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February 15, 2016

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

SUBJECT: Periodic Site Status Report, June through November 2015
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 June 1, 2015 through November 30, 2015. 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.
- 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.
- 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 NAPL 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 monitor wells and SVE

wells, piping, and remediation equipment locations are presented on Figure 2. Groundwater samples were collected in August and November 2015 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) in the groundwater sample collected at monitor well HQUST-548 at 3.1 micrograms per liter (µg/L; August 2015).
- Toluene was reported below its ADEQ established AWQS in the groundwater samples collected at monitor well CEP-518A, CEP-527A and HQUST-523A, with the maximum concentration being 18.9 µg/L (November 2015) reported at monitor well HQUST-523A.
- Ethylbenzene was reported below its ADEQ established AWQS in the groundwater samples collected at monitor well CEP-518A and HQUST-548, with a maximum concentration of 385 µg/L (November 2015) reported at monitor well CEP-518A.
- Total xylenes was reported below its ADEQ established AWQS in the groundwater samples collected at monitor well CEP-518A, CEP-519A and HQUST-548, with the maximum concentration being 801 µg/L (November 2015) reported at monitor well HQUST-523A.
- Methyl-tert-butyl ether (MTBE) was reported in the groundwater samples collected at monitor wells HQUST-523A, HQUST-533A, HQUST-547A and HQUST-548A, with a maximum concentration of 7.6 µg/L (November 2015) reported at monitor well HQUST-523A.
- During the reporting period 1,2-dichloroethane (1,2-DCA), and tetrachloroethylene (PCE) were not detected above analytical method detection limits in the groundwater samples collected at monitor wells CEP-518A, CEP-519A, CEP-520A, CEP-527A, CEP-528A, HQUST-523A, HQUST-524A, HQUST-525A, HQUST-526A, HQUST-531A, HQUST-532A, HQUST-533A, HQUST-547, and HQUST-548.

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 is currently extracting petroleum hydrocarbons from the vadose zone. The remediation system is connected to three wells: HQUST-523A, HQUST-524A, and CEP-518A (Figure 2). Extracted soil vapor is abated using a Solleco 250 standard cubic feet per minute (scfm) thermal catalytic oxidizer, operating under ADEQ Permit No. 60343. Cardno collects 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 discharge permit:	ADEQ Air Quality Division General Permit No. 60343
Reporting period:	June 1, 2015 to November 30, 2015
System modifications during reporting period:	None
System status during reporting period:	Active
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)
06/01/15 to 11/30/15	2,850	475
Cumulative:	20,342	3,390

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:	June 1, 2015 to November 30, 2015
System modifications during reporting period:	Carbon vessel CV2 was repaired and the liquid GAC was replaced.
System status during reporting period:	Active
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): During the reporting period dissolved phase hydrocarbons were not calculated because hydrocarbons were not reported above the specified laboratory reporting limits.

System performance:

Period	Mass of Hydrocarbons Removed (Pounds)	Mass of Hydrocarbons Removed (Gallons)
06/01/15 to 11/30/15	0.0	0.0
Cumulative:	12,972	2,162

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 August 2015 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 0.006 foot per foot (ft/ft) immediately downgradient of the remediation system and in a northwesterly direction. Additionally, a potentiometric surface map (Figure 4B) was created using the November 2015 data. The groundwater flow gradient in November 2015 is approximately 0.006 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 November 2015; 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 are decreasing at monitor well HQUST-526A for the time frame presented in this report; benzene concentration decreased at monitor well HQUST-526A from 1,920 μg/L (May 2015) to <1.0 μg/L (November 2015). The benzene concentration at monitor well CEP-519A decreased from 3.7 μg/L (February 2015) to <1.0 μg/L (August 2015). Benzene concentrations at the other monitor wells sampled remained non-

detect (<1.0 μg/L). Groundwater elevation changes do not appear to correlate with changes in water quality data.

The presence of NAPL has decreased at three monitor wells CEP-518A, HQUST-523A, and HQUST-524A. Future monitoring is expected to show decreasing concentration trends of BTEX and MTBE constituents as the source continues to be removed, through microbial degradation, SVE remediation, and active groundwater remediation through the PT/OWS.

Operation of the SVE system is expected to remediate soil in the suspected release area to concentrations below residential soil remediation levels (RSRL) within two to five years. NAPL and dissolved-phase benzene concentrations in excess of ADEQ established AWQS are expected to decrease with suspected source concentrations in the soil decreasing. Active groundwater remediation through operation of the PT/OWS and SVE system are expected to accelerate the decrease in chemicals of concern to levels at or below ADEQ established AWQS within two to five years.

PROPOSED FUTURE ACTIVITIES

Future activities planned over the next six-month period (December 2015 through May 2016) include the following:

- Continued operation of the SVE and PT/OWS remediation systems.
- 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 (480) 894-2056 with any questions regarding this report.

Respectfully submitted,

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39256
EDWIN T.
VANDEGRIFT
Date Signed 2-15-16
ARIZONA, U.S.A.
Expires 6/30/2018

Enclosures:

References

Figure 1	Site Vicinity Map
Figure 2	Generalized Site Plan
Figure 3	Select Analytical Results – August 12-13, 2015 & November 4-5 & 9, 2015
Figure 4A	Groundwater Elevation Map – August 12-13, 2015
Figure 4B	Groundwater Elevation Map – November 4-5 & 9, 2015
Figure 5	Dissolved Phase Benzene Concentration Graph
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Table 2	Select Groundwater Analytical Results – VOCs
Table 3	Select Groundwater Analytical Results – MNA Parameters
Table 4	Cumulative NAPL Removal
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Table 6	Estimated Petroleum Hydrocarbon Mass Removal
Table 7	PT/OWS Remediation System Runtime
Table 8	Select PT/OWS Analytical Results
Table 9	PT/OWS Dissolved Phase Petroleum Hydrocarbon Mass Removal
Table 10	Cumulative PT/OWS Dissolved Phase Petroleum Hydrocarbon Mass Removal

Appendix A Self-Monitoring and Reporting Forms

Appendix B Groundwater Sampling Protocol

Appendix C Groundwater Sample Laboratory Analytical Reports and Chain-of-Custody Records

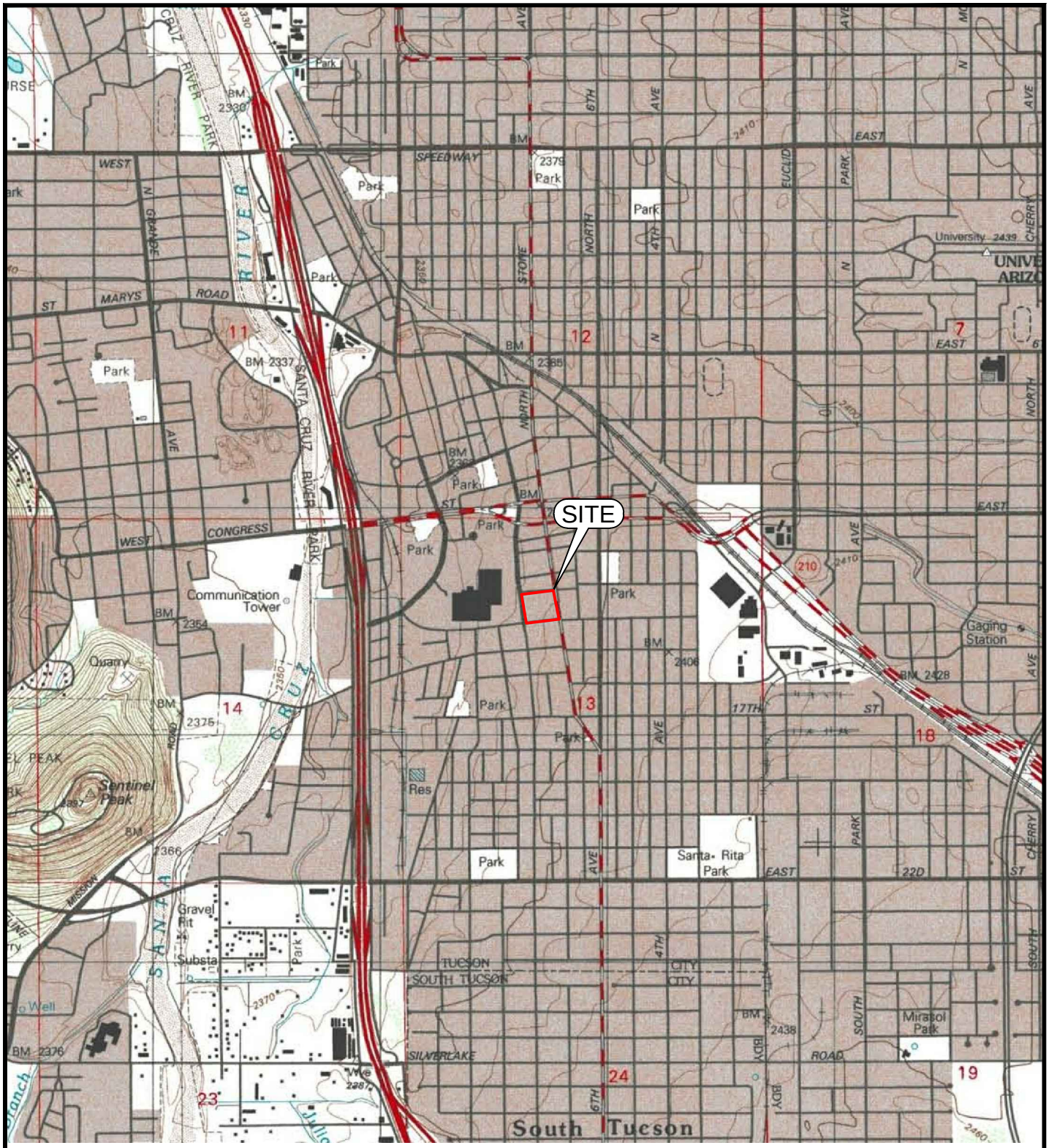
Appendix D Vapor Sample Laboratory Analytical Reports and Chain-of-Custody Records

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

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SCALE, FT

SITE VICINITY MAP

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

PROJECT NUMBER: 1052000015		DATE: 12/22/15	FIGURE
APPROVED BY: RM		DRAWN BY: JTP	1

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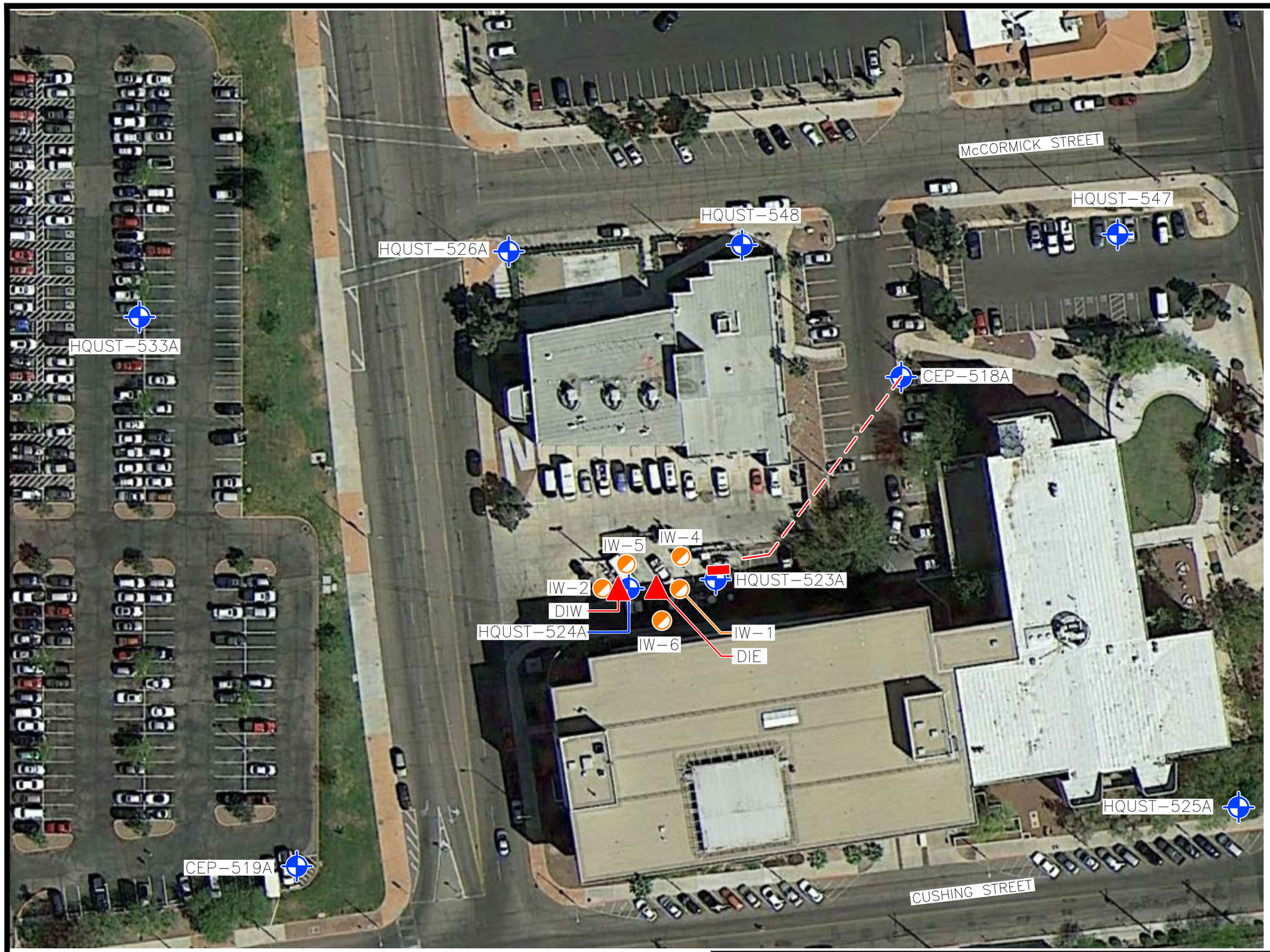

LEGEND

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

SOURCE: Modified from a map provided by Google.

N

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SCALE, FT

GENERALIZED SITE PLAN

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

PROJECT NUMBER: 1052000015		DATE: 8/6/15	FIGURE
APPROVED BY: RM		DRAWN BY: JTP	2

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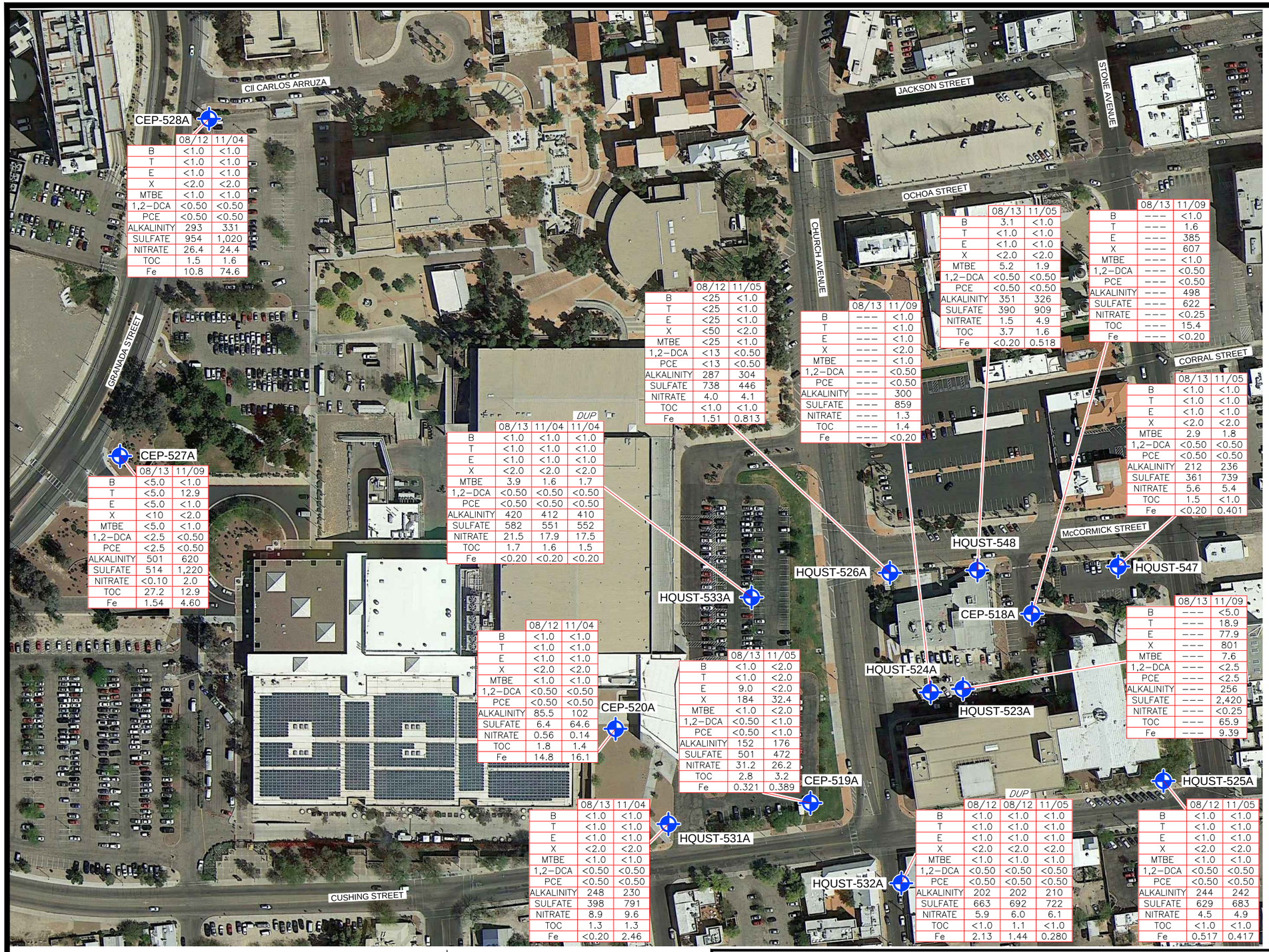

	08/12	11/04
B	<1.0	<1.0
T	<1.0	<1.0
E	<1.0	<1.0
X	<2.0	<2.0
MTBE	<1.0	<1.0
1,2–DCA	<0.50	<0.50
PCE	<0.50	<0.50
ALKALINITY	293	331
SULFATE	954	1,020
NITRATE	26.4	24.4
TOC	1.5	1.6
Fe	10.8	74.6

	08/13	11/09
B	<5.0	<1.0
T	<5.0	12.9
E	<5.0	<1.0
X	<10	<2.0
MTBE	<5.0	<1.0
1,2–DCA	<2.5	<0.50
PCE	<2.5	<0.50
ALKALINITY	501	620
SULFATE	514	1,220
NITRATE	<0.10	2.0
TOC	27.2	12.9
Fe	1.54	4.60

	08/12	11/05
B	<25	<1.0
T	<25	<1.0
E	<25	<1.0
X	<50	<2.0
MTBE	<25	<1.0
1,2–DCA	<13	<0.50
PCE	<13	<0.50
ALKALINITY	287	304
SULFATE	738	446
NITRATE	4.0	4.1
TOC	<1.0	<1.0
Fe	1.51	0.813

	08/13	11/04	DUP 11/04
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	3.9	1.6	1.7
1,2–DCA	<0.50	<0.50	<0.50
PCE	<0.50	<0.50	<0.50
ALKALINITY	420	412	410
SULFATE	582	551	552
NITRATE	21.5	17.9	17.5
TOC	1.7	1.6	1.5
Fe	<0.20	<0.20	<0.20

	08/13	11/09
B	---	<1.0
T	---	<1.0
E	---	<1.0
X	---	<2.0
MTBE	---	<1.0
1,2–DCA	---	<0.50
PCE	---	<0.50
ALKALINITY	---	300
SULFATE	---	859
NITRATE	---	1.3
TOC	---	1.4
Fe	---	<0.20

	08/13	11/05
B	3.1	<1.0
T	<1.0	<1.0
E	<1.0	<1.0
X	<2.0	<2.0
MTBE	5.2	1.9
1,2–DCA	<0.50	<0.50
PCE	<0.50	<0.50
ALKALINITY	351	326
SULFATE	390	909
NITRATE	1.5	4.9
TOC	3.7	1.6
Fe	<0.20	0.518

	08/13	11/09
B	---	<1.0
T	---	1.6
E	---	385
X	---	607
MTBE	---	<1.0
1,2–DCA	---	<0.50
PCE	---	<0.50
ALKALINITY	---	498
SULFATE	---	622
NITRATE	---	<0.25
TOC	---	15.4
Fe	---	<0.20

	08/13	11/05
B	<1.0	<1.0
T	<1.0	<1.0
E	<1.0	<1.0
X	<2.0	<2.0
MTBE	2.9	1.8
1,2–DCA	<0.50	<0.50
PCE	<0.50	<0.50
ALKALINITY	212	236
SULFATE	361	739
NITRATE	5.6	5.4
TOC	1.5	<1.0
Fe	<0.20	0.401

	08/13	11/09
B	---	<5.0
T	---	18.9
E	---	77.9
X	---	801
MTBE	---	7.6
1,2–DCA	---	<2.5
PCE	---	<2.5
ALKALINITY	---	256
SULFATE	---	2,420
NITRATE	---	<0.25
TOC	---	65.9
Fe	---	9.39

	08/12	11/04
B	<1.0	<1.0
T	<1.0	<1.0
E	<1.0	<1.0
X	<2.0	<2.0
MTBE	<1.0	<1.0
1,2–DCA	<0.50	<0.50
PCE	<0.50	<0.50
ALKALINITY	85.5	102
SULFATE	6.4	64.6
NITRATE	0.56	0.14
TOC	1.8	1.4
Fe	14.8	16.1

	08/13	11/05
B	<1.0	<2.0
T	<1.0	<2.0
E	9.0	<2.0
X	184	32.4
MTBE	<1.0	<2.0
1,2–DCA	<0.50	<1.0
PCE	<0.50	<1.0
ALKALINITY	152	176
SULFATE	501	472
NITRATE	31.2	26.2
TOC	2.8	3.2
Fe	0.321	0.389

	08/13	11/04
B	<1.0	<1.0
T	<1.0	<1.0
E	<1.0	<1.0
X	<2.0	<2.0
MTBE	<1.0	<1.0
1,2–DCA	<0.50	<0.50
PCE	<0.50	<0.50
ALKALINITY	248	230
SULFATE	398	791
NITRATE	8.9	9.6
TOC	1.3	1.3
Fe	<0.20	2.46

	08/12	DUP 08/12	11/05
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	202	202	210
SULFATE	663	692	722
NITRATE	5.9	6.0	6.1
TOC	<1.0	1.1	<1.0
Fe	2.13	1.44	0.280

	08/12	11/05
B	<1.0	<1.0
T	<1.0	<1.0
E	<1.0	<1.0
X	<2.0	<2.0
MTBE	<1.0	<1.0
1,2–DCA	<0.50	<0.50
PCE	<0.50	<0.50
ALKALINITY	244	242
SULFATE	629	683
NITRATE	4.5	4.9
TOC	<1.0	<1.0
Fe	0.517	0.417

LEGEND

Groundwater Monitor Well

	11/09	SAMPLING DATE
B	<5.0	BENZENE (µg/L)
T	18.9	TOLUENE (µg/L)
E	77.9	ETHYLBENZENE (µg/L)
X	801	TOTAL XYLENES (µg/L)
MTBE	7.6	METHYL TERT BUTYL ETHER (µg/L)
1,2–DCA	<2.5	1,2–DICHLOROETHANE (µg/L)
PCE	<2.5	TETRACHLOROETHENE (µg/L)
ALKALINITY	256	TOTAL ALKALINITY (mg/L)
SULFATE	2,420	SULFATE (mg/L)
NITRATE	<0.25	NITRATE (mg/L)
TOC	65.9	TOTAL ORGANIC CARBON (mg/L)
Fe	9.39	TOTAL IRON (mg/L)

< LESS THAN THE LABORATORY REPORTING 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
AUGUST 12-13, 2015 & NOVEMBER 4-5 & 9, 2015

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

PROJECT NUMBER: 1052000015		DATE: 12/17/15	FIGURE
APPROVED BY: RM		DRAWN BY: JTP	3

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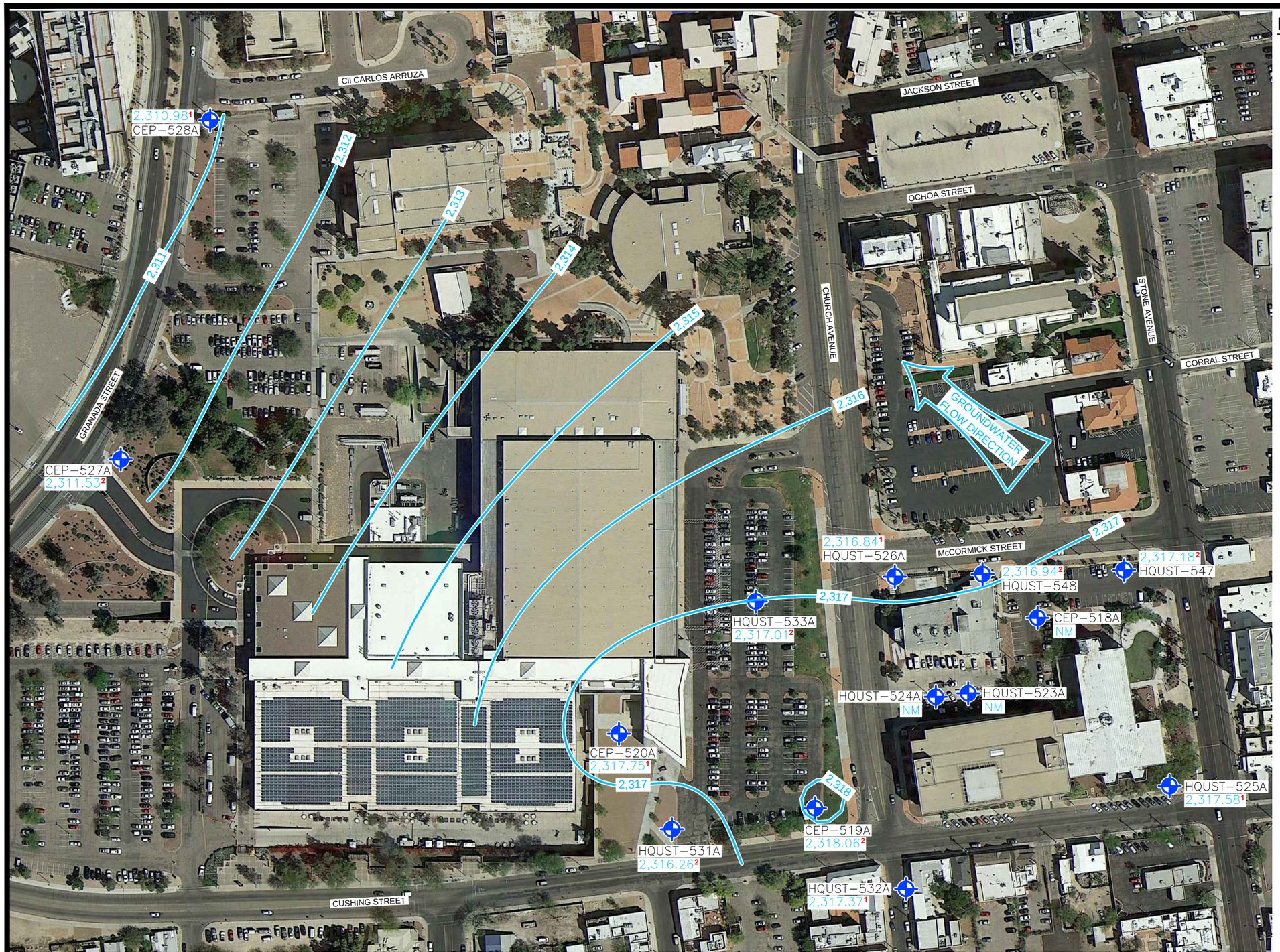

LEGEND

Groundwater Monitor Well

2,318.06 Groundwater elevation in feet; datum is mean sea level

Line of equal groundwater elevation; datum is mean sea level

1 Groundwater level measured on August 12, 2015

2 Groundwater level measured on August 13, 2015

NM Not measured

SOURCE: Modified from a map provided by Google.

N

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SCALE, FT

GROUNDWATER ELEVATION MAP AUGUST 12-13, 2015

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

PROJECT NUMBER: 1052000015	DATE: 12/21/15	FIGURE
APPROVED BY: RM	DRAWN BY: JTP	4A

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LEGEND

Groundwater Monitor Well

2,318.70 Groundwater elevation in feet; datum is mean sea level

Line of equal groundwater elevation; datum is mean sea level

1 Groundwater level measured on November 4, 2015

2 Groundwater level measured on November 5, 2015

3 Groundwater level measured on November 9, 2015

* Not used for contouring

SOURCE: Modified from a map provided by Google.

N

0 160 320

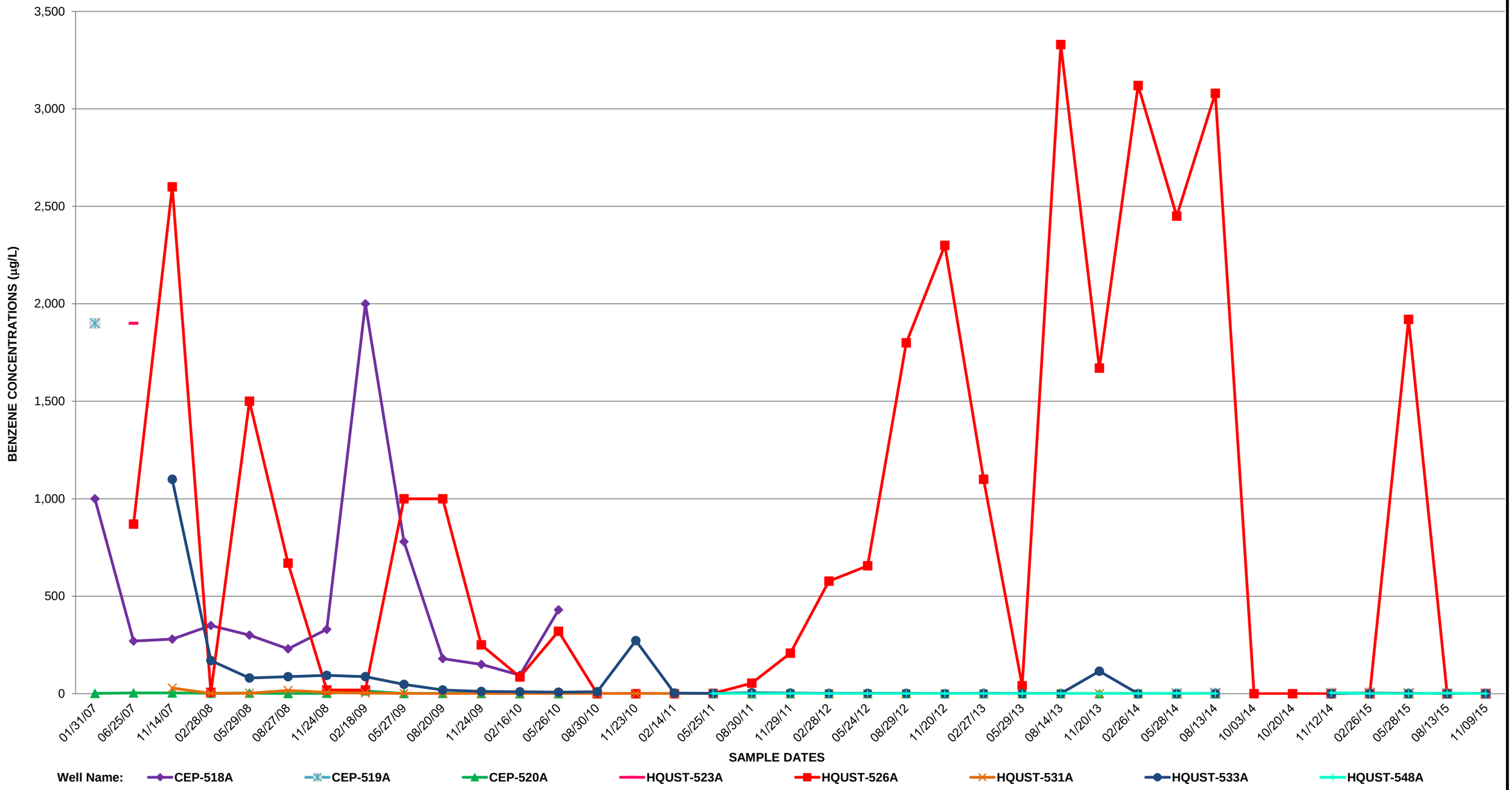
SCALE, FT

GROUNDWATER ELEVATION MAP NOVEMBER 4-5 & 9, 2015

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

PROJECT NUMBER: 1052000015	DATE: 12/22/15	FIGURE
APPROVED BY: RM	DRAWN BY: JTP	4B

Cardno Shaping the Future
9185 S. Farmer Ave., Ste. #111
Tempe, Arizona 85284-2912
Ph: (480) 894-2056 *** Fax: (480) 894-2497



DISSOLVED PHASE BENZENE CONCENTRATION GRAPH

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

PROJECT NUMBER: 1052000015	DATE: 12/16/15	FIGURE 5
APPROVED BY: RM	DRAWN BY: JTP	

Cardno
Shaping the Future
9185 S. Farmer Ave., Ste. #111
Tempe, Arizona 85284-2912
Ph: (480) 894-2056 *** Fax: (480) 894-2497

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

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)	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
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

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	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-519A	06/27/07	2,381.67	62.75	62.10	0.65	2,391.44
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

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-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
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

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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-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-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
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-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

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	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
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-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

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-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
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
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

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-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
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

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	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
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

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)	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
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-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

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-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
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-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

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-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
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

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-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-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
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-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

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	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
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-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

TABLE 1
SUMMARY OF WATER / LNAPL LEVELS
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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-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-547	11/22/10	2,389.95	70.44	N/A	0.00	2,319.51
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

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	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-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

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 (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
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

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-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-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
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

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	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-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
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

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	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-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
CEP-528A	11/19/12	<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	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
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 [4]	11/09/15	<5.0	18.9	77.9	801	7.6	<2.5	<2.5
HQUST-524A [4]	06/27/07 to 08/13/15 not sampled.							
HQUST-524A [4]	11/09/15	<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
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

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	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-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
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

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	02/27/13 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-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
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

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	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-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
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

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	02/26/14	<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-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
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

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	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-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-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
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

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	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
ADEQ AWQS		**5.0**	**1,000**	**700**	**10,000**	**NE**	**5**	**5**

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.
NA	=	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 contains NAPL and were not sampled after June 2007.
(5)	=	Data collected for the sodium persulfate ISCO injection event.
*	=	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-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-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-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
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

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	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-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
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 [5]	11/09/15	256	2,420	<0.25	65.9	9.39
HQUST-524A [5]	06/27/07 to 08/13/15 not sampled.					
HQUST-524A [5]	11/09/15	300	859	1.3	1.4	<0.20
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

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-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-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
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-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

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-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-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
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

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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 [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
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-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
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-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

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-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

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 contains NAPL and were not sampled after June 2007.

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-519 [(a)]	09/05/12	5.67	1.50	5.67	1.50
CEP-519 [(a)]	09/25/12	3.78	1.00	9.45	2.50
HQUST-523 [(a)]	10/08/12	2.84	0.75	2.84	0.75
HQUST-523 [(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 (June 1, 2015 through November 30, 2015)

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)
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 shutdown.																						
	137	55.0	789	1453	137	INF	150	99.7	1,870	1.4	4.4	4.3	26	0.91	21.9	0.0007	0.016	0.002	0.05	0.0021	0.05	0.013	0.30
						EFF	0.4		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
07/01/15	System running on arrival and shutdown.																						
	140	53.0	784	1443	130	INF	147	99.0															
						EFF	1.5																
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	0.52	12.4	0.0005	0.012	0.001	0.03	0.0012	0.03	0.007	0.17
						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	0.75	18.1	0.0005	0.012	0.001	0.03	0.0010	0.02	0.006	0.14
						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	---	---															

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 (June 1, 2015 through November 30, 2015)

Date	Field Measurements							Destruction	Laboratory Analytical Results					TPH Removal		Benzene Removal		Toluene Removal		Ethylbenzene 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)
						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	0.89	21.4	0.0006	0.013	0.002	0.04	0.0016	0.04	0.011	0.25
						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	0.78	18.8	0.0005	0.013	0.002	0.04	0.0011	0.03	0.008	0.19
						EFF	1.2		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
11/02/15	System running on arrival and shutdown.																						
	110	50.0	789	1452	119	INF	440	98.9															
						EFF	4.9																
Influent Averages									**1,520**	**1.1**	**3.1**	**2.7**	**17**	**0.77**	**18.5**	**0.0005**	**0.013**	**0.002**	**0.04**	**0.0014**	**0.03**	**0.009**	**0.21**

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.

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																

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 (deg C)	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)
08/05/13	System running on arrival and departure.																						
	146	28.0	385	725	38	INF	472	100															
						EFF	2.0																
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																

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)
12/02/13	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	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	---	---

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		Ethylbenzene 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)
04/03/14	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	---	---	---	---	---	---	---	---	---	---
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																

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)
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																
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 shutdown.																						
	107	55.0	366	1410	156	INF	266	97															
						EFF	9.0																
12/29/14	System running on arrival and shutdown.																						
	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	---	---	---	---	---	---	---	---	---	---

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)
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	1.21	29.0	0.0008	0.018	0.002	0.04	0.0030	0.07	0.020	0.47
						EFF	13.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
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																

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		Ethylbenzene 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)
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 shutdown.																						
	137	55.0	789	1453	137	INF	150	99.7	1,870	1.4	4.4	4.3	26	0.91	21.9	0.0007	0.016	0.002	0.05	0.0021	0.05	0.013	0.30
						EFF	0.4		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
07/01/15	System running on arrival and shutdown.																						
	140	53.0	784	1443	130	INF	147	99.0															
						EFF	1.5																
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	0.52	12.4	0.0005	0.012	0.001	0.03	0.0012	0.03	0.007	0.17
						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	0.75	18.1	0.0005	0.012	0.001	0.03	0.0010	0.02	0.006	0.14
						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																

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)
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	0.89	21.4	0.0006	0.013	0.002	0.04	0.0016	0.04	0.011	0.25
						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	0.78	18.8	0.0005	0.013	0.002	0.04	0.0011	0.03	0.008	0.19
						EFF	1.2		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
11/02/15	System running on arrival and shutdown.																						
	110	50.0	789	1452	119	INF	440	98.9															
						EFF	4.9																
Influent Averages									**4,246**	**11**	**12**	**23**	**75**	**1.00**	**24.1**	**0.0023**	**0.054**	**0.005**	**0.12**	**0.0046**	**0.11**	**0.018**	**0.43**

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)	=	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.

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 Period	OP Hours	Cumulative OP Hours	TPH Removal (lbs)		Benzene Removal (lbs)		Toluene Removal (lbs)		Ethlybenzene Removal (lbs)		Xylenes Removal (lbs)	
			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	4,976	17,492	5.54	41.0	12.9	91.9	13.74	86.4	76.4	321.6
06/01/15 - 11/30/15	3,693	20,584	2,850	20,342	2.01	43.0	5.8	97.7	5.08	91.5	32.6	354.2

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)***	
06/01/15 - 06/07/15	OFF	OFF	0	The system was shut down on May 12, 2015 for transfer pump maintenance, and was restared on June 8, 2015.
06/08/15 - 06/14/15	OFF	OFF	0	
06/15/15 - 06/21/15	OFF	ON	8,025	
06/22/15 - 06/28/15	OFF	ON	7,883	
06/29/15 - 07/05/15	OFF	ON	6,348	
07/06/15 - 07/12/15	OFF	ON	4,310	The system was shut down on July 6, 2015 for well pump maintenance, and was restarted on July 14, 2015.
07/13/15 - 07/19/15	OFF	OFF	0	
07/20/15 - 07/26/15	OFF	ON	6,244	
07/27/15 - 08/02/15	OFF	ON	4,798	
08/03/15 - 08/09/15	OFF	ON	6,258	
08/10/15 - 08/16/15	OFF	ON	2,490	
08/17/15 - 08/23/15	OFF	ON	2,553	
08/24/15 - 08/30/15	OFF	ON	47	
08/31/15 - 09/06/15	OFF	ON	4,401	
09/07/15 - 09/13/15	OFF	ON	1,944	
09/14/15 - 09/20/15	OFF	OFF	0	
09/21/15 - 09/27/15	OFF	OFF	0	
09/28/15 - 10/04/15	OFF	OFF	0	
10/05/15 - 10/11/15	OFF	OFF	0	
10/12/15 - 10/18/15	OFF	OFF	0	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. On November 24, 2015 the system was cycled on to collect discharge compliance samples.
10/19/15 - 10/25/15	OFF	OFF	0	
10/26/15 - 11/01/15	OFF	OFF	0	
11/02/15 - 11/08/15	OFF	OFF	0	
11/09/15 - 11/15/15	OFF	OFF	0	
11/16/15 - 11/22/15	OFF	OFF	0	
11/23/29 - 11/29/30	OFF	ON	11	
11/30/15 - 12/06/15	OFF	OFF	0	
Total			***55,312***	

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

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**	**0.028**	**0.007**	**0.911**
12/01/13 - 05/31/14	32.3	54.2	52.9	1,169	171,632	**0.046**	**0.078**	**0.076**	**1.67**
06/01/14 - 11/30/14	8.9	1.9	21.6	101	126,762	**0.009**	**0.002**	**0.023**	**0.11**
12/01/14 - 05/31/15	8.1	1.0	7.1	11.5	147,579	**0.010**	**0.001**	**0.009**	**0.01**
06/01/15 - 11/30/15 (3)	0.0	0.0	0.0	0.0	55,312	**0.000**	**0.000**	**0.000**	**0.00**

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	18.9	18.9	2,157
12/01/14 - 05/31/15	144	0	4.89	4.89	2,162
06/01/15 - 11/30/15 (4)	71	0	0.00	0.00	2,162

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.

APPENDIX A

SELF-MONITORING AND REPORTING FORMS

Cardno

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USA

Phone 480 894 2056
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September 17, 2015
Cardno 1052000015.S13

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 June 1, 2015 through August 31, 2015. Compliance samples were collected on August 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).

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

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 (June 1, 2015 through August 31, 2015)

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)***
311-312[1]	06/01/15 - 06/14/15	1,915,648	1,915,648	0	0	0
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[2]	07/06/15 - 07/19/15	1,937,904	1,942,214	4,310	5	862
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
				Operational Period Average Flowrate (GPD)		693

Notes:

GPD = gallons per day

[1] The system was shut down on May 12, 2015 for transfer pump maintenance, and was restared on June 8, 2015.

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

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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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
					Total Average Flowrate (GPD)	1,276

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.

Notes:

[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.

[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.

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: 06/01/2015 to 08/31/2015 **REPORT DUE:** 09/28/2015

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	08/21/15	<20 mg/L
Oil and Grease	200.0 mg/L	QUARTERLY	GRAB	Grab	John Manley	08/21/15	<5.0 mg/L
pH	5.0-11 S.U.	QUARTERLY	GRAB	Grab	John Manley	08/21/15	7.04
Purgeable Aromatics	***	QUARTERLY	GRAB	Grab	John Manley	08/21/15	ND
Purgeable Halocarbons	***	QUARTERLY	GRAB	Grab	John Manley	08/21/15	ND
Total Suspended Solids	***	QUARTERLY	COMPOS	Composite	John Manley	08/21/15	<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:**	06/01/2015 to 08/31/2015
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: 08/21/15 ** Flow is monitored weekly for permit compliance.

Flow (Gallons): **693

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: 09 / 17 / 2015

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

09/03/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C41457

Sampling Date: 08/21/15

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: **33**

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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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: C41457

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C41457-1	08/21/15	08:30		08/26/15	AQ	Ground Water	HQUST-GW-EFF
C41457-2	08/21/15	09:00		08/26/15	AQ	Ground Water	HQUST-GW-CV1
C41457-3	08/21/15	09:30		08/26/15	AQ	Ground Water	HQUST-GW-INF
C41457-4	08/21/15	09:30		08/26/15	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C41457
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	9/3/2015 5:16:08 PM

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/21/2015 and were received at Accutest on 08/26/2015 properly preserved, at 4.3 Deg. C and intact. These Samples received an Accutest job number of C41457. 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:** VV1127

- Sample(s) C41457-3MS, C41457-3MSD were used as the QC samples indicated.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP8311

- All samples were distilled within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) C41440-2MS were used as the QC samples for HEM Oil and Grease.
- Matrix Spike Recovery(s) for HEM Oil and Grease are outside control limits. Probable cause due to matrix interference.
- GP8311-S1 for HEM Oil and Grease: Spike recovery outside of acceptable QC criteria.

Wet Chemistry By Method HACH 8000

Matrix: AQ **Batch ID:** GP8284

- All samples were distilled within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) C41457-3MS, C41457-3MSD were used as the QC samples for Chemical Oxygen Demand.

Wet Chemistry By Method SM2540 D-07

Matrix: AQ **Batch ID:** GN17231

- All method blanks for this batch meet method specific criteria.
- Sample(s) C41440-1DUP were used as the QC samples for Solids, Total Suspended.
- The following samples were run outside of holding time for method SM2540 D-07: C41457-1, C41457-3

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: C41457
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/21/15

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C41457-1	**HQUST-GW-EFF**					
No hits reported in this sample.						
C41457-2	**HQUST-GW-CV1**					
No hits reported in this sample.						
C41457-3	**HQUST-GW-INF**					
Solids, Total Suspended		450	5.0		mg/l	SM2540 D-07
C41457-4	**TRIP BLANK**					
No hits reported in this sample.						

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C41457-1	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	V27845.D	1	08/28/15	SY	n/a	n/a	VV1127
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	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:	C41457-1	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	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	97%		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-EFF		
Lab Sample ID:	C41457-1	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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%		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:	C41457-1	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
		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	08/27/15 16:00	PH	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	09/02/15 16:47	RL	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	08/28/15 12:15	PH	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C41457-2	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	V27846.D	1	08/28/15	SY	n/a	n/a	VV1127
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	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:	C41457-2	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	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	97%		70-130%
2037-26-5	Toluene-D8	105%		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:	C41457-2	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	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:	HQUST-GW-INF		
Lab Sample ID:	C41457-3	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	V27847.D	2.5	08/28/15	SY	n/a	n/a	VV1127
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	2.5	ug/l	
108-86-1	Bromobenzene	ND	2.5	ug/l	
74-97-5	Bromochloromethane	ND	2.5	ug/l	
75-27-4	Bromodichloromethane	ND	1.3	ug/l	
75-25-2	Bromoform	ND	1.3	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
108-90-7	Chlorobenzene	ND	1.3	ug/l	
75-00-3	Chloroethane	ND	1.3	ug/l	
67-66-3	Chloroform	ND	1.3	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.3	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.3	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.5	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.3	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.3	ug/l	
142-28-9	1,3-Dichloropropane	ND	2.5	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.5	ug/l	
124-48-1	Dibromochloromethane	ND	1.3	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.3	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.3	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.3	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.3	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.3	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.3	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.3	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:	C41457-3	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	1.3	ug/l	
100-41-4	Ethylbenzene	ND	2.5	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	25	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	2.5	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	25	ug/l	
74-83-9	Methyl bromide	ND	5.0	ug/l	
74-87-3	Methyl chloride	ND	2.5	ug/l	
74-95-3	Methylene bromide	ND	2.5	ug/l	
75-09-2	Methylene chloride	ND	13	ug/l	
78-93-3	Methyl ethyl ketone	ND	25	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	2.5	ug/l	
91-20-3	Naphthalene	ND	13	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	2.5	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	25	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.3	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.3	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.3	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.3	ug/l	
108-88-3	Toluene	ND	2.5	ug/l	
79-01-6	Trichloroethylene	ND	1.3	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.3	ug/l	
	m,p-Xylene	ND	2.5	ug/l	
95-47-6	o-Xylene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	105%		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:	C41457-3	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
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	104%		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:	C41457-3	**Date Sampled:**	08/21/15
Matrix:	AQ - Ground Water	**Date Received:**	08/26/15
		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	08/27/15 16:00	PH	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	09/02/15 16:47	RL	EPA 1664A
Solids, Total Suspended	450	5.0	mg/l	1	08/28/15 12:15	PH	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C41457-4	**Date Sampled:**	08/21/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/26/15
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	V27848.D	1	08/29/15	SY	n/a	n/a	VV1127
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	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:	C41457-4	**Date Sampled:**	08/21/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/26/15
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	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	97%		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:	C41457-4	**Date Sampled:**	08/21/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/26/15
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%

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:

- Chain of Custody

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 # 7743 5145 2465
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C 041457

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

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 #

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Na2S2O3	MEOH	NONE		COD	VOC 624	O&G 1664	TSS							LAB USE ONLY
1	HQUST-GW-EFF	8-21-15	8:30		GW	8	3			4				1		X	X	X	X							
2	HQUST-GW-CV1	8-21-15	9:00		GW	3	3										X									
3	HQUST-GW-INF	8-21-15	9:30		GW	8	3			4				1		X	X	X	X							
4	Trip Blank	8-21-15	9:30			~~4~~	2										X									

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)

Turnaround Time (Business days)
Approved By:/ Date:
- [ ] 10 Day
- [x] 5 Day
- [ ] 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 [signature]	8-21-15 - 14:00	1 [signature]	2 [signature]	8/24/15 10:42	2 [signature]
3 [signature]	8/24/15 17:00	3 Fed-Ex	4 Fedex	8/26/15 09:40	4 [signature]
5		5			

Custody Seal # Y
Appropriate Bottle / Pres. Y / N
Headspace Y / N
On Ice Y / N
Cooler Temp. 4.3/4.3 oC
Labels match Coc? Y / N
Separate Receiving Check List used: Y / N

5.1 5

C41457: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C41457 **Client:** CITY OF TUCSON **Project:** HQUST PO1152

Date / Time Received: 8/26/2015 9:40:00 AM **Delivery Method:** FedEx **Airbill #'s:** 774351452465

Cooler Temps (Initial/Adjusted): #1: (4.3/4.3);

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

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. 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

C41457: 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

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41457
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
C41457-3MS	V27849.D	2.5	08/29/15	SY	n/a	n/a	VV1127
C41457-3MSD	V27850.D	2.5	08/29/15	SY	n/a	n/a	VV1127
C41457-3	V27847.D	2.5	08/28/15	SY	n/a	n/a	VV1127

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

C41457-1, C41457-2, C41457-3, C41457-4

CAS No.	Compound	C41457-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		50	48.6	97	50	47.8	96	2	77-122/16
108-86-1	Bromobenzene	ND		50	52.0	104	50	51.8	104	0	76-126/17
74-97-5	Bromochloromethane	ND		50	47.6	95	50	47.6	95	0	77-130/17
75-27-4	Bromodichloromethane	ND		50	48.2	96	50	48.1	96	0	75-127/16
75-25-2	Bromoform	ND		50	50.4	101	50	50.1	100	1	69-141/17
104-51-8	n-Butylbenzene	0.55		50	47.6	94	50	49.0	97	3	72-129/18
135-98-8	sec-Butylbenzene	0.52		50	50.2	99	50	51.2	101	2	74-128/18
98-06-6	tert-Butylbenzene	ND		50	51.4	103	50	51.2	102	0	73-127/18
108-90-7	Chlorobenzene	ND		50	49.4	99	50	50.2	100	2	77-122/16
75-00-3	Chloroethane	ND		50	39.4	79	50	39.1	78	1	69-133/18
67-66-3	Chloroform	ND		50	46.7	93	50	46.3	93	1	74-126/17
95-49-8	o-Chlorotoluene	ND		50	47.3	95	50	52.6	105	11	72-127/20
106-43-4	p-Chlorotoluene	ND		50	49.1	98	50	49.4	99	1	68-127/18
56-23-5	Carbon tetrachloride	ND		50	47.4	95	50	46.6	93	2	71-133/19
75-34-3	1,1-Dichloroethane	ND		50	45.1	90	50	44.7	89	1	71-125/17
75-35-4	1,1-Dichloroethylene	ND		50	41.7	83	50	41.2	82	1	66-125/20
563-58-6	1,1-Dichloropropene	ND		50	42.5	85	50	41.7	83	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		50	44.2	88	50	45.8	92	4	65-131/20
106-93-4	1,2-Dibromoethane	ND		50	51.1	102	50	50.5	101	1	75-135/17
107-06-2	1,2-Dichloroethane	ND		50	47.5	95	50	46.1	92	3	71-131/17
78-87-5	1,2-Dichloropropane	ND		50	49.8	100	50	49.3	99	1	78-124/16
142-28-9	1,3-Dichloropropane	ND		50	53.0	106	50	51.5	103	3	78-123/16
108-20-3	Di-Isopropyl ether	ND		50	45.4	91	50	45.3	91	0	68-129/17
594-20-7	2,2-Dichloropropane	ND		50	37.6	75	50	36.5	73	3	70-131/19
124-48-1	Dibromochloromethane	ND		50	48.8	98	50	49.2	98	1	76-132/16
75-71-8	Dichlorodifluoromethane	ND		50	25.6	51	50	26.0	52	2	32-168/28
156-59-2	cis-1,2-Dichloroethylene	ND		50	50.1	100	50	49.3	99	2	73-126/17
10061-01-5	cis-1,3-Dichloropropene	ND		50	49.3	99	50	48.4	97	2	72-130/16
541-73-1	m-Dichlorobenzene	ND		50	50.6	101	50	50.4	101	0	75-124/16
95-50-1	o-Dichlorobenzene	ND		50	48.8	98	50	50.8	102	4	76-124/16
106-46-7	p-Dichlorobenzene	ND		50	49.6	99	50	51.2	102	3	75-124/16
156-60-5	trans-1,2-Dichloroethylene	ND		50	41.5	83	50	40.6	81	2	71-126/18
10061-02-6	trans-1,3-Dichloropropene	ND		50	47.0	94	50	46.1	92	2	71-126/16
100-41-4	Ethylbenzene	ND		50	49.4	99	50	50.4	101	2	76-126/17
637-92-3	Ethyl Tert Butyl Ether	ND		50	46.7	93	50	46.5	93	0	75-134/17
591-78-6	2-Hexanone	ND		200	221	111	200	218	109	1	67-150/22

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41457
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
C41457-3MS	V27849.D	2.5	08/29/15	SY	n/a	n/a	VV1127
C41457-3MSD	V27850.D	2.5	08/29/15	SY	n/a	n/a	VV1127
C41457-3	V27847.D	2.5	08/28/15	SY	n/a	n/a	VV1127

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

C41457-1, C41457-2, C41457-3, C41457-4

CAS No.	Compound	C41457-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		50	47.0	94	50	51.7	103	10	69-135/20
98-82-8	Isopropylbenzene	0.58		50	49.1	97	50	49.3	97	0	61-125/17
99-87-6	p-Isopropyltoluene	ND		50	49.3	99	50	50.8	102	3	68-127/18
108-10-1	4-Methyl-2-pentanone	ND		200	215	108	200	215	108	0	71-142/21
74-83-9	Methyl bromide	ND		50	38.5	77	50	39.2	78	2	68-132/18
74-87-3	Methyl chloride	ND		50	40.4	81	50	43.1	86	6	39-150/28
74-95-3	Methylene bromide	ND		50	50.5	101	50	50.0	100	1	77-127/16
75-09-2	Methylene chloride	ND		50	41.9	84	50	41.9	84	0	67-128/18
78-93-3	Methyl ethyl ketone	ND		200	214	107	200	209	105	2	56-155/23
1634-04-4	Methyl Tert Butyl Ether	ND		50	44.5	89	50	44.1	88	1	73-132/17
91-20-3	Naphthalene	ND		50	41.6	83	50	44.9	90	8	70-136/20
103-65-1	n-Propylbenzene	ND		50	49.9	100	50	50.9	102	2	71-127/17
100-42-5	Styrene	ND		50	49.6	99	50	50.8	102	2	72-134/16
994-05-8	Tert-Amyl Methyl Ether	ND		50	47.6	95	50	46.6	93	2	73-133/17
75-65-0	Tert-Butyl Alcohol	ND		250	213	85	250	204	82	4	60-149/26
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	49.3	99	50	50.2	100	2	77-130/16
71-55-6	1,1,1-Trichloroethane	ND		50	46.5	93	50	46.1	92	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	50.6	101	50	52.1	104	3	77-129/17
79-00-5	1,1,2-Trichloroethane	ND		50	50.4	101	50	50.0	100	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	ND		50	42.3	85	50	46.3	93	9	70-133/18
96-18-4	1,2,3-Trichloropropane	ND		50	42.3	85	50	41.5	83	2	69-126/18
120-82-1	1,2,4-Trichlorobenzene	ND		50	44.8	90	50	48.8	98	9	68-129/17
95-63-6	1,2,4-Trimethylbenzene	ND		50	49.2	98	50	49.5	99	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	ND		50	51.6	103	50	52.1	104	1	77-129/17
127-18-4	Tetrachloroethylene	ND		50	48.7	97	50	47.9	96	2	69-127/20
108-88-3	Toluene	ND		50	50.3	101	50	49.2	98	2	75-122/17
79-01-6	Trichloroethylene	ND		50	48.5	97	50	47.4	95	2	78-123/17
75-69-4	Trichlorofluoromethane	ND		50	45.7	91	50	46.4	93	2	65-136/23
75-01-4	Vinyl chloride	ND		50	42.0	84	50	42.7	85	2	57-146/22
	m,p-Xylene	ND		100	101	101	100	102	102	1	76-125/17
95-47-6	o-Xylene	ND		50	48.3	97	50	49.5	99	2	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C41457-3	Limits
1868-53-7	Dibromofluoromethane	99%	99%	97%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41457
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
C41457-3MS	V27849.D	2.5	08/29/15	SY	n/a	n/a	VV1127
C41457-3MSD	V27850.D	2.5	08/29/15	SY	n/a	n/a	VV1127
C41457-3	V27847.D	2.5	08/28/15	SY	n/a	n/a	VV1127

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

C41457-1, C41457-2, C41457-3, C41457-4

CAS No.	Surrogate Recoveries	MS	MSD	C41457-3	Limits
2037-26-5	Toluene-D8	101%	100%	105%	70-130%
460-00-4	4-Bromofluorobenzene	102%	99%	104%	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: C41457
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	GP8284/GN17219	20	0.0	mg/l	500	503	100.6	90-110%
HEM Oil and Grease	GP8311/GN17266	5.0	0.0	mg/l	40	35.3	88.3	78-114%
Solids, Total Suspended	GN17231	5.0	0.0	mg/l				

Associated Samples:
Batch GP8284: C41457-1, C41457-3
Batch GP8311: C41457-1, C41457-3
Batch GN17231: C41457-1, C41457-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41457
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	GP8284/GN17219	mg/l	500	480	4.6	25%
HEM Oil and Grease	GP8311/GN17266	mg/l	40	35.2	0.3	18%

Associated Samples:
Batch GP8284: C41457-1, C41457-3
Batch GP8311: C41457-1, C41457-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41457
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	GN17231	C41440-1	mg/l	7.0	7.0	0.0	0-25%

Associated Samples:
Batch GN17231: C41457-1, C41457-3
(*) Outside of QC limits

7.3

7

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41457
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	GP8284/GN17219	C41457-3	mg/l	0.0	250	231	91.7	90-110%
HEM Oil and Grease	GP8311/GN17266	C41440-2	mg/l	1.2	40	19.9	46.8*(a)	78-114%

Associated Samples:
Batch GP8284: C41457-1, C41457-3
Batch GP8311: C41457-1, C41457-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery outside of acceptable QC criteria.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41457
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	GP8284/GN17219	C41457-3	mg/l	0.0	250	235	2.0	25%

Associated Samples:
Batch GP8284: C41457-1, C41457-3
(*) 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			
										HQUST-GW-EFF						
Date	Discharge Totalizer	INF Filter (PSI)	EFF Filter (PSI)	Discharge Filter (PSI)	CV1 Top gauge (PSI)	CV2 Top gauge (PSI)	CV2 Lower gauge (PSI)	Tank (PSI)	Outlet (PSI)	pH	Temp. (^{o}F)	Conductivity (μS/cm)	523A Counter	523A Pressure (PSI)	524A Counter	524A Pressure (PSI)
08/21/15	1,964,557	17	15	7	22	8	9	115	60	7.04	82.9	2.84	NT	NT	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

Cardno

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December 23, 2015
Cardno 1052000015.S14

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 September 1, 2015 through November 30, 2015. Compliance samples were collected on November 24, 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).

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

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 (September 1, 2015 through November 30, 2015)

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)***
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[1]	09/14/15 - 11/22/15	1,970,949	1,970,949	0	0	0
336[2]	11/23/15 - 11/29/15	1,970,949	1,970,960	11	1	11
337[1]	11/30/15 - 12/06/15	1,970,960	1,970,960	0	0	0
				Operational Period Average Flowrate (GPD)		424

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.

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

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

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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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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

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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

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[48]	11/30/15 - 12/06/15	1,970,960	1,970,960	0	0	0
					Total Average Flowrate (GPD)	1,257

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.

Notes:

[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.

[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.

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

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: 09/01/2015 to 11/30/2015 **REPORT DUE:** 12/28/2015

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	Daniel Pike	11/24/15	<20 mg/L
Oil and Grease	200.0 mg/L	QUARTERLY	GRAB	Grab	Daniel Pike	11/24/15	<5.0 mg/L
pH	5.0-11 S.U.	QUARTERLY	GRAB	Grab	Daniel Pike	11/24/15	7.03
Purgeable Aromatics	***	QUARTERLY	GRAB	Grab	Daniel Pike	11/24/15	ND
Purgeable Halocarbons	***	QUARTERLY	GRAB	Grab	Daniel Pike	11/24/15	ND
Total Suspended Solids	***	QUARTERLY	COMPOS	Composite	Daniel Pike	11/24/15	6.0 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:**	09/01/2015 to 11/30/2015
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: 11/24/15 ** Flow is monitored weekly for permit compliance.

Flow (Gallons): **424

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: 12 / 23 / 2015

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

12/05/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C43032

Sampling Date: 11/24/15

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)

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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: C43032

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C43032-1	11/24/15	13:20	DP	11/25/15	AQ	Ground Water	HQUST-GW-EFF
C43032-2	11/24/15	13:30	DP	11/25/15	AQ	Ground Water	HQUST-GW-CV1
C43032-3	11/24/15	13:10	DP	11/25/15	AQ	Ground Water	HQUST-GW-INF
C43032-4	11/24/15	00:00	DP	11/25/15	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C43032
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	12/5/2015 12:06:29 A

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 11/24/2015 and were received at Accutest on 11/25/2015 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of C43032. 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:** VW2203

- RPD(s) for BSD for Carbon tetrachloride, 1,1-Dichloropropene, Isopropylbenzene exceeded laboratory acceptance limits; BS/BSD recoveries met acceptance criteria. These analytes were not detected in associated samples.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP8730

- Sample(s) C43032-1MS 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 and/or sample nonhomogeneity. The associated blank spike recoveries were acceptable.

Wet Chemistry By Method HACH 8000

Matrix: AQ **Batch ID:** GP8724

- Sample(s) C43032-1MS, C43032-1MSD were used as the QC samples for Chemical Oxygen Demand.

Wet Chemistry By Method SM2540 D-07

Matrix: AQ **Batch ID:** GN17947

- Sample(s) C43020-3DUP were used as the QC samples for Solids, Total Suspended.

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: C43032
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/24/15

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C43032-1	**HQUST-GW-EFF**					
Solids, Total Suspended		6.0	5.0		mg/l	SM2540 D-07
C43032-2	**HQUST-GW-CV1**					
Methyl chloride		1.6	1.0		ug/l	EPA 624
C43032-3	**HQUST-GW-INF**					
No hits reported in this sample.						
C43032-4	**TRIP BLANK**					
Methylene chloride		10.9	5.0		ug/l	EPA 624

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C43032-1	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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	W58732.D	1	12/01/15	CV	n/a	n/a	VW2203
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 [a]	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 [a]	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	
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:	C43032-1	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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 [a]	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	
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	105%		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:	C43032-1	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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%		70-130%

(a) AZ:R7
(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-GW-EFF		
Lab Sample ID:	C43032-1	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
		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	12/01/15 15:00	RL	HACH 8000
HEM Oil and Grease [a]	< 5.0	5.0	mg/l	1	12/02/15 15:45	RL	EPA 1664A
Solids, Total Suspended	6.0	5.0	mg/l	1	11/25/15 11:30	DQ	SM2540 D-07

(a) AZ:M2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C43032-2	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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	W58733.D	1	12/01/15	CV	n/a	n/a	VW2203
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 [a]	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 [a]	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	
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:	C43032-2	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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 [a]	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	1.6	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	
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	105%		70-130%
2037-26-5	Toluene-D8	99%		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:	C43032-2	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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:R7
(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-GW-INF		
Lab Sample ID:	C43032-3	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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	W58734.D	1	12/01/15	CV	n/a	n/a	VW2203
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 [a]	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 [a]	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	
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:	C43032-3	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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 [a]	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	
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	107%		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-INF		
Lab Sample ID:	C43032-3	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
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:R7
(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-GW-INF		
Lab Sample ID:	C43032-3	**Date Sampled:**	11/24/15
Matrix:	AQ - Ground Water	**Date Received:**	11/25/15
		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	12/01/15 15:00	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	12/02/15 15:45	RL	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	11/25/15 11:30	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C43032-4	**Date Sampled:**	11/24/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/25/15
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	W58731.D	1	12/01/15	CV	n/a	n/a	VW2203
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 [a]	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 [a]	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	
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:	C43032-4	**Date Sampled:**	11/24/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/25/15
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 [a]	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	10.9	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	
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	104%		70-130%
2037-26-5	Toluene-D8	97%		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:	C43032-4	**Date Sampled:**	11/24/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/25/15
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	97%		70-130%

(a) AZ:R7
(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

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: C43032
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.
R7	LFB/LFBD 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.

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 # 8034 0102 4085
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C43032

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: Daniel Pike

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

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	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	11/24/15	1320	DP	GW	8	3			4				1		X	X	X	X							
2	HQUST-GW-CV1	↓	1330		GW	3	3										X									
3	HQUST-GW-INF	↓	1310	↓	GW	8	3			4				1		X	X	X	X							
4	Trip Blank					2	2										X									

Turnaround Time (Business days)

Approved By/ Date:

- [ ] 10 Day
- [x] 5 Day
- [ ] 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	Daniel Pike	11/24/15 1620		2	11/24/15 1700	2 Fed EX
	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
3	FedEX	11/25/15 1000		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		3.1 / 2.2 °C

C43032: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C43032 **Client:** CITY OF TUCSON **Project:** HQUST PO1152

Date / Time Received: 11/25/2015 10:05:00 AM **Delivery Method:** FedEx **Airbill #'s:** 803401029085

Cooler Temps (Initial/Adjusted): #1: (3.1/2.2);

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

C43032: 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: C43032
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
VW2203-MB	W58711.D	1	11/30/15	CV	n/a	n/a	VW2203

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

C43032-1, C43032-2, C43032-3, C43032-4

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: C43032
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
VW2203-MB	W58711.D	1	11/30/15	CV	n/a	n/a	VW2203

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

C43032-1, C43032-2, C43032-3, C43032-4

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	103%	70-130%

Method Blank Summary

Job Number: C43032
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
VW2203-MB	W58711.D	1	11/30/15	CV	n/a	n/a	VW2203

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

C43032-1, C43032-2, C43032-3, C43032-4

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C43032
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
VW2203-BS	W58705.D	1	11/30/15	CV	n/a	n/a	VW2203
VW2203-BSD	W58706.D	1	11/30/15	CV	n/a	n/a	VW2203

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

C43032-1, C43032-2, C43032-3, C43032-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	21.3	107	19.9	100	7	77-122/25
108-86-1	Bromobenzene	20	19.4	97	19.6	98	1	76-126/17
74-97-5	Bromochloromethane	20	21.7	109	21.7	109	0	77-130/17
75-27-4	Bromodichloromethane	20	22.1	111	21.3	107	4	75-127/16
75-25-2	Bromoform	20	23.4	117	21.2	106	10	69-141/17
104-51-8	n-Butylbenzene	20	21.1	106	19.5	98	8	72-129/18
135-98-8	sec-Butylbenzene	20	20.4	102	19.4	97	5	74-128/18
98-06-6	tert-Butylbenzene	20	19.8	99	19.0	95	4	73-127/18
108-90-7	Chlorobenzene	20	20.8	104	20.1	101	3	77-122/16
75-00-3	Chloroethane	20	18.1	91	18.7	94	3	69-133/18
67-66-3	Chloroform	20	21.7	109	21.4	107	1	74-126/17
95-49-8	o-Chlorotoluene	20	19.5	98	19.0	95	3	72-127/20
106-43-4	p-Chlorotoluene	20	21.0	105	20.2	101	4	68-127/18
56-23-5	Carbon tetrachloride	20	21.6	108	17.1	86	23* [a]	71-133/19
75-34-3	1,1-Dichloroethane	20	22.0	110	21.1	106	4	71-125/17
75-35-4	1,1-Dichloroethylene	20	21.2	106	17.8	89	17	66-125/20
563-58-6	1,1-Dichloropropene	20	19.0	95	15.6	78	20* [a]	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	22.9	115	22.1	111	4	65-131/20
106-93-4	1,2-Dibromoethane	20	21.7	109	21.1	106	3	75-135/17
107-06-2	1,2-Dichloroethane	20	21.4	107	20.7	104	3	71-131/17
78-87-5	1,2-Dichloropropane	20	22.3	112	21.7	109	3	78-124/16
142-28-9	1,3-Dichloropropane	20	22.5	113	21.9	110	3	78-123/16
108-20-3	Di-Isopropyl ether	20	24.0	120	24.1	121	0	68-129/17
594-20-7	2,2-Dichloropropane	20	23.3	117	20.2	101	14	70-131/19
124-48-1	Dibromochloromethane	20	21.9	110	21.6	108	1	76-132/16
75-71-8	Dichlorodifluoromethane	20	14.8	74	15.2	76	3	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	23.2	116	23.1	116	0	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	23.7	119	22.7	114	4	72-130/16
541-73-1	m-Dichlorobenzene	20	20.3	102	19.8	99	2	75-124/16
95-50-1	o-Dichlorobenzene	20	20.7	104	20.3	102	2	76-124/16
106-46-7	p-Dichlorobenzene	20	20.4	102	20.1	101	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	20.4	102	18.8	94	8	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	22.0	110	21.4	107	3	71-126/16
100-41-4	Ethylbenzene	20	21.4	107	19.6	98	9	76-126/17
637-92-3	Ethyl Tert Butyl Ether	20	23.8	119	23.9	120	0	75-134/17
591-78-6	2-Hexanone	80	88.6	111	84.5	106	5	67-150/22

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C43032
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
VW2203-BS	W58705.D	1	11/30/15	CV	n/a	n/a	VW2203
VW2203-BSD	W58706.D	1	11/30/15	CV	n/a	n/a	VW2203

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

C43032-1, C43032-2, C43032-3, C43032-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	20	19.8	99	20.0	100	1	69-135/20
98-82-8	Isopropylbenzene	20	22.7	114	19.0	95	18* [a]	61-125/17
99-87-6	p-Isopropyltoluene	20	20.7	104	19.3	97	7	68-127/18
108-10-1	4-Methyl-2-pentanone	80	91.0	114	85.6	107	6	71-142/21
74-83-9	Methyl bromide	20	19.3	97	19.8	99	3	68-132/18
74-87-3	Methyl chloride	20	17.8	89	18.3	92	3	39-150/28
74-95-3	Methylene bromide	20	22.4	112	21.8	109	3	77-127/16
75-09-2	Methylene chloride	20	21.3	107	21.6	108	1	67-128/18
78-93-3	Methyl ethyl ketone	80	89.6	112	87.2	109	3	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	22.4	112	22.3	112	0	73-132/17
91-20-3	Naphthalene	20	20.7	104	21.2	106	2	70-136/20
103-65-1	n-Propylbenzene	20	19.9	100	18.2	91	9	71-127/17
100-42-5	Styrene	20	23.2	116	21.0	105	10	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	23.9	120	23.7	119	1	73-133/17
75-65-0	Tert-Butyl Alcohol	100	132	132	116	116	13	60-149/26
630-20-6	1,1,1,2-Tetrachloroethane	20	22.0	110	21.5	108	2	77-130/16
71-55-6	1,1,1-Trichloroethane	20	22.5	113	19.3	97	15	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	20.4	102	20.5	103	0	77-129/17
79-00-5	1,1,2-Trichloroethane	20	21.5	108	20.8	104	3	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	21.3	107	21.9	110	3	70-133/18
96-18-4	1,2,3-Trichloropropane	20	22.2	111	19.2	96	14	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	20.8	104	20.1	101	3	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	20.0	100	19.5	98	3	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	20.6	103	19.7	99	4	77-129/17
127-18-4	Tetrachloroethylene	20	19.9	100	17.3	87	14	69-127/20
108-88-3	Toluene	20	21.3	107	19.7	99	8	75-122/17
79-01-6	Trichloroethylene	20	21.3	107	18.6	93	14	78-123/17
75-69-4	Trichlorofluoromethane	20	17.7	89	18.7	94	5	65-136/23
75-01-4	Vinyl chloride	20	16.0	80	15.8	79	1	57-146/22
	m,p-Xylene	40	42.8	107	38.6	97	10	76-125/17
95-47-6	o-Xylene	20	22.7	114	19.8	99	14	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	103%	105%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C43032
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
VW2203-BS	W58705.D	1	11/30/15	CV	n/a	n/a	VW2203
VW2203-BSD	W58706.D	1	11/30/15	CV	n/a	n/a	VW2203

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

C43032-1, C43032-2, C43032-3, C43032-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
2037-26-5	Toluene-D8	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	109%	99%	70-130%

(a) RPD exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria. AZ:R7

* = 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: C43032
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	GP8724/GN17971	20	0.0	mg/l	500	468	93.5	90-110%
HEM Oil and Grease	GP8730/GN17980	5.0	0.0	mg/l	40	35.8	89.5	78-114%
Solids, Total Suspended	GN17947	5.0	0.0	mg/l	1000	940	94.0	80-120%

Associated Samples:
Batch GP8724: C43032-1, C43032-3
Batch GP8730: C43032-1, C43032-3
Batch GN17947: C43032-1, C43032-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43032
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	GP8724/GN17971	mg/l	500	481	2.8	25%
HEM Oil and Grease	GP8730/GN17980	mg/l	40	35.2	1.7	18%

Associated Samples:
Batch GP8724: C43032-1, C43032-3
Batch GP8730: C43032-1, C43032-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43032
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	GN17947	C43020-3	mg/l	36.0	37.0	2.7	0-5%

Associated Samples:
Batch GN17947: C43032-1, C43032-3
(*) Outside of QC limits

7.3

7

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43032
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	GP8724/GN17971	C43032-1	mg/l	0.0	250	243	96.3	90-110%
HEM Oil and Grease	GP8730/GN17980	C43032-1	mg/l	1.8	40	31.2	71.0*(a)	78-114%

Associated Samples:
Batch GP8724: C43032-1, C43032-3
Batch GP8730: C43032-1, C43032-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity. AZ:M2

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43032
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	GP8724/GN17971	C43032-1	mg/l	0.0	250	247	1.8	25%

Associated Samples:
Batch GP8724: C43032-1, C43032-3
(*) 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			
										HQUST-GW-EFF						
Date	Discharge Totalizer	INF Filter (PSI)	EFF Filter (PSI)	Discharge Filter (PSI)	CV1 Top gauge (PSI)	CV2 Top gauge (PSI)	CV2 Lower gauge (PSI)	Tank (PSI)	Outlet (PSI)	pH	Temp. (^{o}F)	Conductivity (µS/cm)	523A Counter	523A Pressure (PSI)	524A Counter	524A Pressure (PSI)
11/24/15	1,970,960	8	8	6	14	7	7	NT	NT	7.03	77.6	2.78	NT	NT	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 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

Northern California
ACCUTEST
LABORATORIES

08/25/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C41223

Sampling Date: 08/12/15

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: **78**

NELAP ACCREDITED TNI LABORATORY

James J. Rhudy
Lab Director

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

Client Service contact: 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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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C41223

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C41223-1	08/12/15	07:55	JVM	08/13/15	AQ	Ground Water	HQUST-532A
C41223-2	08/12/15	07:59	JVM	08/13/15	AQ	Ground Water	HQUST-532A
C41223-3	08/12/15	08:40	JVM	08/13/15	AQ	Ground Water	HQUST-526A
C41223-4	08/12/15	09:10	JVM	08/13/15	AQ	Ground Water	CEP-528A
C41223-5	08/12/15	09:45	JVM	08/13/15	AQ	Ground Water	HQUST-525A
C41223-6	08/12/15	10:15	JVM	08/13/15	AQ	Ground Water	CEP-520A
C41223-7	08/12/15	00:00	JVM	08/13/15	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C41223
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	8/25/2015 9:12:49 PM

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/12/2015 and were received at Accutest on 08/13/2015 properly preserved, at 1.9 Deg. C and intact. These Samples received an Accutest job number of C41223. 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:** VQ1339

- Sample(s) C41316-3MS, C41316-3MSD were used as the QC samples indicated.
- Sample(s) C41223-4, C41223-5, C41223-6, C41223-7, C41223-4 have for 1,1,1,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,2-Dibromoethane, Dibromochloromethane, Methyl chloride, Styrene, trans-1,3-Dichloropropene a CCV outside of control limits (biased high); not detected in sample.
- Blank Spike and Matrix Spike Recovery(s) for 1,3-Dichloropropane, Bromobenzene, p-Dichlorobenzene are outside control limits laboratory control limits (high bias); not detected in associated samples.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,2,4-Trimethylbenzene, 1,2-Dibromoethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 4-Methyl-2-pentanone, Benzene, Chlorobenzene, cis-1,2-Dichloroethylene, Ethylbenzene, Isopropylbenzene, n-Butylbenzene, n-Propylbenzene, o-Chlorotoluene, o-Dichlorobenzene, p-Isopropyltoluene, Styrene, tert-Butylbenzene, Toluene, Trichloroethylene, Xylene (total), Hexachlorobutadiene, m-Dichlorobenzene, sec-Butylbenzene are outside laboratory 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 Hexachlorobutadiene, m-Dichlorobenzene, Methyl Tert Butyl Ether, sec-Butylbenzene are outside laboratory control limits for sample C41316-3MSD.
- Sample C41223-6 has surrogate (Toluene-D8) outside of in-house control limits; but within method acceptance limits.

Matrix: AQ **Batch ID:** VU1208

- Sample(s) C41223-3MS, C41223-3MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for 1,3-Dichloropropane, 2-Hexanone, 4-Methyl-2-pentanone, Acetone, cis-1,2-Dichloroethylene, Dichlorodifluoromethane, Methyl ethyl ketone, Methylene chloride are outside laboratory control limits (high bias); not detected in associated samples.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP9994

- Sample(s) C41223-1MS, C41223-1MSD, C41223-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP9994-SD1. Serial dilution indicates possible matrix interference.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP8221

- Sample(s) C41223-4MS, C41223-4MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP8242

- Sample(s) C41223-1MS, C41223-1MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ	Batch ID: GN17103

- Sample(s) C41256-4DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ	Batch ID: GP8235

- Sample(s) C41227-4MS, C41227-4MSD 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: C41223
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/12/15

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C41223-1	**HQUST-532A**					
Iron		2130	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		202	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		5.9	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		663	50		mg/l	EPA 300/SW846 9056A
C41223-2	**HQUST-532A**					
Iron		1440	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		202	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.0	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		692	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.1	1.0		mg/l	SM5310 C-00
C41223-3	**HQUST-526A**					
Iron		1510	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		287	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.0	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		738	50		mg/l	EPA 300/SW846 9056A
C41223-4	**CEP-528A**					
Chloroform		1.3	0.50		ug/l	SW846 8260B
Iron		10800	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		293	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		26.4	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [a]		954	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.5	1.0		mg/l	SM5310 C-00
C41223-5	**HQUST-525A**					
Iron		517	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		244	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.5	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		629	25		mg/l	EPA 300/SW846 9056A
C41223-6	**CEP-520A**					
Trichlorofluoromethane		1.8	0.50		ug/l	SW846 8260B
Iron		14800	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		85.5	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.56	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		6.4	0.50		mg/l	EPA 300/SW846 9056A

Summary of Hits

Job Number: C41223
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/12/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Total Organic Carbon		1.8	1.0		mg/l	SM5310 C-00

C41223-7 **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-532A		
Lab Sample ID:	C41223-1	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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	U29685.D	1	08/19/15	CV	n/a	n/a	VU1208
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 [a]	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	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene [a]	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:	C41223-1	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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 [a]	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 [a]	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone [a]	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	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	108%		78-125%
2037-26-5	Toluene-D8	101%		86-114%
460-00-4	4-Bromofluorobenzene	95%		80-113%

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:	C41223-1	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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:M1

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:	C41223-1	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	2130	200	ug/l	1	08/14/15	08/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5120
(2) Prep QC Batch: MP9994

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C41223-1	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	202	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	5.9	0.10	mg/l	1	08/13/15 22:22	RL	EPA 300/SW846 9056A
Sulfate [a]	663	50	mg/l	100	08/20/15 13:05	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/19/15 09:50	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C41223-2	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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	U29686.D	1	08/19/15	CV	n/a	n/a	VU1208
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 [a]	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	0.50	ug/l	
75-71-8	Dichlorodifluoromethane [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene [a]	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:	C41223-2	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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 [a]	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 [a]	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone [a]	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	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%		78-125%
2037-26-5	Toluene-D8	99%		86-114%
460-00-4	4-Bromofluorobenzene	92%		80-113%

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:	C41223-2	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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:M1

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:	C41223-2	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	1440	200	ug/l	1	08/14/15	08/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5120
(2) Prep QC Batch: MP9994

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C41223-2	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	202	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	6.0	0.10	mg/l	1	08/13/15 22:39	RL	EPA 300/SW846 9056A
Sulfate [a]	692	50	mg/l	100	08/20/15 14:15	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.1	1.0	mg/l	1	08/19/15 09:50	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C41223-3	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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	U29687.D	25	08/19/15	CV	n/a	n/a	VU1208
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	500	ug/l	
71-43-2	Benzene	ND	25	ug/l	
108-86-1	Bromobenzene	ND	25	ug/l	
74-97-5	Bromochloromethane	ND	25	ug/l	
75-27-4	Bromodichloromethane	ND	13	ug/l	
75-25-2	Bromoform	ND	13	ug/l	
104-51-8	n-Butylbenzene	ND	50	ug/l	
135-98-8	sec-Butylbenzene	ND	50	ug/l	
98-06-6	tert-Butylbenzene	ND	50	ug/l	
108-90-7	Chlorobenzene	ND	13	ug/l	
75-00-3	Chloroethane	ND	13	ug/l	
67-66-3	Chloroform	ND	13	ug/l	
95-49-8	o-Chlorotoluene	ND	50	ug/l	
106-43-4	p-Chlorotoluene	ND	50	ug/l	
75-15-0	Carbon disulfide	ND	25	ug/l	
56-23-5	Carbon tetrachloride	ND	13	ug/l	
75-34-3	1,1-Dichloroethane	ND	13	ug/l	
75-35-4	1,1-Dichloroethylene	ND	13	ug/l	
563-58-6	1,1-Dichloropropene	ND	25	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	ug/l	
106-93-4	1,2-Dibromoethane	ND	25	ug/l	
107-06-2	1,2-Dichloroethane	ND	13	ug/l	
78-87-5	1,2-Dichloropropane	ND	13	ug/l	
142-28-9	1,3-Dichloropropane [a]	ND	25	ug/l	
108-20-3	Di-Isopropyl ether	ND	50	ug/l	
594-20-7	2,2-Dichloropropane	ND	25	ug/l	
124-48-1	Dibromochloromethane	ND	13	ug/l	
75-71-8	Dichlorodifluoromethane [a]	ND	13	ug/l	
156-59-2	cis-1,2-Dichloroethylene [a]	ND	13	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	13	ug/l	
541-73-1	m-Dichlorobenzene	ND	13	ug/l	
95-50-1	o-Dichlorobenzene	ND	13	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:	C41223-3	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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	13	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	13	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	13	ug/l	
100-41-4	Ethylbenzene	ND	25	ug/l	
591-78-6	2-Hexanone [a]	ND	250	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	ug/l	
98-82-8	Isopropylbenzene	ND	25	ug/l	
99-87-6	p-Isopropyltoluene	ND	50	ug/l	
108-10-1	4-Methyl-2-pentanone [a]	ND	250	ug/l	
74-83-9	Methyl bromide	ND	50	ug/l	
74-87-3	Methyl chloride	ND	25	ug/l	
74-95-3	Methylene bromide	ND	25	ug/l	
75-09-2	Methylene chloride [a]	ND	130	ug/l	
78-93-3	Methyl ethyl ketone [a]	ND	250	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	25	ug/l	
91-20-3	Naphthalene	ND	130	ug/l	
103-65-1	n-Propylbenzene	ND	50	ug/l	
100-42-5	Styrene	ND	25	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	13	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	13	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	13	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	50	ug/l	
127-18-4	Tetrachloroethylene	ND	13	ug/l	
108-88-3	Toluene	ND	25	ug/l	
79-01-6	Trichloroethylene	ND	13	ug/l	
75-69-4	Trichlorofluoromethane	ND	13	ug/l	
75-01-4	Vinyl chloride	ND	13	ug/l	
1330-20-7	Xylene (total)	ND	50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		78-125%
2037-26-5	Toluene-D8	100%		86-114%
460-00-4	4-Bromofluorobenzene	91%		80-113%

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:	C41223-3	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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:M1

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:	C41223-3	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	1510	200	ug/l	1	08/14/15	08/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5120
(2) Prep QC Batch: MP9994

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C41223-3	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	287	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	4.0	0.10	mg/l	1	08/13/15 22:57	RL	EPA 300/SW846 9056A
Sulfate [a]	738	50	mg/l	100	08/20/15 14:32	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/19/15 09:50	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C41223-4	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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	Q30792.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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	1.3	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 [b]	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 [a]	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 [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-528A		
Lab Sample ID:	C41223-4	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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	96%		78-125%
2037-26-5	Toluene-D8	99%		86-114%
460-00-4	4-Bromofluorobenzene	94%		80-113%

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:	C41223-4	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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:L5
(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:	CEP-528A		
Lab Sample ID:	C41223-4	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	10800	200	ug/l	1	08/14/15	08/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5120
(2) Prep QC Batch: MP9994

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C41223-4	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate [a]	26.4	0.50	mg/l	5	08/13/15 23:14	RL	EPA 300/SW846 9056A
Sulfate [a]	954	50	mg/l	100	08/20/15 14:49	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.5	1.0	mg/l	1	08/19/15 09:50	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C41223-5	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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	Q30793.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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 [b]	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 [a]	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 [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-525A		
Lab Sample ID:	C41223-5	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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	96%		78-125%
2037-26-5	Toluene-D8	100%		86-114%
460-00-4	4-Bromofluorobenzene	92%		80-113%

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:	C41223-5	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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:L5
(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-525A		
Lab Sample ID:	C41223-5	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	517	200	ug/l	1	08/14/15	08/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5120
(2) Prep QC Batch: MP9994

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C41223-5	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	244	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	4.5	0.10	mg/l	1	08/14/15 00:06	RL	EPA 300/SW846 9056A
Sulfate [a]	629	25	mg/l	50	08/20/15 15:07	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/19/15 09:50	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C41223-6	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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	Q30794.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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 [b]	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 [a]	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 [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:	C41223-6	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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	1.8	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	96%		78-125%
2037-26-5	Toluene-D8	84% [c]		86-114%
460-00-4	4-Bromofluorobenzene	89%		80-113%

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:	C41223-6	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
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:L5
(b) CCV outside of control limits (biased high); not detected in sample. AZ:V1
(c) Outside of in-house control limits; but within method acceptance limits.

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:	C41223-6	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	14800	200	ug/l	1	08/14/15	08/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5120
(2) Prep QC Batch: MP9994

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C41223-6	**Date Sampled:**	08/12/15
Matrix:	AQ - Ground Water	**Date Received:**	08/13/15
		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	85.5	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	0.56	0.10	mg/l	1	08/14/15 00:23	RL	EPA 300/SW846 9056A
Sulfate	6.4	0.50	mg/l	1	08/20/15 13:57	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.8	1.0	mg/l	1	08/19/15 09:50	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C41223-7	**Date Sampled:**	08/12/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/13/15
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	Q30791.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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 [b]	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 [a]	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 [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:	C41223-7	**Date Sampled:**	08/12/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/13/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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	96%		78-125%
2037-26-5	Toluene-D8	95%		86-114%
460-00-4	4-Bromofluorobenzene	93%		80-113%

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:	C41223-7	**Date Sampled:**	08/12/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/13/15
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:L5
(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

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: C41223
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.
L5	The associated blank spike recovery was above method acceptance limits. No analyte detected in sample.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
R9	Sample RPD exceeded the laboratory acceptance limit.
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 # 807790134678
Bottle Order Control # C41223
Accutest Quote #
Accutest NC Job #: C ~~C71223~~

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: J. Vmontante

Project Information

Project Name: HQUST
Street:
City: State:
Project #: PO 1152
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	NaOHZn	NaHSO4	MeOH	ENCORE	Alk	NO3 SO4	Fe (total)	TOC	8260 VOC	LAB USE ONLY
1	HQUST-532A	8/12/15	0755	JVM	GW	7									X	X	X	X	X	
2	HQUST-532A	8/12/15	0759	JVM	GW	7									X	X	X	X	X	
3	HQUST-526A	8/12/15	0840	JVM	GW	7									X	X	X	X	X	
4	CEP-528A	8/12/15	0910	JVM	GW	7									X	X	X	X	X	
5	HQUST-525A	8/12/15	0945	JVM	GW	7									X	X	X	X	X	
6	CEP-520A	8/12/15	1015	JVM	GW	7									X	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	J. Bejarano	8/12/15 1235	1 [signature]	2 [signature]	8/12/15 1706	2 Fedex
3	Relinquished by: Fedex	Date Time: 8/13/15 0940	Received By: 3 [signature]	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice (Y) N; Cooler Temp. 1.9/1.9 °C

5.2 5

C41223: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C41223 **Client:** CITY OF TUSCON **Project:** HQUST

Date / Time Received: 8/13/2015 9:40:00 AM **Delivery Method:** FedEx **Airbill #'s:** 807790134678

Cooler Temps (Initial/Adjusted): #1: (1.9/1.9);

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

C41223: 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: C41223
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
VU1208-MB	U29681.D	1	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

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: C41223
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
VU1208-MB	U29681.D	1	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

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	
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%	78-125%
2037-26-5	Toluene-D8	104%	86-114%

Method Blank Summary

Job Number: C41223
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
VU1208-MB	U29681.D	1	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	80-113%

Method Blank Summary

Job Number: C41223
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
VQ1339-MB	Q30790.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

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: C41223
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
VQ1339-MB	Q30790.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

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	96%	78-125%
2037-26-5	Toluene-D8	100%	86-114%

Method Blank Summary

Job Number: C41223
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
VQ1339-MB	Q30790.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	92%	80-113%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41223
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
VU1208-BS	U29676.D	1	08/19/15	CV	n/a	n/a	VU1208
VU1208-BSD	U29677.D	1	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	102	128	94.3	118	8	58-137/12
71-43-2	Benzene	20	21.4	107	20.4	102	5	77-118/10
108-86-1	Bromobenzene	20	21.6	108	21.3	107	1	78-122/10
74-97-5	Bromochloromethane	20	22.4	112	21.3	107	5	76-124/10
75-27-4	Bromodichloromethane	20	21.2	106	20.4	102	4	74-121/10
75-25-2	Bromoform	20	16.7	84	16.4	82	2	58-133/10
104-51-8	n-Butylbenzene	20	23.0	115	22.4	112	3	75-125/10
135-98-8	sec-Butylbenzene	20	22.4	112	22.0	110	2	76-127/10
98-06-6	tert-Butylbenzene	20	22.3	112	21.9	110	2	76-124/10
108-90-7	Chlorobenzene	20	20.9	105	20.4	102	2	77-120/10
75-00-3	Chloroethane	20	18.4	92	18.1	91	2	63-117/10
67-66-3	Chloroform	20	21.9	110	20.4	102	7	74-123/10
95-49-8	o-Chlorotoluene	20	20.4	102	21.0	105	3	76-125/10
106-43-4	p-Chlorotoluene	20	21.9	110	21.7	109	1	76-123/10
75-15-0	Carbon disulfide	20	22.2	111	21.2	106	5	57-126/11
56-23-5	Carbon tetrachloride	20	22.1	111	21.7	109	2	72-128/11
75-34-3	1,1-Dichloroethane	20	21.5	108	20.1	101	7	70-120/10
75-35-4	1,1-Dichloroethylene	20	21.5	108	20.9	105	3	65-120/11
563-58-6	1,1-Dichloropropene	20	19.7	99	19.1	96	3	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	21.6	108	21.7	109	0	63-128/10
106-93-4	1,2-Dibromoethane	20	21.5	108	21.1	106	2	78-123/10
107-06-2	1,2-Dichloroethane	20	21.4	107	20.4	102	5	72-123/10
78-87-5	1,2-Dichloropropane	20	21.9	110	20.7	104	6	76-119/10
142-28-9	1,3-Dichloropropane	20	22.4	112	21.9	110	2	78-122/10
108-20-3	Di-Isopropyl ether	20	22.3	112	20.9	105	6	69-124/10
594-20-7	2,2-Dichloropropane	20	23.0	115	22.0	110	4	68-129/10
124-48-1	Dibromochloromethane	20	17.9	90	17.7	89	1	75-124/10
75-71-8	Dichlorodifluoromethane	20	21.9	110	25.7	129	16	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	22.7	114	21.4	107	6	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	23.5	118	22.4	112	5	76-125/10
541-73-1	m-Dichlorobenzene	20	21.3	107	20.8	104	2	77-121/10
95-50-1	o-Dichlorobenzene	20	21.2	106	20.8	104	2	77-120/10
106-46-7	p-Dichlorobenzene	20	21.0	105	20.6	103	2	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	19.9	100	18.8	94	6	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	21.6	108	21.0	105	3	73-122/10
100-41-4	Ethylbenzene	20	21.9	110	21.3	107	3	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41223
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
VU1208-BS	U29676.D	1	08/19/15	CV	n/a	n/a	VU1208
VU1208-BSD	U29677.D	1	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	103	129	100	125	3	71-139/10
87-68-3	Hexachlorobutadiene	20	21.8	109	21.8	109	0	69-127/11
98-82-8	Isopropylbenzene	20	21.9	110	21.4	107	2	77-125/10
99-87-6	p-Isopropyltoluene	20	18.8	94	18.5	93	2	76-125/10
108-10-1	4-Methyl-2-pentanone	80	104	130	99.4	124	5	71-132/10
74-83-9	Methyl bromide	20	20.9	105	20.1	101	4	66-123/10
74-87-3	Methyl chloride	20	24.7	124	21.5	108	14	50-138/19
74-95-3	Methylene bromide	20	22.2	111	21.3	107	4	77-125/10
75-09-2	Methylene chloride	20	22.8	114	21.8	109	4	65-124/14
78-93-3	Methyl ethyl ketone	80	99.5	124	94.6	118	5	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	21.1	106	20.2	101	4	73-124/10
91-20-3	Naphthalene	20	20.2	101	20.2	101	0	68-122/12
103-65-1	n-Propylbenzene	20	21.9	110	21.5	108	2	76-123/10
100-42-5	Styrene	20	17.9	90	17.1	86	5	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	22.9	115	21.6	108	6	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	21.8	109	21.3	107	2	79-123/10
71-55-6	1,1,1-Trichloroethane	20	22.2	111	21.3	107	4	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	21.9	110	21.6	108	1	77-123/10
79-00-5	1,1,2-Trichloroethane	20	21.3	107	20.5	103	4	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	21.3	107	21.6	108	1	70-126/11
96-18-4	1,2,3-Trichloropropane	20	21.2	106	20.6	103	3	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	21.2	106	21.3	107	0	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	22.3	112	21.7	109	3	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	23.3	117	22.6	113	3	79-127/10
127-18-4	Tetrachloroethylene	20	20.3	102	20.4	102	0	71-124/10
108-88-3	Toluene	20	21.3	107	20.9	105	2	78-120/10
79-01-6	Trichloroethylene	20	20.9	105	20.2	101	3	75-119/10
75-69-4	Trichlorofluoromethane	20	18.7	94	21.4	107	13	67-129/14
75-01-4	Vinyl chloride	20	22.4	112	20.0	100	11	60-133/15
1330-20-7	Xylene (total)	60	61.2	102	59.2	99	3	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	104%	100%	78-125%
2037-26-5	Toluene-D8	98%	100%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41223
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
VU1208-BS	U29676.D	1	08/19/15	CV	n/a	n/a	VU1208
VU1208-BSD	U29677.D	1	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	80-113%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41223
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
VQ1339-BS	Q30787.D	1	08/20/15	JC	n/a	n/a	VQ1339
VQ1339-BSD	Q30788.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	91.5	114	95.8	120	5	58-137/12
71-43-2	Benzene	20	22.1	111	21.8	109	1	77-118/10
108-86-1	Bromobenzene	20	24.6	123* [a]	23.5	118	5	78-122/10
74-97-5	Bromochloromethane	20	22.4	112	22.7	114	1	76-124/10
75-27-4	Bromodichloromethane	20	22.2	111	21.4	107	4	74-121/10
75-25-2	Bromoform	20	21.3	107	20.7	104	3	58-133/10
104-51-8	n-Butylbenzene	20	23.8	119	22.6	113	5	75-125/10
135-98-8	sec-Butylbenzene	20	23.5	118	22.3	112	5	76-127/10
98-06-6	tert-Butylbenzene	20	23.6	118	22.9	115	3	76-124/10
108-90-7	Chlorobenzene	20	23.4	117	22.8	114	3	77-120/10
75-00-3	Chloroethane	20	16.6	83	17.4	87	5	63-117/10
67-66-3	Chloroform	20	21.9	110	22.2	111	1	74-123/10
95-49-8	o-Chlorotoluene	20	25.0	125	24.1	121	4	76-125/10
106-43-4	p-Chlorotoluene	20	22.3	112	21.3	107	5	76-123/10
75-15-0	Carbon disulfide	20	17.1	86	17.5	88	2	57-126/11
56-23-5	Carbon tetrachloride	20	20.6	103	20.1	101	2	72-128/11
75-34-3	1,1-Dichloroethane	20	20.7	104	21.1	106	2	70-120/10
75-35-4	1,1-Dichloroethylene	20	19.2	96	19.3	97	1	65-120/11
563-58-6	1,1-Dichloropropene	20	18.7	94	18.4	92	2	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	21.4	107	20.7	104	3	63-128/10
106-93-4	1,2-Dibromoethane	20	24.1	121	23.4	117	3	78-123/10
107-06-2	1,2-Dichloroethane	20	22.2	111	21.8	109	2	72-123/10
78-87-5	1,2-Dichloropropane	20	22.7	114	22.2	111	2	76-119/10
142-28-9	1,3-Dichloropropane	20	24.7	124* [a]	23.9	120	3	78-122/10
108-20-3	Di-Isopropyl ether	20	21.6	108	21.7	109	0	69-124/10
594-20-7	2,2-Dichloropropane	20	19.7	99	20.4	102	3	68-129/10
124-48-1	Dibromochloromethane	20	23.2	116	22.3	112	4	75-124/10
75-71-8	Dichlorodifluoromethane	20	16.5	83	17.6	88	6	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	23.1	116	23.4	117	1	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	23.8	119	23.2	116	3	76-125/10
541-73-1	m-Dichlorobenzene	20	24.0	120	23.0	115	4	77-121/10
95-50-1	o-Dichlorobenzene	20	23.5	118	22.7	114	3	77-120/10
106-46-7	p-Dichlorobenzene	20	23.8	119* [a]	22.9	115	4	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	18.7	94	19.3	97	3	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	23.4	117	22.4	112	4	73-122/10
100-41-4	Ethylbenzene	20	23.2	116	22.6	113	3	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41223
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
VQ1339-BS	Q30787.D	1	08/20/15	JC	n/a	n/a	VQ1339
VQ1339-BSD	Q30788.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	103	129	102	128	1	71-139/10
87-68-3	Hexachlorobutadiene	20	23.7	119	22.7	114	4	69-127/11
98-82-8	Isopropylbenzene	20	23.2	116	22.5	113	3	77-125/10
99-87-6	p-Isopropyltoluene	20	24.0	120	22.9	115	5	76-125/10
108-10-1	4-Methyl-2-pentanone	80	100	125	100	125	0	71-132/10
74-83-9	Methyl bromide	20	19.3	97	20.0	100	4	66-123/10
74-87-3	Methyl chloride	20	17.4	87	18.0	90	3	50-138/19
74-95-3	Methylene bromide	20	23.4	117	23.1	116	1	77-125/10
75-09-2	Methylene chloride	20	20.4	102	20.8	104	2	65-124/14
78-93-3	Methyl ethyl ketone	80	96.8	121	98.2	123	1	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	20.5	103	20.9	105	2	73-124/10
91-20-3	Naphthalene	20	21.1	106	20.9	105	1	68-122/12
103-65-1	n-Propylbenzene	20	23.0	115	22.1	111	4	76-123/10
100-42-5	Styrene	20	25.0	125	24.2	121	3	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	22.1	111	22.4	112	1	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	24.1	121	23.4	117	3	79-123/10
71-55-6	1,1,1-Trichloroethane	20	20.3	102	20.6	103	1	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	24.0	120	23.3	117	3	77-123/10
79-00-5	1,1,2-Trichloroethane	20	23.9	120	23.0	115	4	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	22.7	114	22.3	112	2	70-126/11
96-18-4	1,2,3-Trichloropropane	20	21.5	108	20.8	104	3	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	23.0	115	22.4	112	3	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	23.6	118	22.8	114	3	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	24.4	122	23.6	118	3	79-127/10
127-18-4	Tetrachloroethylene	20	21.5	108	20.7	104	4	71-124/10
108-88-3	Toluene	20	23.2	116	22.6	113	3	78-120/10
79-01-6	Trichloroethylene	20	21.4	107	21.2	106	1	75-119/10
75-69-4	Trichlorofluoromethane	20	18.3	92	19.9	100	8	67-129/14
75-01-4	Vinyl chloride	20	18.0	90	19.2	96	6	60-133/15
1330-20-7	Xylene (total)	60	70.0	117	68.3	114	2	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	93%	98%	78-125%
2037-26-5	Toluene-D8	101%	101%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41223
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
VQ1339-BS	Q30787.D	1	08/20/15	JC	n/a	n/a	VQ1339
VQ1339-BSD	Q30788.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	100%	80-113%

(a) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L5

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C41223
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
VU1208-LCS	U29680.D	1	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	78-125%
2037-26-5	Toluene-D8	103%	86-114%
460-00-4	4-Bromofluorobenzene	93%	80-113%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C41223
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
VQ1339-LCS	Q30789.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	78-125%
2037-26-5	Toluene-D8	101%	86-114%
460-00-4	4-Bromofluorobenzene	94%	80-113%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41223
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
C41223-3MS	U29699.D	25	08/19/15	CV	n/a	n/a	VU1208
C41223-3MSD	U29700.D	25	08/19/15	CV	n/a	n/a	VU1208
C41223-3	U29687.D	25	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

CAS No.	Compound	C41223-3 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		2000	2870	144* [a]	2000	2720	136	5	58-137/12
71-43-2	Benzene	ND		500	561	112	500	569	114	1	77-118/10
108-86-1	Bromobenzene	ND		500	548	110	500	549	110	0	78-122/10
74-97-5	Bromochloromethane	ND		500	608	122	500	604	121	1	76-124/10
75-27-4	Bromodichloromethane	ND		500	544	109	500	536	107	1	74-121/10
75-25-2	Bromoform	ND		500	357	71	500	349	70	2	58-133/10
104-51-8	n-Butylbenzene	ND		500	525	105	500	552	110	5	75-125/10
135-98-8	sec-Butylbenzene	ND		500	519	104	500	545	109	5	76-127/10
98-06-6	tert-Butylbenzene	ND		500	515	103	500	541	108	5	76-124/10
108-90-7	Chlorobenzene	ND		500	548	110	500	547	109	0	77-120/10
75-00-3	Chloroethane	ND		500	518	104	500	529	106	2	63-117/10
67-66-3	Chloroform	ND		500	599	120	500	592	118	1	74-123/10
95-49-8	o-Chlorotoluene	ND		500	505	101	500	500	100	1	76-125/10
106-43-4	p-Chlorotoluene	ND		500	553	111	500	554	111	0	76-123/10
75-15-0	Carbon disulfide	ND		500	382	76	500	397	79	4	57-126/11
56-23-5	Carbon tetrachloride	ND		500	504	101	500	538	108	7	72-128/11
75-34-3	1,1-Dichloroethane	ND		500	579	116	500	579	116	0	70-120/10
75-35-4	1,1-Dichloroethylene	ND		500	515	103	500	554	111	7	65-120/11
563-58-6	1,1-Dichloropropene	ND		500	467	93	500	493	99	5	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	567	113	500	532	106	6	63-128/10
106-93-4	1,2-Dibromoethane	ND		500	595	119	500	571	114	4	78-123/10
107-06-2	1,2-Dichloroethane	ND		500	594	119	500	575	115	3	72-123/10
78-87-5	1,2-Dichloropropane	ND		500	590	118	500	583	117	1	76-119/10
142-28-9	1,3-Dichloropropane	ND		500	618	124* [a]	500	596	119	4	78-122/10
108-20-3	Di-Isopropyl ether	ND		500	615	123	500	604	121	2	69-124/10
594-20-7	2,2-Dichloropropane	ND		500	511	102	500	536	107	5	68-129/10
124-48-1	Dibromochloromethane	ND		500	421	84	500	414	83	2	75-124/10
75-71-8	Dichlorodifluoromethane	ND		500	754	151* [a]	500	756	151* [a]	0	37-149/21
156-59-2	cis-1,2-Dichloroethylene	ND		500	616	123* [a]	500	621	124* [a]	1	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		500	597	119	500	585	117	2	76-125/10
541-73-1	m-Dichlorobenzene	ND		500	539	108	500	536	107	1	77-121/10
95-50-1	o-Dichlorobenzene	ND		500	548	110	500	540	108	1	77-120/10
106-46-7	p-Dichlorobenzene	ND		500	533	107	500	531	106	0	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		500	501	100	500	518	104	3	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		500	554	111	500	535	107	3	73-122/10
100-41-4	Ethylbenzene	ND		500	548	110	500	558	112	2	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41223
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
C41223-3MS	U29699.D	25	08/19/15	CV	n/a	n/a	VU1208
C41223-3MSD	U29700.D	25	08/19/15	CV	n/a	n/a	VU1208
C41223-3	U29687.D	25	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

CAS No.	Compound	C41223-3 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		2000	2940	147* [a]	2000	2750	138	7	71-139/10
87-68-3	Hexachlorobutadiene	ND		500	481	96	500	514	103	7	69-127/11
98-82-8	Isopropylbenzene	ND		500	547	109	500	558	112	2	77-125/10
99-87-6	p-Isopropyltoluene	ND		500	441	88	500	461	92	4	76-125/10
108-10-1	4-Methyl-2-pentanone	ND		2000	2960	148* [a]	2000	2770	139* [a]	7	71-132/10
74-83-9	Methyl bromide	ND		500	576	115	500	578	116	0	66-123/10
74-87-3	Methyl chloride	ND		500	687	137	500	678	136	1	50-138/19
74-95-3	Methylene bromide	ND		500	620	124	500	598	120	4	77-125/10
75-09-2	Methylene chloride	ND		500	627	125* [a]	500	637	127* [a]	2	65-124/14
78-93-3	Methyl ethyl ketone	ND		2000	2850	143* [a]	2000	2720	136	5	67-139/11
1634-04-4	Methyl Tert Butyl Ether	ND		500	576	115	500	576	115	0	73-124/10
91-20-3	Naphthalene	ND		500	517	103	500	517	103	0	68-122/12
103-65-1	n-Propylbenzene	ND		500	513	103	500	536	107	4	76-123/10
100-42-5	Styrene	ND		500	469	94	500	459	92	2	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		500	627	125	500	623	125	1	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		500	572	114	500	569	114	1	79-123/10
71-55-6	1,1,1-Trichloroethane	ND		500	554	111	500	582	116	5	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	595	119	500	579	116	3	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		500	590	118	500	569	114	4	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		500	520	104	500	541	108	4	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		500	552	110	500	525	105	5	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		500	506	101	500	528	106	4	72-123/10
95-63-6	1,2,4-Trimethylbenzene	ND		500	545	109	500	554	111	2	77-122/10
108-67-8	1,3,5-Trimethylbenzene	ND		500	551	110	500	570	114	3	79-127/10
127-18-4	Tetrachloroethylene	ND		500	475	95	500	496	99	4	71-124/10
108-88-3	Toluene	ND		500	543	109	500	552	110	2	78-120/10
79-01-6	Trichloroethylene	ND		500	543	109	500	561	112	3	75-119/10
75-69-4	Trichlorofluoromethane	ND		500	605	121	500	634	127	5	67-129/14
75-01-4	Vinyl chloride	ND		500	582	116	500	591	118	2	60-133/15
1330-20-7	Xylene (total)	ND		1500	1560	104	1500	1570	105	1	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C41223-3	Limits
1868-53-7	Dibromofluoromethane	110%	109%	107%	78-125%
2037-26-5	Toluene-D8	100%	98%	100%	86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41223
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
C41223-3MS	U29699.D	25	08/19/15	CV	n/a	n/a	VU1208
C41223-3MSD	U29700.D	25	08/19/15	CV	n/a	n/a	VU1208
C41223-3	U29687.D	25	08/19/15	CV	n/a	n/a	VU1208

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

C41223-1, C41223-2, C41223-3

CAS No.	Surrogate Recoveries	MS	MSD	C41223-3	Limits
460-00-4	4-Bromofluorobenzene	105%	101%	91%	80-113%

(a) Outside laboratory control limits (high bias); not detected in associated samples. AZ:M1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41223
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
C41316-3MS	Q30806.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3MSD	Q30807.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3 [a]	Q30805.D	50	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

CAS No.	Compound	C41316-3 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		4000	4840	121	4000	5300	133	9	58-137/12
71-43-2	Benzene	275		1000	1370	110	1000	1470	120* [b]	7	77-118/10
108-86-1	Bromobenzene	ND		1000	1180	118	1000	1300	130* [c]	10	78-122/10
74-97-5	Bromochloromethane	ND		1000	1120	112	1000	1240	124	10	76-124/10
75-27-4	Bromodichloromethane	ND		1000	1010	101	1000	1100	110	9	74-121/10
75-25-2	Bromoform	ND		1000	782	78	1000	864	86	10	58-133/10
104-51-8	n-Butylbenzene	ND		1000	1190	119	1000	1320	132* [b]	10	75-125/10
135-98-8	sec-Butylbenzene	ND		1000	1170	117	1000	1300	130* [b]	11* [d]	76-127/10
98-06-6	tert-Butylbenzene	ND		1000	1440	144* [b]	1000	1590	159* [b]	10	76-124/10
108-90-7	Chlorobenzene	ND		1000	1160	116	1000	1250	125* [b]	7	77-120/10
75-00-3	Chloroethane	ND		1000	856	86	1000	928	93	8	63-117/10
67-66-3	Chloroform	ND		1000	1080	108	1000	1190	119	10	74-123/10
95-49-8	o-Chlorotoluene	ND		1000	1220	122	1000	1340	134* [b]	9	76-125/10
106-43-4	p-Chlorotoluene	ND		1000	1060	106	1000	1170	117	10	76-123/10
75-15-0	Carbon disulfide	ND		1000	672	67	1000	738	74	9	57-126/11
56-23-5	Carbon tetrachloride	ND		1000	1090	109	1000	1180	118	8	72-128/11
75-34-3	1,1-Dichloroethane	ND		1000	1050	105	1000	1150	115	9	70-120/10
75-35-4	1,1-Dichloroethylene	ND		1000	1070	107	1000	1160	116	8	65-120/11
563-58-6	1,1-Dichloropropene	ND		1000	1020	102	1000	1090	109	7	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	1010	101	1000	1120	112	10	63-128/10
106-93-4	1,2-Dibromoethane	ND		1000	1190	119	1000	1280	128* [b]	7	78-123/10
107-06-2	1,2-Dichloroethane	ND		1000	1090	109	1000	1170	117	7	72-123/10
78-87-5	1,2-Dichloropropane	ND		1000	1130	113	1000	1220	122* [b]	8	76-119/10
142-28-9	1,3-Dichloropropane	ND		1000	1210	121	1000	1300	130* [c]	7	78-122/10
108-20-3	Di-Isopropyl ether	ND		1000	1060	106	1000	1170	117	10	69-124/10
594-20-7	2,2-Dichloropropane	ND		1000	922	92	1000	996	100	8	68-129/10
124-48-1	Dibromochloromethane	ND		1000	965	97	1000	1050	105	8	75-124/10
75-71-8	Dichlorodifluoromethane	ND		1000	894	89	1000	907	91	1	37-149/21
156-59-2	cis-1,2-Dichloroethylene	ND		1000	1170	117	1000	1280	128* [b]	9	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		1000	1070	107	1000	1160	116	8	76-125/10
541-73-1	m-Dichlorobenzene	ND		1000	1140	114	1000	1270	127* [b]	11* [d]	77-121/10
95-50-1	o-Dichlorobenzene	ND		1000	1130	113	1000	1240	124* [b]	9	77-120/10
106-46-7	p-Dichlorobenzene	ND		1000	1140	114	1000	1250	125* [c]	9	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		1000	986	99	1000	1080	108	9	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		1000	1020	102	1000	1100	110	8	73-122/10
100-41-4	Ethylbenzene	258		1000	1430	117	1000	1540	128* [b]	7	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41223
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
C41316-3MS	Q30806.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3MSD	Q30807.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3 [a]	Q30805.D	50	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

CAS No.	Compound	C41316-3 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		4000	5090	127	4000	5460	137	7	71-139/10
87-68-3	Hexachlorobutadiene	ND		1000	1140	114	1000	1280	128* [b]	12* [d]	69-127/11
98-82-8	Isopropylbenzene	21.4	J	1000	1210	119	1000	1300	128* [b]	7	77-125/10
99-87-6	p-Isopropyltoluene	ND		1000	1180	118	1000	1310	131* [b]	10	76-125/10
108-10-1	4-Methyl-2-pentanone	ND		4000	5160	129	4000	5610	140* [b]	8	71-132/10
74-83-9	Methyl bromide	ND		1000	967	97	1000	1060	106	9	66-123/10
74-87-3	Methyl chloride	ND		1000	839	84	1000	906	91	8	50-138/19
74-95-3	Methylene bromide	ND		1000	1160	116	1000	1250	125	7	77-125/10
75-09-2	Methylene chloride	ND		1000	1030	103	1000	1130	113	9	65-124/14
78-93-3	Methyl ethyl ketone	ND		4000	4930	123	4000	5470	137	10	67-139/11
1634-04-4	Methyl Tert Butyl Ether	ND		1000	1010	101	1000	1130	113	11* [d]	73-124/10
91-20-3	Naphthalene	85.4	J	1000	1130	104	1000	1240	115	9	68-122/12
103-65-1	n-Propylbenzene	84.5	J	1000	1220	114	1000	1340	126* [b]	9	76-123/10
100-42-5	Styrene	ND		1000	1230	123	1000	1330	133* [b]	8	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		1000	1090	109	1000	1210	121	10	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	1160	116	1000	1250	125* [b]	7	79-123/10
71-55-6	1,1,1-Trichloroethane	ND		1000	1090	109	1000	1200	120	10	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	1160	116	1000	1270	127* [b]	9	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		1000	1180	118	1000	1270	127* [b]	7	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		1000	1100	110	1000	1210	121	10	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		1000	956	96	1000	1040	104	8	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		1000	1100	110	1000	1210	121	10	72-123/10
95-63-6	1,2,4-Trimethylbenzene	363		1000	1520	116	1000	1680	132* [b]	10	77-122/10
108-67-8	1,3,5-Trimethylbenzene	89.9	J	1000	1580	149* [b]	1000	1750	166* [b]	10	79-127/10
127-18-4	Tetrachloroethylene	ND		1000	1130	113	1000	1210	121	7	71-124/10
108-88-3	Toluene	119		1000	1280	116	1000	1380	126* [b]	8	78-120/10
79-01-6	Trichloroethylene	ND		1000	1140	114	1000	1210	121* [b]	6	75-119/10
75-69-4	Trichlorofluoromethane	ND		1000	993	99	1000	1040	104	5	67-129/14
75-01-4	Vinyl chloride	ND		1000	955	96	1000	1010	101	6	60-133/15
1330-20-7	Xylene (total)	606		3000	4140	118	3000	4470	129* [b]	8	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C41316-3	Limits
1868-53-7	Dibromofluoromethane	95%	96%		78-125%
2037-26-5	Toluene-D8	102%	101%		86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41223
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
C41316-3MS	Q30806.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3MSD	Q30807.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3 [a]	Q30805.D	50	08/20/15	JC	n/a	n/a	VQ1339

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

C41223-4, C41223-5, C41223-6, C41223-7

CAS No.	Surrogate Recoveries	MS	MSD	C41316-3	Limits
460-00-4	4-Bromofluorobenzene	99%	99%		80-113%

(a) Sample used for QC purposes only.
(b) Outside laboratory control limits. AZ:M1
(c) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L5
(d) Outside laboratory control limits. AZ:R9

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

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: C41223
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP9994
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/14/15

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	3.7	<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 MP9994: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6

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: C41223
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP9994
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/14/15

Metal	C41223-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper					
Iron	2130	2520	500	78.0	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP9994: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6

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: C41223
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP9994 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/14/15

Metal	C41223-1 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper						
Iron	2130	2460	500	66.0N(a)	2.4	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP9994: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6

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
(a) Spike recovery indicates possible matrix interference. AZ:M2

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C41223
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP9994
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/14/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	526	500	105.0	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP9994: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C41223
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP9994
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/14/15

Metal	C41223-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	2130	2750	29.3*(a)	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP9994: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

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: C41223
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	GN17103	5.0	0.0	mg/l	250	250	100.2	75-125%
Nitrogen, Nitrate	GP8221/GN17122	0.10	0.0	mg/l	5	4.76	95.2	90-110%
Sulfate	GP8242/GN17149	0.50	0.0	mg/l	5	4.91	98.2	90-110%
Total Organic Carbon	GP8235/GN17140	1.0	0.0	mg/l	25	24.1	96.3	75-125%

Associated Samples:
Batch GP8221: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8235: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8242: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GN17103: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41223
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	GN17103	mg/l	250	250	0.0	
Nitrogen, Nitrate	GP8221/GN17122	mg/l	5	4.77	0.2	25%
Sulfate	GP8242/GN17149	mg/l	5	5.34	8.4	25%
Total Organic Carbon	GP8235/GN17140	mg/l	25	25.0	3.9	

Associated Samples:
Batch GP8221: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8235: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8242: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GN17103: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41223
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	GN17103	C41256-4	mg/l	351	351	0.0	0-25%

Associated Samples:
Batch GN17103: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
(*) Outside of QC limits

8.3
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41223
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	GP8221/GN17122	C41223-4	mg/l	26.4	25	52.1	102.8	80-120%
Sulfate	GP8242/GN17149	C41223-1	mg/l	663	500	1090	85.4	80-120%
Total Organic Carbon	GP8235/GN17140	C41227-4	mg/l	0.44	25	25.8	101.6	75-125%

Associated Samples:
Batch GP8221: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8235: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8242: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41223
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	GP8221/GN17122	C41223-4	mg/l	26.4	25	51.9	0.4	
Sulfate	GP8242/GN17149	C41223-1	mg/l	663	500	1100	0.9	
Total Organic Carbon	GP8235/GN17140	C41227-4	mg/l	0.44	25	25.7	0.5	

Associated Samples:
Batch GP8221: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8235: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
Batch GP8242: C41223-1, C41223-2, C41223-3, C41223-4, C41223-5, C41223-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
ACCUTEST
LABORATORIES

08/25/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C41256

Sampling Date: 08/13/15

Report to:

City of Tucson - Env.Services
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Total number of pages in report: **72**

NELAP ACCREDITED TNI LABORATORY

James J. Rhudy
Lab Director

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

Client Service contact: 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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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C41256

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C41256-1	08/13/15	07:45	KV	08/14/15	AQ	Ground Water	HQUST-533A
C41256-2	08/13/15	08:15	KV	08/14/15	AQ	Ground Water	HQUST-531A
C41256-3	08/13/15	08:50	KV	08/14/15	AQ	Ground Water	CEP-527A
C41256-4	08/13/15	09:34	KV	08/14/15	AQ	Ground Water	HQUST-548
C41256-5	08/13/15	10:00	KV	08/14/15	AQ	Ground Water	HQUST-547
C41256-6	08/13/15	10:25	KV	08/14/15	AQ	Ground Water	CEP-519A
C41256-7	08/13/15	00:00	KV	08/14/15	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C41256
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	8/25/2015 9:55:48 PM

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/13/2015 and were received at Accutest on 08/14/2015 properly preserved, at 2.7 Deg. C and intact. These Samples received an Accutest job number of C41256. 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:** VQ1339

- Sample(s) C41316-3MS, C41316-3MSD were used as the QC samples indicated.
- Sample(s) C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7 have for 1,1,1,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,2-Dibromoethane, Dibromochloromethane, Methyl chloride, Styrene, trans-1,3-Dichloropropene, 1,1,1,2-Tetrachloroethane a CCV outside of control limits (biased high); not detected in samples.
- Blank Spike and Matrix Spike Recovery(s) for 1,3-Dichloropropane, Bromobenzene, p-Dichlorobenzene are outside control limits laboratory control limits (high bias); not detected in associated samples.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,2,4-Trimethylbenzene, 1,2-Dibromoethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 4-Methyl-2-pentanone, Benzene, Chlorobenzene, cis-1,2-Dichloroethylene, Ethylbenzene, Isopropylbenzene, n-Butylbenzene, n-Propylbenzene, o-Chlorotoluene, o-Dichlorobenzene, p-Isopropyltoluene, Styrene, tert-Butylbenzene, Toluene, Trichloroethylene, Xylene (total), Hexachlorobutadiene, m-Dichlorobenzene, sec-Butylbenzene are outside laboratory 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 Hexachlorobutadiene, m-Dichlorobenzene, Methyl Tert Butyl Ether, sec-Butylbenzene are outside laboratory control limits for sample C41316-3MSD.
- C41256-3: Dilution required due to sample foaming.

Matrix: AQ **Batch ID:** VR1392

- Sample(s) C41224-2MS, C41224-2MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP10014

- Sample(s) C41278-1MS, C41278-1MSD, C41278-1SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP8222

- Sample(s) C41057-17MS, C41057-17MSD were used as the QC samples for Sulfate.

Matrix: AQ **Batch ID:** GP8223

- Sample(s) C41256-1MS, C41256-1MSD, C41256-6MS, C41256-6MSD were used as the QC samples for Nitrogen, Nitrate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN17103

- Sample(s) C41256-4DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ	Batch ID: GP8250

- Sample(s) C41256-1MS 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: C41256
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/13/15

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C41256-1	**HQUST-533A**					
Methyl Tert Butyl Ether		3.9	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		420	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		21.5	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [a]		582	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.7	1.0		mg/l	SM5310 C-00
C41256-2	**HQUST-531A**					
Alkalinity, Total as CaCO3		248	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		8.9	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		398	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.3	1.0		mg/l	SM5310 C-00
C41256-3	**CEP-527A**					
Iron		1540	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		501	5.0		mg/l	SM2320 B-97
Sulfate [a]		514	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		27.2	1.0		mg/l	SM5310 C-00
C41256-4	**HQUST-548**					
Benzene		3.1	1.0		ug/l	SW846 8260B
sec-Butylbenzene		2.2	2.0		ug/l	SW846 8260B
Isopropylbenzene		6.8	1.0		ug/l	SW846 8260B
Methyl Tert Butyl Ether		5.2	1.0		ug/l	SW846 8260B
Naphthalene		11.1	5.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		351	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		1.5	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		390	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		3.7	1.0		mg/l	SM5310 C-00
C41256-5	**HQUST-547**					
Methyl Tert Butyl Ether		2.9	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		212	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		5.6	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		361	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.5	1.0		mg/l	SM5310 C-00
C41256-6	**CEP-519A**					
Ethylbenzene		9.0	1.0		ug/l	SW846 8260B

Summary of Hits

Job Number: C41256
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/13/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Isopropylbenzene		8.1	1.0		ug/l	SW846 8260B
Naphthalene		40.8	5.0		ug/l	SW846 8260B
n-Propylbenzene		16.6	2.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene [a]		111	4.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		44.2	2.0		ug/l	SW846 8260B
Xylene (total)		184	2.0		ug/l	SW846 8260B
Iron		321	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		152	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		31.2	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [a]		501	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.8	1.0		mg/l	SM5310 C-00

C41256-7 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-533A		
Lab Sample ID:	C41256-1	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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	Q30797.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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 [b]	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 [a]	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 [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:	C41256-1	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	3.9	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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%		78-125%
2037-26-5	Toluene-D8	97%		86-114%
460-00-4	4-Bromofluorobenzene	92%		80-113%

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:	C41256-1	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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:L5
(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-533A		
Lab Sample ID:	C41256-1	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	08/17/15	08/18/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5130
(2) Prep QC Batch: MP10014

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C41256-1	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	420	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate [a]	21.5	0.50	mg/l	5	08/14/15 18:53	RL	EPA 300/SW846 9056A
Sulfate [a]	582	25	mg/l	50	08/17/15 21:32	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.7	1.0	mg/l	1	08/18/15 11:21	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C41256-2	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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	Q30798.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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 [b]	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 [a]	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 [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:	C41256-2	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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	96%		78-125%
2037-26-5	Toluene-D8	101%		86-114%
460-00-4	4-Bromofluorobenzene	92%		80-113%

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:	C41256-2	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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:L5
(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-531A		
Lab Sample ID:	C41256-2	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	08/17/15	08/18/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5130
(2) Prep QC Batch: MP10014

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C41256-2	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	248	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	8.9	0.10	mg/l	1	08/14/15 15:25	RL	EPA 300/SW846 9056A
Sulfate [a]	398	25	mg/l	50	08/17/15 21:50	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.3	1.0	mg/l	1	08/18/15 11:21	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C41256-3	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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]	Q30799.D	5	08/20/15	JC	n/a	n/a	VQ1339
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	100	ug/l	
71-43-2	Benzene	ND	5.0	ug/l	
108-86-1	Bromobenzene [b]	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	ND	10	ug/l	
135-98-8	sec-Butylbenzene	ND	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 [c]	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 [b]	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	10	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane [c]	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:	CEP-527A		
Lab Sample ID:	C41256-3	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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 [b]	ND	2.5	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.5	ug/l	
10061-02-6	trans-1,3-Dichloropropene [c]	ND	2.5	ug/l	
100-41-4	Ethylbenzene	ND	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	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	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 [c]	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	ND	25	ug/l	
103-65-1	n-Propylbenzene	ND	10	ug/l	
100-42-5	Styrene [c]	ND	5.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	10	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [c]	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 [c]	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	ND	10	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10	ug/l	
127-18-4	Tetrachloroethylene	ND	2.5	ug/l	
108-88-3	Toluene	ND	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)	ND	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		78-125%
2037-26-5	Toluene-D8	101%		86-114%
460-00-4	4-Bromofluorobenzene	92%		80-113%

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:	C41256-3	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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) Dilution required due to sample foaming. AZ:D1
(b) AZ:L5
(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-527A		
Lab Sample ID:	C41256-3	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	1540	200	ug/l	1	08/17/15	08/18/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5130
(2) Prep QC Batch: MP10014

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C41256-3	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	501	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	< 0.10	0.10	mg/l	1	08/14/15 15:42	RL	EPA 300/SW846 9056A
Sulfate [a]	514	25	mg/l	50	08/17/15 22:07	RL	EPA 300/SW846 9056A
Total Organic Carbon	27.2	1.0	mg/l	1	08/18/15 11:21	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C41256-4	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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	Q30800.D	1	08/20/15	JC	n/a	n/a	VQ1339
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	3.1	1.0	ug/l	
108-86-1	Bromobenzene [a]	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	2.2	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 [b]	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 [a]	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 [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-548		
Lab Sample ID:	C41256-4	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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	6.8	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 [b]	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	5.2	1.0	ug/l	
91-20-3	Naphthalene	11.1	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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%		78-125%
2037-26-5	Toluene-D8	101%		86-114%
460-00-4	4-Bromofluorobenzene	95%		80-113%

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:	C41256-4	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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:L5
(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-548		
Lab Sample ID:	C41256-4	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	08/17/15	08/18/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5130
(2) Prep QC Batch: MP10014

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C41256-4	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	351	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	1.5	0.10	mg/l	1	08/14/15 15:59	RL	EPA 300/SW846 9056A
Sulfate [a]	390	25	mg/l	50	08/17/15 22:24	RL	EPA 300/SW846 9056A
Total Organic Carbon	3.7	1.0	mg/l	1	08/18/15 11:21	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C41256-5	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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	Q30801.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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 [b]	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 [a]	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 [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-547		
Lab Sample ID:	C41256-5	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	2.9	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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%		78-125%
2037-26-5	Toluene-D8	101%		86-114%
460-00-4	4-Bromofluorobenzene	93%		80-113%

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:	C41256-5	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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:L5
(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-547		
Lab Sample ID:	C41256-5	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	08/17/15	08/18/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5130
(2) Prep QC Batch: MP10014

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C41256-5	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	5.6	0.10	mg/l	1	08/14/15 16:17	RL	EPA 300/SW846 9056A
Sulfate [a]	361	25	mg/l	50	08/17/15 22:42	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.5	1.0	mg/l	1	08/18/15 11:21	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C41256-6	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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	Q30802.D	1	08/20/15	JC	n/a	n/a	VQ1339
Run #2 [a]	R36622.D	2	08/21/15	KZ	n/a	n/a	VR1392

	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 [b]	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 [c]	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 [b]	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 [c]	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:	C41256-6	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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 [b]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [c]	ND	0.50	ug/l	
100-41-4	Ethylbenzene	9.0	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	8.1	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 [c]	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	40.8	5.0	ug/l	
103-65-1	n-Propylbenzene	16.6	2.0	ug/l	
100-42-5	Styrene [c]	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 [c]	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 [c]	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	111 [d]	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	44.2	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)	184	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	95%	78-125%
2037-26-5	Toluene-D8	101%	98%	86-114%
460-00-4	4-Bromofluorobenzene	98%	98%	80-113%

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:	C41256-6	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
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:D2
(b) AZ:L5
(c) CCV outside of control limits (biased high); not detected in sample. AZ:V1
(d) 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-519A		
Lab Sample ID:	C41256-6	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	321	200	ug/l	1	08/17/15	08/18/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5130
(2) Prep QC Batch: MP10014

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C41256-6	**Date Sampled:**	08/13/15
Matrix:	AQ - Ground Water	**Date Received:**	08/14/15
		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	152	5.0	mg/l	1	08/15/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate [a]	31.2	0.50	mg/l	5	08/14/15 21:13	RL	EPA 300/SW846 9056A
Sulfate [a]	501	25	mg/l	50	08/17/15 22:59	RL	EPA 300/SW846 9056A
Total Organic Carbon	2.8	1.0	mg/l	1	08/18/15 11:21	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C41256-7	**Date Sampled:**	08/13/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/14/15
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	Q30796.D	1	08/20/15	JC	n/a	n/a	VQ1339
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 [a]	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 [b]	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 [a]	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 [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:	C41256-7	**Date Sampled:**	08/13/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/14/15
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 [a]	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene [b]	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 [b]	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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane [b]	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 [b]	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%		78-125%
2037-26-5	Toluene-D8	95%		86-114%
460-00-4	4-Bromofluorobenzene	92%		80-113%

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:	C41256-7	**Date Sampled:**	08/13/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/14/15
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:L5
(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

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: C41256
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.
L5	The associated blank spike recovery was above method acceptance limits. No analyte detected in sample.
M1	Matrix spike recovery was high; the associated blank spike recovery was acceptable.
R9	Sample RPD exceeded the laboratory acceptance limit.
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

C41256

PHOENIX ACCUTEST LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 808633438635
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C41256 ~~C41255~~

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

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	8/13/15	0745	KV	GW	7									X	X	X	X							
2	HQUST-531A	8/13/15	0815	KV	GW	7									X	X	X	X							
3	CEP-527A	8/13/15	0850	KV	GW	7									X	X	X	X							
4	HQUST-548	8/13/15	0934	KV	GW	7									X	X	X	X							
5	HQUST-547	8/13/15	1000	KV	GW	7									X	X	X	X							
6	CEP-519A	8/13/15	1025	KV	GW	7									X	X	X	X							
7	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

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

Emergency T/A data available VIA Labelink

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	8/13/15 1224		2	8/13/15 1700	2 Fedex
3		8/14/15 0900	3	4		4
5			5			

Custody Seal # Y Intact
Appropriate Bottle / Pres. Y / N
Labels match Coc? Y / N
Headspace Y / N
Separate Receiving Check List used: Y / N
On Ice Y / N
Cooler Temp. 2.7/2.7 °C

C41256: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C41256 **Client:** CITY OF TUSCON **Project:** HQUST

Date / Time Received: 8/14/2015 9:40:00 AM **Delivery Method:** FedEx **Airbill #'s:** 808633438635

Cooler Temps (Initial/Adjusted): #1: (2.7/2.7);

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:	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

C41256: 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: C41256
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
VQ1339-MB	Q30790.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

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: C41256
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
VQ1339-MB	Q30790.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

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	96%	78-125%
2037-26-5	Toluene-D8	100%	86-114%

Method Blank Summary

Job Number: C41256
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
VQ1339-MB	Q30790.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	92%	80-113%

Method Blank Summary

Job Number: C41256
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
VR1392-MB	R36619.D	1	08/21/15	KZ	n/a	n/a	VR1392

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

C41256-6

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	96%	78-125%
2037-26-5	Toluene-D8	98%	86-114%
460-00-4	4-Bromofluorobenzene	92%	80-113%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41256
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
VQ1339-BS	Q30787.D	1	08/20/15	JC	n/a	n/a	VQ1339
VQ1339-BSD	Q30788.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	91.5	114	95.8	120	5	58-137/12
71-43-2	Benzene	20	22.1	111	21.8	109	1	77-118/10
108-86-1	Bromobenzene	20	24.6	123* [a]	23.5	118	5	78-122/10
74-97-5	Bromochloromethane	20	22.4	112	22.7	114	1	76-124/10
75-27-4	Bromodichloromethane	20	22.2	111	21.4	107	4	74-121/10
75-25-2	Bromoform	20	21.3	107	20.7	104	3	58-133/10
104-51-8	n-Butylbenzene	20	23.8	119	22.6	113	5	75-125/10
135-98-8	sec-Butylbenzene	20	23.5	118	22.3	112	5	76-127/10
98-06-6	tert-Butylbenzene	20	23.6	118	22.9	115	3	76-124/10
108-90-7	Chlorobenzene	20	23.4	117	22.8	114	3	77-120/10
75-00-3	Chloroethane	20	16.6	83	17.4	87	5	63-117/10
67-66-3	Chloroform	20	21.9	110	22.2	111	1	74-123/10
95-49-8	o-Chlorotoluene	20	25.0	125	24.1	121	4	76-125/10
106-43-4	p-Chlorotoluene	20	22.3	112	21.3	107	5	76-123/10
75-15-0	Carbon disulfide	20	17.1	86	17.5	88	2	57-126/11
56-23-5	Carbon tetrachloride	20	20.6	103	20.1	101	2	72-128/11
75-34-3	1,1-Dichloroethane	20	20.7	104	21.1	106	2	70-120/10
75-35-4	1,1-Dichloroethylene	20	19.2	96	19.3	97	1	65-120/11
563-58-6	1,1-Dichloropropene	20	18.7	94	18.4	92	2	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	21.4	107	20.7	104	3	63-128/10
106-93-4	1,2-Dibromoethane	20	24.1	121	23.4	117	3	78-123/10
107-06-2	1,2-Dichloroethane	20	22.2	111	21.8	109	2	72-123/10
78-87-5	1,2-Dichloropropane	20	22.7	114	22.2	111	2	76-119/10
142-28-9	1,3-Dichloropropane	20	24.7	124* [a]	23.9	120	3	78-122/10
108-20-3	Di-Isopropyl ether	20	21.6	108	21.7	109	0	69-124/10
594-20-7	2,2-Dichloropropane	20	19.7	99	20.4	102	3	68-129/10
124-48-1	Dibromochloromethane	20	23.2	116	22.3	112	4	75-124/10
75-71-8	Dichlorodifluoromethane	20	16.5	83	17.6	88	6	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	23.1	116	23.4	117	1	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	23.8	119	23.2	116	3	76-125/10
541-73-1	m-Dichlorobenzene	20	24.0	120	23.0	115	4	77-121/10
95-50-1	o-Dichlorobenzene	20	23.5	118	22.7	114	3	77-120/10
106-46-7	p-Dichlorobenzene	20	23.8	119* [a]	22.9	115	4	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	18.7	94	19.3	97	3	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	23.4	117	22.4	112	4	73-122/10
100-41-4	Ethylbenzene	20	23.2	116	22.6	113	3	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41256
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
VQ1339-BS	Q30787.D	1	08/20/15	JC	n/a	n/a	VQ1339
VQ1339-BSD	Q30788.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	103	129	102	128	1	71-139/10
87-68-3	Hexachlorobutadiene	20	23.7	119	22.7	114	4	69-127/11
98-82-8	Isopropylbenzene	20	23.2	116	22.5	113	3	77-125/10
99-87-6	p-Isopropyltoluene	20	24.0	120	22.9	115	5	76-125/10
108-10-1	4-Methyl-2-pentanone	80	100	125	100	125	0	71-132/10
74-83-9	Methyl bromide	20	19.3	97	20.0	100	4	66-123/10
74-87-3	Methyl chloride	20	17.4	87	18.0	90	3	50-138/19
74-95-3	Methylene bromide	20	23.4	117	23.1	116	1	77-125/10
75-09-2	Methylene chloride	20	20.4	102	20.8	104	2	65-124/14
78-93-3	Methyl ethyl ketone	80	96.8	121	98.2	123	1	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	20.5	103	20.9	105	2	73-124/10
91-20-3	Naphthalene	20	21.1	106	20.9	105	1	68-122/12
103-65-1	n-Propylbenzene	20	23.0	115	22.1	111	4	76-123/10
100-42-5	Styrene	20	25.0	125	24.2	121	3	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	22.1	111	22.4	112	1	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	24.1	121	23.4	117	3	79-123/10
71-55-6	1,1,1-Trichloroethane	20	20.3	102	20.6	103	1	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	24.0	120	23.3	117	3	77-123/10
79-00-5	1,1,2-Trichloroethane	20	23.9	120	23.0	115	4	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	22.7	114	22.3	112	2	70-126/11
96-18-4	1,2,3-Trichloropropane	20	21.5	108	20.8	104	3	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	23.0	115	22.4	112	3	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	23.6	118	22.8	114	3	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	24.4	122	23.6	118	3	79-127/10
127-18-4	Tetrachloroethylene	20	21.5	108	20.7	104	4	71-124/10
108-88-3	Toluene	20	23.2	116	22.6	113	3	78-120/10
79-01-6	Trichloroethylene	20	21.4	107	21.2	106	1	75-119/10
75-69-4	Trichlorofluoromethane	20	18.3	92	19.9	100	8	67-129/14
75-01-4	Vinyl chloride	20	18.0	90	19.2	96	6	60-133/15
1330-20-7	Xylene (total)	60	70.0	117	68.3	114	2	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	93%	98%	78-125%
2037-26-5	Toluene-D8	101%	101%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41256
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
VQ1339-BS	Q30787.D	1	08/20/15	JC	n/a	n/a	VQ1339
VQ1339-BSD	Q30788.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	100%	80-113%

(a) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L5

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C41256
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
VR1392-BS	R36616.D	1	08/21/15	KZ	n/a	n/a	VR1392
VR1392-BSD	R36617.D	1	08/21/15	KZ	n/a	n/a	VR1392

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

C41256-6

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	18.9	95	20.1	101	6	77-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	95%	78-125%
2037-26-5	Toluene-D8	98%	97%	86-114%
460-00-4	4-Bromofluorobenzene	100%	100%	80-113%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C41256
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
VQ1339-LCS	Q30789.D	1	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	78-125%
2037-26-5	Toluene-D8	101%	86-114%
460-00-4	4-Bromofluorobenzene	94%	80-113%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C41256
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
VR1392-LCS	R36618.D	1	08/21/15	KZ	n/a	n/a	VR1392

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

C41256-6

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	78-125%
2037-26-5	Toluene-D8	99%	86-114%
460-00-4	4-Bromofluorobenzene	96%	80-113%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41256
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
C41316-3MS	Q30806.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3MSD	Q30807.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3 [a]	Q30805.D	50	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

CAS No.	Compound	C41316-3 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		4000	4840	121	4000	5300	133	9	58-137/12
71-43-2	Benzene	275		1000	1370	110	1000	1470	120* [b]	7	77-118/10
108-86-1	Bromobenzene	ND		1000	1180	118	1000	1300	130* [c]	10	78-122/10
74-97-5	Bromochloromethane	ND		1000	1120	112	1000	1240	124	10	76-124/10
75-27-4	Bromodichloromethane	ND		1000	1010	101	1000	1100	110	9	74-121/10
75-25-2	Bromoform	ND		1000	782	78	1000	864	86	10	58-133/10
104-51-8	n-Butylbenzene	ND		1000	1190	119	1000	1320	132* [b]	10	75-125/10
135-98-8	sec-Butylbenzene	ND		1000	1170	117	1000	1300	130* [b]	11* [d]	76-127/10
98-06-6	tert-Butylbenzene	ND		1000	1440	144* [b]	1000	1590	159* [b]	10	76-124/10
108-90-7	Chlorobenzene	ND		1000	1160	116	1000	1250	125* [b]	7	77-120/10
75-00-3	Chloroethane	ND		1000	856	86	1000	928	93	8	63-117/10
67-66-3	Chloroform	ND		1000	1080	108	1000	1190	119	10	74-123/10
95-49-8	o-Chlorotoluene	ND		1000	1220	122	1000	1340	134* [b]	9	76-125/10
106-43-4	p-Chlorotoluene	ND		1000	1060	106	1000	1170	117	10	76-123/10
75-15-0	Carbon disulfide	ND		1000	672	67	1000	738	74	9	57-126/11
56-23-5	Carbon tetrachloride	ND		1000	1090	109	1000	1180	118	8	72-128/11
75-34-3	1,1-Dichloroethane	ND		1000	1050	105	1000	1150	115	9	70-120/10
75-35-4	1,1-Dichloroethylene	ND		1000	1070	107	1000	1160	116	8	65-120/11
563-58-6	1,1-Dichloropropene	ND		1000	1020	102	1000	1090	109	7	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	1010	101	1000	1120	112	10	63-128/10
106-93-4	1,2-Dibromoethane	ND		1000	1190	119	1000	1280	128* [b]	7	78-123/10
107-06-2	1,2-Dichloroethane	ND		1000	1090	109	1000	1170	117	7	72-123/10
78-87-5	1,2-Dichloropropane	ND		1000	1130	113	1000	1220	122* [b]	8	76-119/10
142-28-9	1,3-Dichloropropane	ND		1000	1210	121	1000	1300	130* [c]	7	78-122/10
108-20-3	Di-Isopropyl ether	ND		1000	1060	106	1000	1170	117	10	69-124/10
594-20-7	2,2-Dichloropropane	ND		1000	922	92	1000	996	100	8	68-129/10
124-48-1	Dibromochloromethane	ND		1000	965	97	1000	1050	105	8	75-124/10
75-71-8	Dichlorodifluoromethane	ND		1000	894	89	1000	907	91	1	37-149/21
156-59-2	cis-1,2-Dichloroethylene	ND		1000	1170	117	1000	1280	128* [b]	9	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		1000	1070	107	1000	1160	116	8	76-125/10
541-73-1	m-Dichlorobenzene	ND		1000	1140	114	1000	1270	127* [b]	11* [d]	77-121/10
95-50-1	o-Dichlorobenzene	ND		1000	1130	113	1000	1240	124* [b]	9	77-120/10
106-46-7	p-Dichlorobenzene	ND		1000	1140	114	1000	1250	125* [c]	9	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		1000	986	99	1000	1080	108	9	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		1000	1020	102	1000	1100	110	8	73-122/10
100-41-4	Ethylbenzene	258		1000	1430	117	1000	1540	128* [b]	7	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41256
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
C41316-3MS	Q30806.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3MSD	Q30807.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3 [a]	Q30805.D	50	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

CAS No.	Compound	C41316-3 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		4000	5090	127	4000	5460	137	7	71-139/10
87-68-3	Hexachlorobutadiene	ND		1000	1140	114	1000	1280	128* [b]	12* [d]	69-127/11
98-82-8	Isopropylbenzene	21.4	J	1000	1210	119	1000	1300	128* [b]	7	77-125/10
99-87-6	p-Isopropyltoluene	ND		1000	1180	118	1000	1310	131* [b]	10	76-125/10
108-10-1	4-Methyl-2-pentanone	ND		4000	5160	129	4000	5610	140* [b]	8	71-132/10
74-83-9	Methyl bromide	ND		1000	967	97	1000	1060	106	9	66-123/10
74-87-3	Methyl chloride	ND		1000	839	84	1000	906	91	8	50-138/19
74-95-3	Methylene bromide	ND		1000	1160	116	1000	1250	125	7	77-125/10
75-09-2	Methylene chloride	ND		1000	1030	103	1000	1130	113	9	65-124/14
78-93-3	Methyl ethyl ketone	ND		4000	4930	123	4000	5470	137	10	67-139/11
1634-04-4	Methyl Tert Butyl Ether	ND		1000	1010	101	1000	1130	113	11* [d]	73-124/10
91-20-3	Naphthalene	85.4	J	1000	1130	104	1000	1240	115	9	68-122/12
103-65-1	n-Propylbenzene	84.5	J	1000	1220	114	1000	1340	126* [b]	9	76-123/10
100-42-5	Styrene	ND		1000	1230	123	1000	1330	133* [b]	8	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		1000	1090	109	1000	1210	121	10	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	1160	116	1000	1250	125* [b]	7	79-123/10
71-55-6	1,1,1-Trichloroethane	ND		1000	1090	109	1000	1200	120	10	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	1160	116	1000	1270	127* [b]	9	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		1000	1180	118	1000	1270	127* [b]	7	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		1000	1100	110	1000	1210	121	10	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		1000	956	96	1000	1040	104	8	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		1000	1100	110	1000	1210	121	10	72-123/10
95-63-6	1,2,4-Trimethylbenzene	363		1000	1520	116	1000	1680	132* [b]	10	77-122/10
108-67-8	1,3,5-Trimethylbenzene	89.9	J	1000	1580	149* [b]	1000	1750	166* [b]	10	79-127/10
127-18-4	Tetrachloroethylene	ND		1000	1130	113	1000	1210	121	7	71-124/10
108-88-3	Toluene	119		1000	1280	116	1000	1380	126* [b]	8	78-120/10
79-01-6	Trichloroethylene	ND		1000	1140	114	1000	1210	121* [b]	6	75-119/10
75-69-4	Trichlorofluoromethane	ND		1000	993	99	1000	1040	104	5	67-129/14
75-01-4	Vinyl chloride	ND		1000	955	96	1000	1010	101	6	60-133/15
1330-20-7	Xylene (total)	606		3000	4140	118	3000	4470	129* [b]	8	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C41316-3	Limits
1868-53-7	Dibromofluoromethane	95%	96%		78-125%
2037-26-5	Toluene-D8	102%	101%		86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41256
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
C41316-3MS	Q30806.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3MSD	Q30807.D	50	08/20/15	JC	n/a	n/a	VQ1339
C41316-3 [a]	Q30805.D	50	08/20/15	JC	n/a	n/a	VQ1339

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

C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6, C41256-7

CAS No.	Surrogate Recoveries	MS	MSD	C41316-3	Limits
460-00-4	4-Bromofluorobenzene	99%	99%		80-113%

(a) Sample used for QC purposes only.
(b) Outside laboratory control limits. AZ:M1
(c) Outside laboratory control limits (high bias); not detected in associated samples. AZ:L5
(d) Outside laboratory control limits. AZ:R9

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C41256
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
C41224-2MS	R36629.D	1	08/21/15	KZ	n/a	n/a	VR1392
C41224-2MSD	R36630.D	1	08/21/15	KZ	n/a	n/a	VR1392
C41224-2	R36625.D	1	08/21/15	KZ	n/a	n/a	VR1392

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

C41256-6

CAS No.	Compound	C41224-2 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	18.9	95	20	19.0	95	1	77-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C41224-2	Limits
1868-53-7	Dibromofluoromethane	95%	95%	99%	78-125%
2037-26-5	Toluene-D8	98%	97%	97%	86-114%
460-00-4	4-Bromofluorobenzene	100%	99%	93%	80-113%

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

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: C41256
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10014
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/17/15

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	2.0	<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 MP10014: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6

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: C41256
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10014 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/17/15

Metal	C41278-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	51.5	13100	12500	104.4	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	anr				
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	anr				

Associated samples MP10014: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6

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: C41256
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10014 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/17/15

Metal	C41278-1 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	51.5	12800	12500	102.0	2.3	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP10014: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6

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: C41256
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10014
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/17/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	12800	12500	102.4	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP10014: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C41256
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10014
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/17/15

Metal	C41278-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	51.5	52.6	2.1	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP10014: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Northern California
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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: C41256
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	GN17103	5.0	0.0	mg/l	250	250	100.2	75-125%
Chloride	GP8222/GN17123	0.50	0.0	mg/l	5	4.69	93.8	90-110%
Chloride	GP8223/GN17124	0.50	0.0	mg/l	5	4.93	98.6	90-110%
Fluoride	GP8222/GN17123	0.10	0.0	mg/l	5	4.95	99.0	90-110%
Fluoride	GP8223/GN17124	0.10	0.0	mg/l	5	4.96	99.2	90-110%
Nitrogen, Nitrate	GP8223/GN17124	0.10	0.0	mg/l	5	4.95	99.0	90-110%
Nitrogen, Nitrite	GP8223/GN17124	0.10	0.0	mg/l	5	4.71	94.2	90-110%
Sulfate	GP8222/GN17123	0.50	0.0	mg/l	5	4.71	94.2	90-110%
Sulfate	GP8223/GN17124	0.50	0.0	mg/l	5	4.92	98.4	90-110%
Total Organic Carbon	GP8250/GN17159	1.0	0.0	mg/l	25	23.4	93.7	75-125%

Associated Samples:
Batch GP8222: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8223: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8250: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GN17103: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41256
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	GN17103	mg/l	250	250	0.0	
Chloride	GP8222/GN17123	mg/l	5	4.76	1.5	25%
Chloride	GP8223/GN17124	mg/l	5	4.91	0.4	25%
Fluoride	GP8222/GN17123	mg/l	5	4.95	0.0	25%
Fluoride	GP8223/GN17124	mg/l	5	4.84	2.4	25%
Nitrogen, Nitrate	GP8223/GN17124	mg/l	5	4.97	0.4	25%
Nitrogen, Nitrite	GP8223/GN17124	mg/l	5	4.83	2.5	25%
Sulfate	GP8222/GN17123	mg/l	5	4.75	0.8	25%
Sulfate	GP8223/GN17124	mg/l	5	4.78	2.9	25%
Total Organic Carbon	GP8250/GN17159	mg/l	25	23.6	0.6	

Associated Samples:
Batch GP8222: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8223: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8250: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GN17103: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41256
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	GN17103	C41256-4	mg/l	351	351	0.0	0-25%

Associated Samples:
Batch GN17103: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
(*) Outside of QC limits

8.3

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41256
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
Chloride	GP8222/GN17123	C41057-17	mg/l	155	250	390	94.0	80-120%
Chloride	GP8223/GN17124	C41256-1	mg/l	196	25	223	108.0	80-120%
Chloride	GP8223/GN17124	C41256-6	mg/l	140	25	169	116.0	80-120%
Fluoride	GP8222/GN17123	C41057-17	mg/l	0.34 U	250	239	95.6	80-120%
Fluoride	GP8223/GN17124	C41256-1	mg/l	0.10	25	23.3	92.8	80-120%
Fluoride	GP8223/GN17124	C41256-6	mg/l	0.62	25	23.9	93.1	80-120%
Nitrogen, Nitrate	GP8223/GN17124	C41256-1	mg/l	21.5	25	46.6	100.4	80-120%
Nitrogen, Nitrate	GP8223/GN17124	C41256-6	mg/l	31.2	25	56.9	102.8	80-120%
Nitrogen, Nitrite	GP8223/GN17124	C41256-1	mg/l	1.1	25	25.2	96.4	80-120%
Nitrogen, Nitrite	GP8223/GN17124	C41256-6	mg/l	0.47	25	24.5	96.1	80-120%
Sulfate	GP8222/GN17123	C41057-17	mg/l	5.2 U	250	219	87.6	80-120%
Sulfate	GP8223/GN17124	C41256-1	mg/l	835	25	846	44.0(a)	80-120%
Sulfate	GP8223/GN17124	C41256-6	mg/l	708	25	718	40.0(a)	80-120%
Total Organic Carbon	GP8250/GN17159	C41256-1	mg/l	1.7	25	24.0	89.4	75-125%

Associated Samples:
Batch GP8222: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8223: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8250: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
(*) 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.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C41256
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
Chloride	GP8222/GN17123	C41057-17	mg/l	155	250	389	0.3	
Chloride	GP8223/GN17124	C41256-1	mg/l	196	25	224	0.4	
Chloride	GP8223/GN17124	C41256-6	mg/l	140	25	169	0.0	
Fluoride	GP8222/GN17123	C41057-17	mg/l	0.34 U	250	238	0.4	
Fluoride	GP8223/GN17124	C41256-1	mg/l	0.10	25	23.4	0.4	
Fluoride	GP8223/GN17124	C41256-6	mg/l	0.62	25	23.9	0.0	
Nitrogen, Nitrate	GP8223/GN17124	C41256-1	mg/l	21.5	25	46.8	0.4	
Nitrogen, Nitrate	GP8223/GN17124	C41256-6	mg/l	31.2	25	57.0	0.2	
Nitrogen, Nitrite	GP8223/GN17124	C41256-1	mg/l	1.1	25	25.4	0.8	
Nitrogen, Nitrite	GP8223/GN17124	C41256-6	mg/l	0.47	25	24.7	0.8	
Sulfate	GP8222/GN17123	C41057-17	mg/l	5.2 U	250	216	1.4	
Sulfate	GP8223/GN17124	C41256-1	mg/l	835	25	846	0.0	
Sulfate	GP8223/GN17124	C41256-6	mg/l	708	25	717	0.1	

Associated Samples:
Batch GP8222: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8223: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
Batch GP8250: C41256-1, C41256-2, C41256-3, C41256-4, C41256-5, C41256-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
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LABORATORIES

11/13/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C42664

Sampling Date: 11/04/15

Report to:

City of Tucson - Env.Services
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Total number of pages in report: **72**

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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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C42664

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C42664-1	11/04/15	08:40	KV	11/05/15	AQ	Ground Water	HQUST-533A
C42664-2	11/04/15	08:45	KV	11/05/15	AQ	Ground Water	HQUST-533A
C42664-3	11/04/15	09:20	KV	11/05/15	AQ	Ground Water	CEP-520A
C42664-4	11/04/15	09:52	KV	11/05/15	AQ	Ground Water	HQUST-531A
C42664-5	11/04/15	10:25	KV	11/05/15	AQ	Ground Water	CEP-528A
C42664-6	11/04/15	00:00	KV	11/05/15	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C42664
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	11/13/2015 1:56:27 A

5 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 11/04/2015 and were received at Accutest on 11/05/2015 properly preserved, at 1.8 Deg. C and intact. These Samples received an Accutest job number of C42664. 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:** VU1265

- Sample(s) C42639-2MS, C42639-2MSD were used as the QC samples indicated.
- RPD for BSD for o-Chlorotoluene exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria.
- Matrix Spike Duplicate Recovery for Toluene is outside laboratory control limits. 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:** VW2180

- Sample(s) C42713-3MS, C42713-3MSD were used as the QC samples indicated.
- Sample(s) C42664-3, C42664-4 have for Carbon tetrachloride a CCV outside of control limits (biased high); not detected in samples.
- Matrix Spike Duplicate Recovery(s) for 1,1-Dichloroethylene, 1,1,1-Trichloroethane are 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.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP10417

- Sample(s) C42584-2MS, C42584-2MSD, C42584-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP10417-SD1. Serial dilution indicates possible matrix interference.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP8618

- Sample(s) C42664-5MS, C42664-5MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP8638

- Sample(s) C42527-1MS, C42527-1MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN17804

- Sample(s) C42664-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ	**Batch ID:** GP8639

- Sample(s) C42664-1MS 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: C42664
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/04/15

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C42664-1	**HQUST-533A**					
Methyl Tert Butyl Ether		1.6	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		412	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		17.9	0.25		mg/l	EPA 300/SW846 9056A
Sulfate [a]		551	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C42664-2	**HQUST-533A**					
Methyl Tert Butyl Ether		1.7	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		410	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		17.5	0.25		mg/l	EPA 300/SW846 9056A
Sulfate [a]		552	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.5	1.0		mg/l	SM5310 C-00
C42664-3	**CEP-520A**					
Iron		16100	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		102	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.14	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		64.6	2.5		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.4	1.0		mg/l	SM5310 C-00
C42664-4	**HQUST-531A**					
Iron		2460	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		230	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		9.6	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		791	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.3	1.0		mg/l	SM5310 C-00
C42664-5	**CEP-528A**					
Chloroform		0.66	0.50		ug/l	SW846 8260B
Iron		74600	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		331	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		24.4	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [a]		1020	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C42664-6	**TRIP BLANK**					

No hits reported in this sample.

Summary of Hits

Job Number: C42664
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/04/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method

(a) AZ:D2

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C42664-1	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	U31173.D	1	11/09/15	JC	n/a	n/a	VU1265
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 [a]	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-533A		
Lab Sample ID:	C42664-1	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	1.6	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	112%		78-125%
2037-26-5	Toluene-D8	103%		86-114%
460-00-4	4-Bromofluorobenzene	91%		80-113%

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:	C42664-1	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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:R7
(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-533A		
Lab Sample ID:	C42664-1	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	11/07/15	11/08/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5362
(2) Prep QC Batch: MP10417

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C42664-1	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	412	5.0	mg/l	1	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	17.9	0.25	mg/l	2.5	11/05/15 15:15	RL	EPA 300/SW846 9056A
Sulfate [a]	551	25	mg/l	50	11/11/15 17:38	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	11/11/15 11:31	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C42664-2	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	U31174.D	1	11/09/15	JC	n/a	n/a	VU1265
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 [a]	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-533A		
Lab Sample ID:	C42664-2	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	1.7	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	112%		78-125%
2037-26-5	Toluene-D8	102%		86-114%
460-00-4	4-Bromofluorobenzene	90%		80-113%

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:	C42664-2	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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:R7
(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-533A		
Lab Sample ID:	C42664-2	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	11/07/15	11/08/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5362
(2) Prep QC Batch: MP10417

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C42664-2	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	410	5.0	mg/l	1	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	17.5	0.25	mg/l	2.5	11/05/15 15:32	RL	EPA 300/SW846 9056A
Sulfate [a]	552	25	mg/l	50	11/11/15 17:56	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.5	1.0	mg/l	1	11/11/15 11:31	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C42664-3	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	W58242.D	1	11/10/15	CV	n/a	n/a	VW2180
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 [a]	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-520A		
Lab Sample ID:	C42664-3	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	96%		78-125%
2037-26-5	Toluene-D8	99%		86-114%
460-00-4	4-Bromofluorobenzene	96%		80-113%

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:	C42664-3	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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) 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:	C42664-3	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	16100	200	ug/l	1	11/07/15	11/08/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5362
(2) Prep QC Batch: MP10417

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C42664-3	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	102	5.0	mg/l	1	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	0.14	0.10	mg/l	1	11/05/15 14:23	RL	EPA 300/SW846 9056A
Sulfate [a]	64.6	2.5	mg/l	5	11/11/15 18:13	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.4	1.0	mg/l	1	11/11/15 11:31	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C42664-4	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	W58243.D	1	11/10/15	CV	n/a	n/a	VW2180
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 [a]	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-531A		
Lab Sample ID:	C42664-4	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	95%		78-125%
2037-26-5	Toluene-D8	99%		86-114%
460-00-4	4-Bromofluorobenzene	99%		80-113%

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:	C42664-4	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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) 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:	C42664-4	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	2460	200	ug/l	1	11/07/15	11/08/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5362
(2) Prep QC Batch: MP10417

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C42664-4	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	230	5.0	mg/l	1	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	9.6	0.10	mg/l	1	11/05/15 14:40	RL	EPA 300/SW846 9056A
Sulfate [a]	791	50	mg/l	100	11/11/15 18:30	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.3	1.0	mg/l	1	11/11/15 11:31	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C42664-5	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	U31177.D	1	11/09/15	JC	n/a	n/a	VU1265
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	0.66	0.50	ug/l	
95-49-8	o-Chlorotoluene [a]	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:	C42664-5	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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	114%		78-125%
2037-26-5	Toluene-D8	103%		86-114%
460-00-4	4-Bromofluorobenzene	91%		80-113%

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:	C42664-5	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
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:R7
(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:	C42664-5	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	74600	200	ug/l	1	11/07/15	11/08/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5362
(2) Prep QC Batch: MP10417

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C42664-5	**Date Sampled:**	11/04/15
Matrix:	AQ - Ground Water	**Date Received:**	11/05/15
		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	331	5.0	mg/l	1	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	24.4	0.50	mg/l	5	11/05/15 16:42	RL	EPA 300/SW846 9056A
Sulfate [a]	1020	50	mg/l	100	11/11/15 18:48	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	11/11/15 11:31	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C42664-6	**Date Sampled:**	11/04/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/05/15
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	U31172.D	1	11/09/15	JC	n/a	n/a	VU1265
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 [a]	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:	TRIP BLANK		
Lab Sample ID:	C42664-6	**Date Sampled:**	11/04/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/05/15
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	110%		78-125%
2037-26-5	Toluene-D8	101%		86-114%
460-00-4	4-Bromofluorobenzene	90%		80-113%

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:	C42664-6	**Date Sampled:**	11/04/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/05/15
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:R7
(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

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: C42664
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.
R7	LFB/LFBD 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.
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 # 807604360701
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C42664

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

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	Na2S2O3	MEOH	ENCORE	Alk NO3 SO4	Fe (total)	TOC	8260 VOC	LAB USE ONLY
1	HQUST-533A	11/4/15	0840	KV	GW	7									X	X	X	X	
2	HQUST-533A	11/4/15	0845	KV	GW	7									X	X	X	X	
3	CEP-520A	11/4/15	0920	KV	GW	7									X	X	X	X	
4	HQUST-531A	11/4/15	0952	KV	GW	7									X	X	X	X	
5	CEP-528A	11/4/15	1025	KV	GW	7									X	X	X	X	
6	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	11/4/15 1430	1 [signature]	2 [signature]	11/4/15 1700	2 Fedex
Relinquished By: 3 FEDEX	Date Time: 11/5/15 0837	Received By: 3 [signature]	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Y INTACT	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N; Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N	Cooler Temp. 2.7/1.8

5.2 5

C42664: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C42664 **Client:** CITY 0F TUCSON **Project:** HQUST

Date / Time Received: 11/5/2015 9:35:00 AM **Delivery Method:** FedEx **Airbill #'s:** 8076504360701

Cooler Temps (Initial/Adjusted): #1: (2.7/1.8);

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

C42664: 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: C42664
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
VU1265-MB	U31159.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

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: C42664
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
VU1265-MB	U31159.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

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	101%	78-125%
2037-26-5	Toluene-D8	103%	86-114%

Method Blank Summary

Job Number: C42664
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
VU1265-MB	U31159.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	91%	80-113%

Method Blank Summary

Job Number: C42664
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
VW2180-MB	W58241.D	1	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

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: C42664
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
VW2180-MB	W58241.D	1	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

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	94%	78-125%
2037-26-5	Toluene-D8	99%	86-114%

Method Blank Summary

Job Number: C42664
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
VW2180-MB	W58241.D	1	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	80-113%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42664
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
VU1265-BS	U31156.D	1	11/09/15	JC	n/a	n/a	VU1265
VU1265-BSD	U31157.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	71.4	89	75.3	94	5	58-137/12
71-43-2	Benzene	20	18.9	95	19.4	97	3	77-118/10
108-86-1	Bromobenzene	20	18.7	94	19.5	98	4	78-122/10
74-97-5	Bromochloromethane	20	19.7	99	19.7	99	0	76-124/10
75-27-4	Bromodichloromethane	20	19.4	97	19.9	100	3	74-121/10
75-25-2	Bromoform	20	16.7	84	17.2	86	3	58-133/10
104-51-8	n-Butylbenzene	20	19.4	97	20.4	102	5	75-125/10
135-98-8	sec-Butylbenzene	20	18.9	95	19.6	98	4	76-127/10
98-06-6	tert-Butylbenzene	20	18.4	92	19.2	96	4	76-124/10
108-90-7	Chlorobenzene	20	18.6	93	19.2	96	3	77-120/10
75-00-3	Chloroethane	20	17.5	88	17.5	88	0	63-117/10
67-66-3	Chloroform	20	19.6	98	19.6	98	0	74-123/10
95-49-8	o-Chlorotoluene	20	19.6	98	22.6	113	14* [a]	76-125/10
106-43-4	p-Chlorotoluene	20	19.9	100	20.8	104	4	76-123/10
75-15-0	Carbon disulfide	20	19.7	99	19.8	99	1	57-126/11
56-23-5	Carbon tetrachloride	20	18.9	95	19.6	98	4	72-128/11
75-34-3	1,1-Dichloroethane	20	19.0	95	19.0	95	0	70-120/10
75-35-4	1,1-Dichloroethylene	20	17.4	87	17.6	88	1	65-120/11
563-58-6	1,1-Dichloropropene	20	17.0	85	17.6	88	3	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	18.2	91	19.4	97	6	63-128/10
106-93-4	1,2-Dibromoethane	20	19.9	100	20.6	103	3	78-123/10
107-06-2	1,2-Dichloroethane	20	18.7	94	19.4	97	4	72-123/10
78-87-5	1,2-Dichloropropane	20	19.9	100	20.1	101	1	76-119/10
142-28-9	1,3-Dichloropropane	20	20.7	104	21.2	106	2	78-122/10
108-20-3	Di-Isopropyl ether	20	19.8	99	19.8	99	0	69-124/10
594-20-7	2,2-Dichloropropane	20	19.5	98	19.8	99	2	68-129/10
124-48-1	Dibromochloromethane	20	16.8	84	17.6	88	5	75-124/10
75-71-8	Dichlorodifluoromethane	20	17.7	89	19.8	99	11	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	20.3	102	20.2	101	0	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	20.8	104	21.7	109	4	76-125/10
541-73-1	m-Dichlorobenzene	20	18.5	93	19.4	97	5	77-121/10
95-50-1	o-Dichlorobenzene	20	18.6	93	19.2	96	3	77-120/10
106-46-7	p-Dichlorobenzene	20	18.5	93	19.3	97	4	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	17.3	87	17.5	88	1	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	20.1	101	20.8	104	3	73-122/10
100-41-4	Ethylbenzene	20	19.3	97	19.8	99	3	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42664
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
VU1265-BS	U31156.D	1	11/09/15	JC	n/a	n/a	VU1265
VU1265-BSD	U31157.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	85.5	107	88.1	110	3	71-139/10
87-68-3	Hexachlorobutadiene	20	18.1	91	18.8	94	4	69-127/11
98-82-8	Isopropylbenzene	20	19.0	95	19.6	98	3	77-125/10
99-87-6	p-Isopropyltoluene	20	18.6	93	19.6	98	5	76-125/10
108-10-1	4-Methyl-2-pentanone	80	82.1	103	84.6	106	3	71-132/10
74-83-9	Methyl bromide	20	18.1	91	18.1	91	0	66-123/10
74-87-3	Methyl chloride	20	19.3	97	19.7	99	2	50-138/19
74-95-3	Methylene bromide	20	20.2	101	20.8	104	3	77-125/10
75-09-2	Methylene chloride	20	17.9	90	17.9	90	0	65-124/14
78-93-3	Methyl ethyl ketone	80	81.1	101	84.4	106	4	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	18.5	93	18.6	93	1	73-124/10
91-20-3	Naphthalene	20	19.1	96	20.1	101	5	68-122/12
103-65-1	n-Propylbenzene	20	18.9	95	19.9	100	5	76-123/10
100-42-5	Styrene	20	16.5	83	16.9	85	2	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	20.0	100	20.1	101	0	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	19.3	97	19.8	99	3	79-123/10
71-55-6	1,1,1-Trichloroethane	20	19.2	96	19.3	97	1	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	20.9	105	21.9	110	5	77-123/10
79-00-5	1,1,2-Trichloroethane	20	19.8	99	20.5	103	3	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	19.8	99	21.1	106	6	70-126/11
96-18-4	1,2,3-Trichloropropane	20	21.0	105	21.8	109	4	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	18.3	92	19.3	97	5	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	18.9	95	19.6	98	4	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	19.5	98	20.4	102	5	79-127/10
127-18-4	Tetrachloroethylene	20	17.0	85	17.8	89	5	71-124/10
108-88-3	Toluene	20	18.8	94	19.4	97	3	78-120/10
79-01-6	Trichloroethylene	20	18.0	90	18.6	93	3	75-119/10
75-69-4	Trichlorofluoromethane	20	17.6	88	18.5	93	5	67-129/14
75-01-4	Vinyl chloride	20	17.5	88	18.4	92	5	60-133/15
1330-20-7	Xylene (total)	60	56.9	95	58.2	97	2	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	106%	105%	78-125%
2037-26-5	Toluene-D8	101%	101%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42664
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
VU1265-BS	U31156.D	1	11/09/15	JC	n/a	n/a	VU1265
VU1265-BSD	U31157.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	99%	80-113%

(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: C42664
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
VW2180-BS	W58236.D	1	11/10/15	CV	n/a	n/a	VW2180
VW2180-BSD	W58239.D	1	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	68.6	86	64.8	81	6	58-137/12
71-43-2	Benzene	20	17.9	90	17.8	89	1	77-118/10
108-86-1	Bromobenzene	20	19.3	97	20.0	100	4	78-122/10
74-97-5	Bromochloromethane	20	18.4	92	18.6	93	1	76-124/10
75-27-4	Bromodichloromethane	20	19.7	99	20.0	100	2	74-121/10
75-25-2	Bromoform	20	19.6	98	19.1	96	3	58-133/10
104-51-8	n-Butylbenzene	20	19.9	100	19.8	99	1	75-125/10
135-98-8	sec-Butylbenzene	20	19.9	100	19.8	99	1	76-127/10
98-06-6	tert-Butylbenzene	20	19.8	99	19.5	98	2	76-124/10
108-90-7	Chlorobenzene	20	18.9	95	19.0	95	1	77-120/10
75-00-3	Chloroethane	20	16.2	81	16.6	83	2	63-117/10
67-66-3	Chloroform	20	18.0	90	18.2	91	1	74-123/10
95-49-8	o-Chlorotoluene	20	19.0	95	19.2	96	1	76-125/10
106-43-4	p-Chlorotoluene	20	19.4	97	20.0	100	3	76-123/10
75-15-0	Carbon disulfide	20	17.8	89	17.8	89	0	57-126/11
56-23-5	Carbon tetrachloride	20	21.6	108	21.4	107	1	72-128/11
75-34-3	1,1-Dichloroethane	20	16.3	82	16.5	83	1	70-120/10
75-35-4	1,1-Dichloroethylene	20	17.9	90	18.3	92	2	65-120/11
563-58-6	1,1-Dichloropropene	20	17.2	86	16.9	85	2	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	19.7	99	18.7	94	5	63-128/10
106-93-4	1,2-Dibromoethane	20	19.7	99	19.7	99	0	78-123/10
107-06-2	1,2-Dichloroethane	20	19.5	98	19.7	99	1	72-123/10
78-87-5	1,2-Dichloropropane	20	16.9	85	16.9	85	0	76-119/10
142-28-9	1,3-Dichloropropane	20	18.6	93	18.7	94	1	78-122/10
108-20-3	Di-Isopropyl ether	20	15.0	75	15.1	76	1	69-124/10
594-20-7	2,2-Dichloropropane	20	19.9	100	20.6	103	3	68-129/10
124-48-1	Dibromochloromethane	20	20.9	105	20.9	105	0	75-124/10
75-71-8	Dichlorodifluoromethane	20	13.3	67	13.8	69	4	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	18.2	91	18.4	92	1	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	20.1	101	20.1	101	0	76-125/10
541-73-1	m-Dichlorobenzene	20	19.0	95	19.5	98	3	77-121/10
95-50-1	o-Dichlorobenzene	20	19.2	96	19.4	97	1	77-120/10
106-46-7	p-Dichlorobenzene	20	19.0	95	19.4	97	2	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	16.5	83	16.5	83	0	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	19.7	99	20.1	101	2	73-122/10
100-41-4	Ethylbenzene	20	19.6	98	19.5	98	1	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42664
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
VW2180-BS	W58236.D	1	11/10/15	CV	n/a	n/a	VW2180
VW2180-BSD	W58239.D	1	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	81.3	102	77.6	97	5	71-139/10
87-68-3	Hexachlorobutadiene	20	21.3	107	20.7	104	3	69-127/11
98-82-8	Isopropylbenzene	20	20.4	102	20.0	100	2	77-125/10
99-87-6	p-Isopropyltoluene	20	20.5	103	20.5	103	0	76-125/10
108-10-1	4-Methyl-2-pentanone	80	79.8	100	75.9	95	5	71-132/10
74-83-9	Methyl bromide	20	18.6	93	19.3	97	4	66-123/10
74-87-3	Methyl chloride	20	17.8	89	18.2	91	2	50-138/19
74-95-3	Methylene bromide	20	19.5	98	19.6	98	1	77-125/10
75-09-2	Methylene chloride	20	16.2	81	16.5	83	2	65-124/14
78-93-3	Methyl ethyl ketone	80	79.0	99	76.7	96	3	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	16.7	84	16.8	84	1	73-124/10
91-20-3	Naphthalene	20	16.9	85	15.5	78	9	68-122/12
103-65-1	n-Propylbenzene	20	18.6	93	18.7	94	1	76-123/10
100-42-5	Styrene	20	20.3	102	20.2	101	0	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	17.4	87	17.8	89	2	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	21.2	106	21.1	106	0	79-123/10
71-55-6	1,1,1-Trichloroethane	20	19.8	99	19.9	100	1	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	18.0	90	18.0	90	0	77-123/10
79-00-5	1,1,2-Trichloroethane	20	18.2	91	18.2	91	0	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	18.8	94	17.6	88	7	70-126/11
96-18-4	1,2,3-Trichloropropane	20	20.1	101	18.9	95	6	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	19.3	97	18.9	95	2	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	19.0	95	19.1	96	1	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	19.7	99	19.6	98	1	79-127/10
127-18-4	Tetrachloroethylene	20	20.1	101	20.1	101	0	71-124/10
108-88-3	Toluene	20	18.9	95	18.8	94	1	78-120/10
79-01-6	Trichloroethylene	20	18.7	94	18.5	93	1	75-119/10
75-69-4	Trichlorofluoromethane	20	22.6	113	23.3	117	3	67-129/14
75-01-4	Vinyl chloride	20	18.2	91	20.9	105	14	60-133/15
1330-20-7	Xylene (total)	60	55.9	93	55.8	93	0	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	97%	78-125%
2037-26-5	Toluene-D8	97%	97%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42664
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
VW2180-BS	W58236.D	1	11/10/15	CV	n/a	n/a	VW2180
VW2180-BSD	W58239.D	1	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	98%	80-113%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C42664
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
VU1265-LCS	U31158.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	78-125%
2037-26-5	Toluene-D8	102%	86-114%
460-00-4	4-Bromofluorobenzene	94%	80-113%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42664
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
C42639-2MS	U31178.D	1	11/09/15	JC	n/a	n/a	VU1265
C42639-2MSD	U31179.D	1	11/09/15	JC	n/a	n/a	VU1265
C42639-2	U31166.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

CAS No.	Compound	C42639-2 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	9.6	J	80	86.9	97	80	88.5	99	2	58-137/12
71-43-2	Benzene	1.5		20	22.5	105	20	22.5	105	0	77-118/10
108-86-1	Bromobenzene	ND		20	19.1	96	20	20.0	100	5	78-122/10
74-97-5	Bromochloromethane	ND		20	20.1	101	20	20.5	103	2	76-124/10
75-27-4	Bromodichloromethane	ND		20	20.6	103	20	20.7	104	0	74-121/10
75-25-2	Bromoform	ND		20	16.5	83	20	16.9	85	2	58-133/10
104-51-8	n-Butylbenzene	ND		20	21.1	106	20	21.8	109	3	75-125/10
135-98-8	sec-Butylbenzene	ND		20	20.2	101	20	21.2	106	5	76-127/10
98-06-6	tert-Butylbenzene	ND		20	19.9	100	20	20.8	104	4	76-124/10
108-90-7	Chlorobenzene	1.9		20	21.9	100	20	22.4	103	2	77-120/10
75-00-3	Chloroethane	18.6		20	40.7	111	20	40.4	109	1	63-117/10
67-66-3	Chloroform	ND		20	21.5	108	20	21.3	107	1	74-123/10
95-49-8	o-Chlorotoluene	ND		20	21.6	108	20	21.9	110	1	76-125/10
106-43-4	p-Chlorotoluene	ND		20	20.8	104	20	21.6	108	4	76-123/10
75-15-0	Carbon disulfide	0.20	J	20	20.9	104	20	21.0	104	0	57-126/11
56-23-5	Carbon tetrachloride	ND		20	20.8	104	20	21.0	105	1	72-128/11
75-34-3	1,1-Dichloroethane	ND		20	21.2	106	20	21.0	105	1	70-120/10
75-35-4	1,1-Dichloroethylene	ND		20	18.8	94	20	19.4	97	3	65-120/11
563-58-6	1,1-Dichloropropene	ND		20	18.8	94	20	19.2	96	2	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		20	20.6	103	20	21.9	110	6	63-128/10
106-93-4	1,2-Dibromoethane	ND		20	20.6	103	20	21.3	107	3	78-123/10
107-06-2	1,2-Dichloroethane	ND		20	20.4	102	20	20.4	102	0	72-123/10
78-87-5	1,2-Dichloropropane	ND		20	21.4	107	20	21.4	107	0	76-119/10
142-28-9	1,3-Dichloropropane	ND		20	21.9	110	20	22.3	112	2	78-122/10
108-20-3	Di-Isopropyl ether	ND		20	21.6	108	20	21.7	109	0	69-124/10
594-20-7	2,2-Dichloropropane	ND		20	21.4	107	20	21.3	107	0	68-129/10
124-48-1	Dibromochloromethane	ND		20	16.9	85	20	17.5	88	3	75-124/10
75-71-8	Dichlorodifluoromethane	ND		20	21.4	107	20	21.9	110	2	37-149/21
156-59-2	cis-1,2-Dichloroethylene	ND		20	21.7	109	20	21.7	109	0	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		20	21.3	107	20	21.6	108	1	76-125/10
541-73-1	m-Dichlorobenzene	ND		20	19.2	96	20	19.9	100	4	77-121/10
95-50-1	o-Dichlorobenzene	0.79	J	20	20.2	97	20	20.8	100	3	77-120/10
106-46-7	p-Dichlorobenzene	ND		20	19.3	97	20	20.0	100	4	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		20	18.6	93	20	18.9	95	2	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		20	20.4	102	20	21.0	105	3	73-122/10
100-41-4	Ethylbenzene	1.7		20	23.2	108	20	23.7	110	2	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42664
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
C42639-2MS	U31178.D	1	11/09/15	JC	n/a	n/a	VU1265
C42639-2MSD	U31179.D	1	11/09/15	JC	n/a	n/a	VU1265
C42639-2	U31166.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

CAS No.	Compound	C42639-2 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		80	107	134	80	109	136	2	71-139/10
87-68-3	Hexachlorobutadiene	ND		20	19.0	95	20	20.0	100	5	69-127/11
98-82-8	Isopropylbenzene	ND		20	20.8	104	20	21.2	106	2	77-125/10
99-87-6	p-Isopropyltoluene	ND		20	19.7	99	20	20.6	103	4	76-125/10
108-10-1	4-Methyl-2-pentanone	1.2	J	80	98.0	121	80	98.9	122	1	71-132/10
74-83-9	Methyl bromide	ND		20	19.9	100	20	20.0	100	1	66-123/10
74-87-3	Methyl chloride	ND		20	23.4	117	20	23.1	116	1	50-138/19
74-95-3	Methylene bromide	ND		20	21.4	107	20	21.4	107	0	77-125/10
75-09-2	Methylene chloride	ND		20	19.8	99	20	19.9	100	1	65-124/14
78-93-3	Methyl ethyl ketone	3.7	J	80	93.4	112	80	95.5	115	2	67-139/11
1634-04-4	Methyl Tert Butyl Ether	0.27	J	20	19.3	95	20	20.1	99	4	73-124/10
91-20-3	Naphthalene	0.96	J	20	21.5	103	20	23.6	113	9	68-122/12
103-65-1	n-Propylbenzene	ND		20	20.5	103	20	21.3	107	4	76-123/10
100-42-5	Styrene	ND		20	16.4	82	20	16.8	84	2	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		20	20.9	105	20	21.3	107	2	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		20	20.3	102	20	21.0	105	3	79-123/10
71-55-6	1,1,1-Trichloroethane	ND		20	21.6	108	20	21.6	108	0	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	22.5	113	20	23.4	117	4	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		20	21.2	106	20	21.7	109	2	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		20	19.8	99	20	21.7	109	9	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		20	22.2	111	20	22.3	112	0	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		20	18.6	93	20	19.7	99	6	72-123/10
95-63-6	1,2,4-Trimethylbenzene	2.2		20	22.4	101	20	23.1	105	3	77-122/10
108-67-8	1,3,5-Trimethylbenzene	0.51	J	20	21.5	105	20	22.4	109	4	79-127/10
127-18-4	Tetrachloroethylene	ND		20	17.6	88	20	18.3	92	4	71-124/10
108-88-3	Toluene	19.5		20	43.5	120	20	43.9	122* [a]	1	78-120/10
79-01-6	Trichloroethylene	ND		20	20.3	102	20	20.4	102	0	75-119/10
75-69-4	Trichlorofluoromethane	ND		20	21.2	106	20	21.1	106	0	67-129/14
75-01-4	Vinyl chloride	ND		20	22.0	110	20	21.6	108	2	60-133/15
1330-20-7	Xylene (total)	13.2		60	78.6	109	60	79.7	111	1	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C42639-2	Limits
1868-53-7	Dibromofluoromethane	111%	109%	114%	78-125%
2037-26-5	Toluene-D8	101%	102%	102%	86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42664
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
C42639-2MS	U31178.D	1	11/09/15	JC	n/a	n/a	VU1265
C42639-2MSD	U31179.D	1	11/09/15	JC	n/a	n/a	VU1265
C42639-2	U31166.D	1	11/09/15	JC	n/a	n/a	VU1265

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

C42664-1, C42664-2, C42664-5, C42664-6

CAS No.	Surrogate Recoveries	MS	MSD	C42639-2	Limits
460-00-4	4-Bromofluorobenzene	101%	101%	96%	80-113%

(a) Outside laboratory control limits. AZ:M1

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42664
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
C42713-3MS	W58258.D	5	11/10/15	CV	n/a	n/a	VW2180
C42713-3MSD	W58259.D	5	11/10/15	CV	n/a	n/a	VW2180
C42713-3	W58257.D	5	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

CAS No.	Compound	C42713-3 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		400	301	75	400	339	85	12	58-137/12
71-43-2	Benzene	ND		100	93.3	93	100	92.2	92	1	77-118/10
108-86-1	Bromobenzene	ND		100	96.2	96	100	98.0	98	2	78-122/10
74-97-5	Bromochloromethane	ND		100	92.8	93	100	94.2	94	1	76-124/10
75-27-4	Bromodichloromethane	ND		100	107	107	100	106	106	1	74-121/10
75-25-2	Bromoform	ND		100	96.9	97	100	97.9	98	1	58-133/10
104-51-8	n-Butylbenzene	ND		100	98.6	99	100	99.4	99	1	75-125/10
135-98-8	sec-Butylbenzene	ND		100	99.4	99	100	102	102	3	76-127/10
98-06-6	tert-Butylbenzene	ND		100	99.8	100	100	100	100	0	76-124/10
108-90-7	Chlorobenzene	ND		100	96.7	97	100	97.5	98	1	77-120/10
75-00-3	Chloroethane	ND		100	81.9	82	100	79.7	80	3	63-117/10
67-66-3	Chloroform	ND		100	96.9	97	100	98.5	99	2	74-123/10
95-49-8	o-Chlorotoluene	ND		100	96.2	96	100	98.1	98	2	76-125/10
106-43-4	p-Chlorotoluene	ND		100	100	100	100	101	101	1	76-123/10
75-15-0	Carbon disulfide	ND		100	90.4	90	100	92.0	92	2	57-126/11
56-23-5	Carbon tetrachloride	ND		100	124	124	100	121	121	2	72-128/11
75-34-3	1,1-Dichloroethane	37.2		100	120	83	100	120	83	0	70-120/10
75-35-4	1,1-Dichloroethylene	828	E	100	934	106	100	886	58* [a]	5	65-120/11
563-58-6	1,1-Dichloropropene	ND		100	92.1	92	100	90.7	91	2	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	95.4	95	100	99.1	99	4	63-128/10
106-93-4	1,2-Dibromoethane	ND		100	99.9	100	100	102	102	2	78-123/10
107-06-2	1,2-Dichloroethane	8.8		100	119	110	100	115	106	3	72-123/10
78-87-5	1,2-Dichloropropane	ND		100	86.3	86	100	86.1	86	0	76-119/10
142-28-9	1,3-Dichloropropane	ND		100	96.2	96	100	98.2	98	2	78-122/10
108-20-3	Di-Isopropyl ether	ND		100	75.0	75	100	77.3	77	3	69-124/10
594-20-7	2,2-Dichloropropane	ND		100	97.9	98	100	97.7	98	0	68-129/10
124-48-1	Dibromochloromethane	ND		100	107	107	100	108	108	1	75-124/10
75-71-8	Dichlorodifluoromethane	ND		100	75.6	76	100	67.6	68	11	37-149/21
156-59-2	cis-1,2-Dichloroethylene	ND		100	91.2	91	100	94.3	94	3	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		100	104	104	100	102	102	2	76-125/10
541-73-1	m-Dichlorobenzene	ND		100	95.5	96	100	98.1	98	3	77-121/10
95-50-1	o-Dichlorobenzene	ND		100	94.5	95	100	97.1	97	3	77-120/10
106-46-7	p-Dichlorobenzene	ND		100	95.6	96	100	97.5	98	2	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		100	84.7	85	100	85.1	85	0	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		100	102	102	100	102	102	0	73-122/10
100-41-4	Ethylbenzene	ND		100	101	101	100	102	102	1	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42664
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
C42713-3MS	W58258.D	5	11/10/15	CV	n/a	n/a	VW2180
C42713-3MSD	W58259.D	5	11/10/15	CV	n/a	n/a	VW2180
C42713-3	W58257.D	5	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

CAS No.	Compound	C42713-3 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		400	399	100	400	413	103	3	71-139/10
87-68-3	Hexachlorobutadiene	ND		100	105	105	100	111	111	6	69-127/11
98-82-8	Isopropylbenzene	ND		100	105	105	100	105	105	0	77-125/10
99-87-6	p-Isopropyltoluene	ND		100	102	102	100	104	104	2	76-125/10
108-10-1	4-Methyl-2-pentanone	ND		400	397	99	400	405	101	2	71-132/10
74-83-9	Methyl bromide	ND		100	95.6	96	100	93.4	93	2	66-123/10
74-87-3	Methyl chloride	ND		100	95.3	95	100	90.1	90	6	50-138/19
74-95-3	Methylene bromide	ND		100	105	105	100	104	104	1	77-125/10
75-09-2	Methylene chloride	ND		100	82.6	83	100	85.3	85	3	65-124/14
78-93-3	Methyl ethyl ketone	ND		400	374	94	400	400	100	7	67-139/11
1634-04-4	Methyl Tert Butyl Ether	ND		100	86.3	86	100	88.6	89	3	73-124/10
91-20-3	Naphthalene	ND		100	76.8	77	100	83.7	84	9	68-122/12
103-65-1	n-Propylbenzene	ND		100	93.3	93	100	94.9	95	2	76-123/10
100-42-5	Styrene	ND		100	104	104	100	101	101	3	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		100	90.4	90	100	93.1	93	3	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	111	111	100	111	111	0	79-123/10
71-55-6	1,1,1-Trichloroethane	375		100	456	81	100	437	62* [a]	4	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	88.4	88	100	90.9	91	3	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		100	94.6	95	100	95.4	95	1	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		100	87.3	87	100	96.8	97	10	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		100	97.5	98	100	98.2	98	1	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		100	92.0	92	100	98.0	98	6	72-123/10
95-63-6	1,2,4-Trimethylbenzene	ND		100	95.5	96	100	96.1	96	1	77-122/10
108-67-8	1,3,5-Trimethylbenzene	ND		100	98.8	99	100	98.1	98	1	79-127/10
127-18-4	Tetrachloroethylene	ND		100	103	103	100	104	104	1	71-124/10
108-88-3	Toluene	ND		100	95.7	96	100	96.9	97	1	78-120/10
79-01-6	Trichloroethylene	9.7		100	109	99	100	107	97	2	75-119/10
75-69-4	Trichlorofluoromethane	ND		100	127	127	100	116	116	9	67-129/14
75-01-4	Vinyl chloride	ND		100	91.7	92	100	92.8	93	1	60-133/15
1330-20-7	Xylene (total)	ND		300	287	96	300	287	96	0	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C42713-3	Limits
1868-53-7	Dibromofluoromethane	99%	101%	100%	78-125%
2037-26-5	Toluene-D8	98%	99%	99%	86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42664
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
C42713-3MS	W58258.D	5	11/10/15	CV	n/a	n/a	VW2180
C42713-3MSD	W58259.D	5	11/10/15	CV	n/a	n/a	VW2180
C42713-3	W58257.D	5	11/10/15	CV	n/a	n/a	VW2180

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

C42664-3, C42664-4

CAS No.	Surrogate Recoveries	MS	MSD	C42713-3	Limits
460-00-4	4-Bromofluorobenzene	102%	100%	99%	80-113%

(a) Outside control limits due to high level in sample relative to spike amount. AZ:M3

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

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: C42664
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10417
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/07/15

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	-1.2	<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 MP10417: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5

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: C42664
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10417 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/07/15

Metal	C42584-2 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr				
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron	474	13200	12500	101.8	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Potassium					
Selenium					
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	anr				

Associated samples MP10417: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5

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: C42664
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10417 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/07/15

Metal	C42584-2 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	474	13100	12500	101.0	0.8	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Potassium						
Selenium						
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	anr					

Associated samples MP10417: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5

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: C42664
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10417
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/07/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	12800	12500	102.4	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP10417: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C42664
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10417
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/07/15

Metal	C42584-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	474	644	35.9*(a)	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium				
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP10417: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

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: C42664
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	GN17804	5.0	0.0	mg/l	250	250	100.0	75-125%
Bromide	GP8638/GN17830	0.20	0.0	mg/l	5	4.94	98.8	90-110%
Chloride	GP8638/GN17830	0.50	0.0	mg/l	5	4.75	95.0	90-110%
Fluoride	GP8638/GN17830	0.10	0.0	mg/l	5	4.87	97.4	90-110%
Nitrogen, Nitrate	GP8618/GN17799	0.10	0.0	mg/l	5	4.96	99.2	90-110%
Nitrogen, Nitrate	GP8638/GN17830	0.10	0.0	mg/l	5	4.87	97.4	90-110%
Nitrogen, Nitrite	GP8638/GN17830	0.10	0.020	mg/l	5	4.76	95.2	90-110%
Sulfate	GP8638/GN17830	0.50	0.0	mg/l	5	4.72	94.4	90-110%
Total Organic Carbon	GP8639/GN17834	1.0	0.0	mg/l	25	24.3	97.3	75-125%

Associated Samples:
Batch GP8618: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GP8638: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GP8639: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GN17804: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42664
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	GN17804	mg/l	250	248	0.8	
Bromide	GP8638/GN17830	mg/l	5	4.96	0.4	25%
Chloride	GP8638/GN17830	mg/l	5	4.76	0.2	25%
Fluoride	GP8638/GN17830	mg/l	5	4.97	2.0	25%
Nitrogen, Nitrate	GP8618/GN17799	mg/l	5	4.97	0.2	25%
Nitrogen, Nitrate	GP8638/GN17830	mg/l	5	4.87	0.0	25%
Nitrogen, Nitrite	GP8638/GN17830	mg/l	5	4.79	0.6	25%
Sulfate	GP8638/GN17830	mg/l	5	4.74	0.4	25%
Total Organic Carbon	GP8639/GN17834	mg/l	25	24.8	2.0	

Associated Samples:
Batch GP8618: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GP8638: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GP8639: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GN17804: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42664
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	GN17804	C42664-1	mg/l	412	404	2.0	0-25%

Associated Samples:
Batch GN17804: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
(*) Outside of QC limits

8.3
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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42664
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	GP8638/GN17830	C42527-1	mg/l	0.030	5	4.8	95.4	80-120%
Chloride	GP8638/GN17830	C42527-1	mg/l	5.0	5	10	100.0	80-120%
Fluoride	GP8638/GN17830	C42527-1	mg/l	0.080	5	5.0	98.4	80-120%
Nitrogen, Nitrate	GP8618/GN17799	C42664-5	mg/l	24.4	25	50.9	106.0	80-120%
Nitrogen, Nitrate	GP8638/GN17830	C42527-1	mg/l	0.0	5	4.7	94.0	80-120%
Nitrogen, Nitrite	GP8638/GN17830	C42527-1	mg/l	0.0	5	4.7	94.0	80-120%
Sulfate	GP8638/GN17830	C42527-1	mg/l	11.0	5	15.4	88.0	80-120%
Total Organic Carbon	GP8639/GN17834	C42664-1	mg/l	1.6	25	24.3	90.7	75-125%

Associated Samples:
Batch GP8618: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GP8638: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GP8639: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42664
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	GP8638/GN17830	C42527-1	mg/l	0.030	5	4.8	0.0	
Chloride	GP8638/GN17830	C42527-1	mg/l	5.0	5	10	0.0	
Fluoride	GP8638/GN17830	C42527-1	mg/l	0.080	5	4.9	2.0	
Nitrogen, Nitrate	GP8618/GN17799	C42664-5	mg/l	24.4	25	50.9	0.0	
Nitrogen, Nitrate	GP8638/GN17830	C42527-1	mg/l	0.0	5	4.7	0.0	
Nitrogen, Nitrite	GP8638/GN17830	C42527-1	mg/l	0.0	5	4.6	2.2	
Sulfate	GP8638/GN17830	C42527-1	mg/l	11.0	5	15.4	0.0	

Associated Samples:
Batch GP8618: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
Batch GP8638: C42664-1, C42664-2, C42664-3, C42664-4, C42664-5
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
ACCUTEST
LABORATORIES

11/16/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C42698

Sampling Date: 11/05/15

Report to:

City of Tucson - Env.Services
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Total number of pages in report: **65**

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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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C42698

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C42698-1	11/05/15	08:20	KV	11/06/15	AQ	Ground Water	HQUST-532A
C42698-2	11/05/15	08:40	KV	11/06/15	AQ	Ground Water	HQUST-526A
C42698-3	11/05/15	09:10	KV	11/06/15	AQ	Ground Water	HQUST-548
C42698-4	11/05/15	09:54	KV	11/06/15	AQ	Ground Water	HQUST-547
C42698-5	11/05/15	10:12	KV	11/06/15	AQ	Ground Water	HQUST-525A
C42698-6	11/05/15	10:45	KV	11/06/15	AQ	Ground Water	CEP-519A

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C42698
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	11/16/2015 9:53:35 P

6 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 11/05/2015 and were received at Accutest on 11/06/2015 properly preserved, at 3.2 Deg. C and intact. These Samples received an Accutest job number of C42698. 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:** VQ1406

- Sample(s) C42607-9MS, C42607-9MSD were used as the QC samples indicated.
- Blank Spike/Blank Spike Duplicate Recovery(s) for Methyl Tert Butyl Ether are outside laboratory control limits; but within marginal exceedance criteria.
- RPD for BSD for Trichlorofluoromethane exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria.
- Matrix Spike Duplicate Recovery(s) for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, p-Isopropyltoluene, tert-Butylbenzene are outside laboratory control limits. The associated blank spike recoveries were acceptable.
- RPD for MSD for tert-Butylbenzene is outside laboratory control limits for sample C42607-9MSD.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP10429

- Sample(s) C42650-3MS, C42650-3MSD, C42650-3SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP8614

- Sample(s) C42540-3MS, C42540-3MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP8649

- Sample(s) C42698-3MS, C42698-3MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN17804

- Sample(s) C42664-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Matrix: AQ **Batch ID:** GN17852

- Sample(s) C42661-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP8648

- Sample(s) C42693-2MS 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: C42698
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/05/15

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C42698-1	**HQUST-532A**					
Iron		280	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		210	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.1	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		722	25		mg/l	EPA 300/SW846 9056A
C42698-2	**HQUST-526A**					
Iron		813	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		304	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.1	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		446	25		mg/l	EPA 300/SW846 9056A
C42698-3	**HQUST-548**					
Methyl Tert Butyl Ether		1.9	1.0		ug/l	SW846 8260B
Iron		518	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		326	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.9	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		909	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C42698-4	**HQUST-547**					
Methyl Tert Butyl Ether		1.8	1.0		ug/l	SW846 8260B
Iron		401	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		236	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		5.4	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		739	50		mg/l	EPA 300/SW846 9056A
C42698-5	**HQUST-525A**					
Iron		417	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		242	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.9	0.10		mg/l	EPA 300/SW846 9056A
Sulfate [a]		683	25		mg/l	EPA 300/SW846 9056A
C42698-6	**CEP-519A**					
Isopropylbenzene		3.2	2.0		ug/l	SW846 8260B
Naphthalene		11.4	10		ug/l	SW846 8260B
n-Propylbenzene		8.0	4.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		92.7	4.0		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		36.5	4.0		ug/l	SW846 8260B

Summary of Hits

Job Number: C42698
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/05/15

3

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Xylene (total)	32.4	4.0		ug/l	SW846 8260B
Iron	389	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3	176	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]	26.2	0.50		mg/l	EPA 300/SW846 9056A
Sulfate [a]	472	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon	3.2	1.0		mg/l	SM5310 C-00

(a) AZ:D2

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C42698-1	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	Q32250.D	1	11/10/15	EA	n/a	n/a	VQ1406
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:	C42698-1	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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%		78-125%
2037-26-5	Toluene-D8	107%		86-114%
460-00-4	4-Bromofluorobenzene	90%		80-113%

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:	C42698-1	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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:	C42698-1	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	280	200	ug/l	1	11/10/15	11/13/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5376
(2) Prep QC Batch: MP10429

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C42698-1	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	210	5.0	mg/l	1	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	6.1	0.10	mg/l	1	11/06/15 12:49	RL	EPA 300/SW846 9056A
Sulfate [a]	722	25	mg/l	50	11/13/15 12:39	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	11/12/15 13:15	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C42698-2	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	Q32251.D	1	11/10/15	EA	n/a	n/a	VQ1406
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-526A		
Lab Sample ID:	C42698-2	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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%		78-125%
2037-26-5	Toluene-D8	105%		86-114%
460-00-4	4-Bromofluorobenzene	91%		80-113%

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:	C42698-2	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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:	C42698-2	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	813	200	ug/l	1	11/10/15	11/13/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5376
(2) Prep QC Batch: MP10429

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C42698-2	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	304	5.0	mg/l	1	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	4.1	0.10	mg/l	1	11/06/15 13:06	RL	EPA 300/SW846 9056A
Sulfate [a]	446	25	mg/l	50	11/13/15 12:57	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	11/12/15 13:15	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C42698-3	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	Q32252.D	1	11/10/15	EA	n/a	n/a	VQ1406
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:	C42698-3	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	1.9	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%		78-125%
2037-26-5	Toluene-D8	107%		86-114%
460-00-4	4-Bromofluorobenzene	91%		80-113%

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:	C42698-3	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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:	C42698-3	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	518	200	ug/l	1	11/10/15	11/14/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5376
(2) Prep QC Batch: MP10429

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C42698-3	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	11/09/15 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	4.9	0.10	mg/l	1	11/06/15 13:23	RL	EPA 300/SW846 9056A
Sulfate [a]	909	50	mg/l	100	11/13/15 13:14	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	11/12/15 13:15	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C42698-4	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	Q32253.D	1	11/10/15	EA	n/a	n/a	VQ1406
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:	C42698-4	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	1.8	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%		78-125%
2037-26-5	Toluene-D8	107%		86-114%
460-00-4	4-Bromofluorobenzene	90%		80-113%

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:	C42698-4	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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:	C42698-4	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	401	200	ug/l	1	11/10/15	11/14/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5376
(2) Prep QC Batch: MP10429

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C42698-4	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	11/13/15 16:00	PH	SM2320 B-97
Nitrogen, Nitrate	5.4	0.10	mg/l	1	11/06/15 13:41	RL	EPA 300/SW846 9056A
Sulfate [a]	739	50	mg/l	100	11/13/15 14:06	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	11/12/15 13:15	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C42698-5	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	Q32254.D	1	11/10/15	EA	n/a	n/a	VQ1406
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:	C42698-5	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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%		78-125%
2037-26-5	Toluene-D8	107%		86-114%
460-00-4	4-Bromofluorobenzene	90%		80-113%

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:	C42698-5	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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:	C42698-5	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	417	200	ug/l	1	11/10/15	11/14/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5376
(2) Prep QC Batch: MP10429

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C42698-5	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	11/13/15 16:00	PH	SM2320 B-97
Nitrogen, Nitrate	4.9	0.10	mg/l	1	11/06/15 13:58	RL	EPA 300/SW846 9056A
Sulfate [a]	683	25	mg/l	50	11/13/15 14:23	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	11/12/15 13:15	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C42698-6	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	Q32255.D	2	11/10/15	EA	n/a	n/a	VQ1406
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:	C42698-6	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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	3.2	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	11.4	10	ug/l	
103-65-1	n-Propylbenzene	8.0	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	92.7	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	36.5	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)	32.4	4.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		78-125%
2037-26-5	Toluene-D8	106%		86-114%
460-00-4	4-Bromofluorobenzene	98%		80-113%

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:	C42698-6	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
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:	C42698-6	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	389	200	ug/l	1	11/10/15	11/14/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5376
(2) Prep QC Batch: MP10429

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C42698-6	**Date Sampled:**	11/05/15
Matrix:	AQ - Ground Water	**Date Received:**	11/06/15
		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	11/13/15 16:00	PH	SM2320 B-97
Nitrogen, Nitrate [a]	26.2	0.50	mg/l	5	11/06/15 14:52	RL	EPA 300/SW846 9056A
Sulfate [a]	472	25	mg/l	50	11/13/15 14:41	RL	EPA 300/SW846 9056A
Total Organic Carbon	3.2	1.0	mg/l	1	11/12/15 13:15	RL	SM5310 C-00

(a) AZ:D2

RL = Reporting Limit

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: C42698
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.
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 # 807604360664
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C 042698

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

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 ND3 SO4	Fe (total)	TDC	8260 VOC								
1	HQUST-532A	11/5/15	0820	KV	GW	7									X	X	X	X								
2	HQUST-526A	11/5/15	0848	KV	GW	7									X	X	X	X								
3	HQUST-548	11/5/15	0910	KV	GW	7									X	X	X	X								
4	HQUST-547	11/5/15	0954	KV	GW	7									X	X	X	X								
5	HQUST-525A	11/5/15	1012	KV	GW	7									X	X	X	X								
6	CEP-519A	11/5/15	1045	KV	GW	7									X	X	X	X								
7	TRIP BLANK					2												X				NO SAMPLES RECVD				

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

* NO TRIP BLANKS RECVD

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	11/5/15 1327	[signature]	[signature]	11/5/15 1730	Fedex
2						
3	Fedex	11/6/15 1000	[signature]			
4						
5						

Custody Seal # Y INTACT
Appropriate Bottle / Pres. Y / N
Labels match Coc? Y / N
Headspace Y / N
Separate Receiving Check List used: Y / N
On Ice Y / N D
Cooler Temp. 4.1 | 3.2

5.2 5

C42698: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C42698 **Client:** CITY OF TUCSON **Project:** HQUST

Date / Time Received: 11/6/2015 10:45:00 AM **Delivery Method:** FedEx **Airbill #'s:** 807604360664

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

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

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	IR GUN	
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 TRIP BLANKS LISTED ON THE COC. NO TRIP BLANKS RECEIVED

Accutest Laboratories
V:408.588.0200

2105 Lundy Avenue
F: 408.588.0201

San Jose, CA 95131
www/accutest.com

C42698: Chain of Custody
Page 2 of 3

Sample Receipt Summary - Problem Resolution

Accutest Job Number: C42698

CSR: Elvin Kumar **Response Date:** 11/9/2015

Response: Per client "Trip Blanks" should have been included in the cooler but it wasn't found during Sample receipt login at the Laboratory.
Trip Blank listed on the COC was not logged in for analysis, 11/09/2015

Accutest Laboratories
V:408.588.0200

2105 Lundy Avenue
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San Jose, CA 95131
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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: C42698
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
VQ1406-MB	Q32243.D	1	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

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: C42698
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
VQ1406-MB	Q32243.D	1	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

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	97%	78-125%
2037-26-5	Toluene-D8	107%	86-114%

Method Blank Summary

Job Number: C42698
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
VQ1406-MB	Q32243.D	1	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	80-113%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42698
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
VQ1406-BS	Q32240.D	1	11/10/15	EA	n/a	n/a	VQ1406
VQ1406-BSD	Q32241.D	1	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	72.1	90	71.7	90	1	58-137/12
71-43-2	Benzene	20	18.3	92	18.4	92	1	77-118/10
108-86-1	Bromobenzene	20	19.4	97	19.8	99	2	78-122/10
74-97-5	Bromochloromethane	20	17.2	86	18.1	91	5	76-124/10
75-27-4	Bromodichloromethane	20	18.8	94	19.2	96	2	74-121/10
75-25-2	Bromoform	20	17.0	85	17.2	86	1	58-133/10
104-51-8	n-Butylbenzene	20	20.9	105	21.0	105	0	75-125/10
135-98-8	sec-Butylbenzene	20	20.7	104	20.6	103	0	76-127/10
98-06-6	tert-Butylbenzene	20	20.8	104	21.0	105	1	76-124/10
108-90-7	Chlorobenzene	20	18.5	93	19.0	95	3	77-120/10
75-00-3	Chloroethane	20	13.9	70	14.9	75	7	63-117/10
67-66-3	Chloroform	20	17.1	86	17.7	89	3	74-123/10
95-49-8	o-Chlorotoluene	20	19.9	100	20.1	101	1	76-125/10
106-43-4	p-Chlorotoluene	20	20.1	101	20.1	101	0	76-123/10
75-15-0	Carbon disulfide	20	16.7	84	17.1	86	2	57-126/11
56-23-5	Carbon tetrachloride	20	18.0	90	18.1	91	1	72-128/11
75-34-3	1,1-Dichloroethane	20	16.4	82	17.0	85	4	70-120/10
75-35-4	1,1-Dichloroethylene	20	13.8	69	14.9	75	8	65-120/11
563-58-6	1,1-Dichloropropene	20	17.0	85	17.0	85	0	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	17.8	89	17.1	86	4	63-128/10
106-93-4	1,2-Dibromoethane	20	19.5	98	19.8	99	2	78-123/10
107-06-2	1,2-Dichloroethane	20	18.2	91	18.3	92	1	72-123/10
78-87-5	1,2-Dichloropropane	20	18.8	94	19.2	96	2	76-119/10
142-28-9	1,3-Dichloropropane	20	19.8	99	20.1	101	2	78-122/10
108-20-3	Di-Isopropyl ether	20	16.7	84	17.4	87	4	69-124/10
594-20-7	2,2-Dichloropropane	20	16.6	83	16.6	83	0	68-129/10
124-48-1	Dibromochloromethane	20	19.4	97	20.0	100	3	75-124/10
75-71-8	Dichlorodifluoromethane	20	11.7	59	14.2	71	19	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	18.3	92	19.1	96	4	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	20.5	103	21.0	105	2	76-125/10
541-73-1	m-Dichlorobenzene	20	19.1	96	19.4	97	2	77-121/10
95-50-1	o-Dichlorobenzene	20	19.0	95	19.3	97	2	77-120/10
106-46-7	p-Dichlorobenzene	20	18.8	94	19.2	96	2	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	15.3	77	15.8	79	3	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	19.7	99	20.0	100	2	73-122/10
100-41-4	Ethylbenzene	20	19.8	99	19.9	100	1	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42698
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
VQ1406-BS	Q32240.D	1	11/10/15	EA	n/a	n/a	VQ1406
VQ1406-BSD	Q32241.D	1	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	80.2	100	79.5	99	1	71-139/10
87-68-3	Hexachlorobutadiene	20	19.0	95	19.3	97	2	69-127/11
98-82-8	Isopropylbenzene	20	20.4	102	20.6	103	1	77-125/10
99-87-6	p-Isopropyltoluene	20	21.0	105	21.1	106	0	76-125/10
108-10-1	4-Methyl-2-pentanone	80	71.6	90	71.6	90	0	71-132/10
74-83-9	Methyl bromide	20	14.9	75	15.6	78	5	66-123/10
74-87-3	Methyl chloride	20	14.4	72	13.8	69	4	50-138/19
74-95-3	Methylene bromide	20	19.1	96	19.4	97	2	77-125/10
75-09-2	Methylene chloride	20	15.4	77	16.2	81	5	65-124/14
78-93-3	Methyl ethyl ketone	80	78.4	98	78.5	98	0	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	14.0	70* [a]	14.4	72* [a]	3	73-124/10
91-20-3	Naphthalene	20	18.5	93	18.7	94	1	68-122/12
103-65-1	n-Propylbenzene	20	20.0	100	19.9	100	1	76-123/10
100-42-5	Styrene	20	17.2	86	17.8	89	3	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	16.5	83	17.3	87	5	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	19.9	100	20.3	102	2	79-123/10
71-55-6	1,1,1-Trichloroethane	20	16.7	84	16.9	85	1	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	19.6	98	19.5	98	1	77-123/10
79-00-5	1,1,2-Trichloroethane	20	18.6	93	18.9	95	2	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	19.0	95	19.4	97	2	70-126/11
96-18-4	1,2,3-Trichloropropane	20	18.9	95	18.9	95	0	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	18.8	94	19.4	97	3	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	20.4	102	20.5	103	0	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	21.4	107	21.5	108	0	79-127/10
127-18-4	Tetrachloroethylene	20	18.5	93	18.6	93	1	71-124/10
108-88-3	Toluene	20	18.8	94	19.1	96	2	78-120/10
79-01-6	Trichloroethylene	20	18.4	92	18.5	93	1	75-119/10
75-69-4	Trichlorofluoromethane	20	13.4	67	15.8	79	16* [b]	67-129/14
75-01-4	Vinyl chloride	20	13.5	68	14.9	75	10	60-133/15
1330-20-7	Xylene (total)	60	58.9	98	59.9	100	2	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	99%	78-125%
2037-26-5	Toluene-D8	103%	103%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42698
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
VQ1406-BS	Q32240.D	1	11/10/15	EA	n/a	n/a	VQ1406
VQ1406-BSD	Q32241.D	1	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	102%	80-113%

(a) Outside laboratory control limits; but within marginal exceedance criteria. AZ:L2
(b) RPD exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria. AZ:R7

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42698
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
C42607-9MS	Q32258.D	25	11/10/15	EA	n/a	n/a	VQ1406
C42607-9MSD	Q32259.D	25	11/10/15	EA	n/a	n/a	VQ1406
C42607-9 [a]	Q32247.D	25	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

CAS No.	Compound	C42607-9 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	440		2000	2720	114	2000	2840	120	4	58-137/12
71-43-2	Benzene	15.6		500	572	111	500	580	113	1	77-118/10
108-86-1	Bromobenzene	ND		500	545	109	500	573	115	5	78-122/10
74-97-5	Bromochloromethane	ND		500	518	104	500	533	107	3	76-124/10
75-27-4	Bromodichloromethane	ND		500	514	103	500	510	102	1	74-121/10
75-25-2	Bromoform	ND		500	321	64	500	325	65	1	58-133/10
104-51-8	n-Butylbenzene	11.8		500	604	118	500	638	125	5	75-125/10
135-98-8	sec-Butylbenzene	ND		500	594	119	500	628	126	6	76-127/10
98-06-6	tert-Butylbenzene	ND		500	609	122	500	768	154* [b]	23* [c]	76-124/10
108-90-7	Chlorobenzene	ND		500	533	107	500	546	109	2	77-120/10
75-00-3	Chloroethane	ND		500	430	86	500	430	86	0	63-117/10
67-66-3	Chloroform	ND		500	530	106	500	527	105	1	74-123/10
95-49-8	o-Chlorotoluene	ND		500	574	115	500	589	118	3	76-125/10
106-43-4	p-Chlorotoluene	ND		500	575	115	500	597	119	4	76-123/10
75-15-0	Carbon disulfide	8.1		500	394	77	500	398	78	1	57-126/11
56-23-5	Carbon tetrachloride	ND		500	554	111	500	559	112	1	72-128/11
75-34-3	1,1-Dichloroethane	ND		500	525	105	500	520	104	1	70-120/10
75-35-4	1,1-Dichloroethylene	ND		500	502	100	500	537	107	7	65-120/11
563-58-6	1,1-Dichloropropene	ND		500	529	106	500	537	107	2	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		500	515	103	500	529	106	3	63-128/10
106-93-4	1,2-Dibromoethane	ND		500	555	111	500	566	113	2	78-123/10
107-06-2	1,2-Dichloroethane	ND		500	553	111	500	539	108	3	72-123/10
78-87-5	1,2-Dichloropropane	ND		500	569	114	500	574	115	1	76-119/10
142-28-9	1,3-Dichloropropane	ND		500	563	113	500	569	114	1	78-122/10
108-20-3	Di-Isopropyl ether	ND		500	504	101	500	502	100	0	69-124/10
594-20-7	2,2-Dichloropropane	ND		500	476	95	500	481	96	1	68-129/10
124-48-1	Dibromochloromethane	ND		500	440	88	500	446	89	1	75-124/10
75-71-8	Dichlorodifluoromethane	ND		500	542	108	500	494	99	9	37-149/21
156-59-2	cis-1,2-Dichloroethylene	ND		500	563	113	500	576	115	2	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		500	576	115	500	582	116	1	76-125/10
541-73-1	m-Dichlorobenzene	ND		500	543	109	500	566	113	4	77-121/10
95-50-1	o-Dichlorobenzene	ND		500	548	110	500	568	114	4	77-120/10
106-46-7	p-Dichlorobenzene	ND		500	538	108	500	558	112	4	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		500	499	100	500	504	101	1	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		500	531	106	500	530	106	0	73-122/10
100-41-4	Ethylbenzene	17.0		500	587	114	500	599	116	2	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42698
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
C42607-9MS	Q32258.D	25	11/10/15	EA	n/a	n/a	VQ1406
C42607-9MSD	Q32259.D	25	11/10/15	EA	n/a	n/a	VQ1406
C42607-9 [a]	Q32247.D	25	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

CAS No.	Compound	C42607-9 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	2200	110	2000	2220	111	1	71-139/10
87-68-3	Hexachlorobutadiene	ND		500	517	103	500	567	113	9	69-127/11
98-82-8	Isopropylbenzene	ND		500	587	117	500	600	120	2	77-125/10
99-87-6	p-Isopropyltoluene	ND		500	594	119	500	635	127* [b]	7	76-125/10
108-10-1	4-Methyl-2-pentanone	ND		2000	1930	97	2000	2020	101	5	71-132/10
74-83-9	Methyl bromide	11.3		500	460	90	500	472	92	3	66-123/10
74-87-3	Methyl chloride	47.2		500	523	95	500	525	96	0	50-138/19
74-95-3	Methylene bromide	ND		500	562	112	500	564	113	0	77-125/10
75-09-2	Methylene chloride	ND		500	509	102	500	509	102	0	65-124/14
78-93-3	Methyl ethyl ketone	55.9		2000	2240	109	2000	2380	116	6	67-139/11
1634-04-4	Methyl Tert Butyl Ether	336		500	754	84	500	801	93	6	73-124/10
91-20-3	Naphthalene	125		500	670	109	500	702	115	5	68-122/12
103-65-1	n-Propylbenzene	10.6		500	581	114	500	609	120	5	76-123/10
100-42-5	Styrene	ND		500	470	94	500	480	96	2	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		500	484	97	500	490	98	1	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		500	574	115	500	580	116	1	79-123/10
71-55-6	1,1,1-Trichloroethane	ND		500	538	108	500	539	108	0	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	554	111	500	570	114	3	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		500	527	105	500	532	106	1	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		500	541	108	500	568	114	5	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		500	477	95	500	488	98	2	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		500	545	109	500	576	115	6	72-123/10
95-63-6	1,2,4-Trimethylbenzene	92.9		500	680	117	500	712	124* [b]	5	77-122/10
108-67-8	1,3,5-Trimethylbenzene	50.0		500	674	125	500	710	132* [b]	5	79-127/10
127-18-4	Tetrachloroethylene	ND		500	521	104	500	543	109	4	71-124/10
108-88-3	Toluene	7.9		500	548	108	500	563	111	3	78-120/10
79-01-6	Trichloroethylene	ND		500	570	114	500	577	115	1	75-119/10
75-69-4	Trichlorofluoromethane	ND		500	459	92	500	452	90	2	67-129/14
75-01-4	Vinyl chloride	ND		500	451	90	500	433	87	4	60-133/15
1330-20-7	Xylene (total)	121		1500	1810	113	1500	1860	116	3	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C42607-9	Limits
1868-53-7	Dibromofluoromethane	99%	97%	92%	78-125%
2037-26-5	Toluene-D8	101%	101%	102%	86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42698
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
C42607-9MS	Q32258.D	25	11/10/15	EA	n/a	n/a	VQ1406
C42607-9MSD	Q32259.D	25	11/10/15	EA	n/a	n/a	VQ1406
C42607-9 [a]	Q32247.D	25	11/10/15	EA	n/a	n/a	VQ1406

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

C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

CAS No.	Surrogate Recoveries	MS	MSD	C42607-9	Limits
460-00-4	4-Bromofluorobenzene	102%	100%	99%	80-113%

(a) Dilution required due to sample foaming. AZ:D1,D2
(b) Outside laboratory control limits. AZ:M1
(c) Outside laboratory control limits. AZ:R9

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

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: C42698
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10429
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/10/15

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	5.3	<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 MP10429: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

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: C42698
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10429
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/10/15

Metal	C42650-3 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr				
Antimony					
Arsenic					
Barium					
Beryllium					
Boron	anr				
Cadmium					
Calcium	anr				
Chromium					
Cobalt					
Copper	anr				
Iron	0.0	12700	12500	101.6	75-125
Lead					
Lithium					
Magnesium	anr				
Manganese	anr				
Molybdenum					
Nickel					
Potassium	anr				
Selenium					
Silicon					
Silver					
Sodium	anr				
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	anr				

Associated samples MP10429: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

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: C42698
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10429 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/10/15

Metal	C42650-3 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony						
Arsenic						
Barium						
Beryllium						
Boron	anr					
Cadmium						
Calcium	anr					
Chromium						
Cobalt						
Copper	anr					
Iron	0.0	13000	12500	104.0	2.3	20
Lead						
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel						
Potassium	anr					
Selenium						
Silicon						
Silver						
Sodium	anr					
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	anr					

Associated samples MP10429: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

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: C42698
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10429
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/10/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr			
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	anr			
Cadmium				
Calcium	anr			
Chromium				
Cobalt				
Copper	anr			
Iron	12900	12500	103.2	80-120
Lead				
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel				
Potassium	anr			
Selenium				
Silicon				
Silver				
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP10429: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C42698
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10429
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/10/15

Metal	C42650-3 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	anr			
Cadmium				
Calcium	anr			
Chromium				
Cobalt				
Copper	anr			
Iron	0.00	0.00	NC	0-10
Lead				
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel				
Potassium	anr			
Selenium				
Silicon				
Silver				
Sodium	anr			
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP10429: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Northern California
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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: C42698
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	GN17804	5.0	0.0	mg/l	250	250	100.0	75-125%
Alkalinity, Total as CaCO3	GN17852	5.0	0.0	mg/l	250	252	100.8	75-125%
Chloride	GP8614/GN17792	0.50	0.0	mg/l	5	4.86	97.2	90-110%
Chloride	GP8649/GN17849	0.50	0.0	mg/l	5	4.75	95.0	90-110%
Nitrogen, Nitrate	GP8614/GN17792	0.10	0.0	mg/l	5	4.97	99.4	90-110%
Sulfate	GP8614/GN17792	0.50	0.0	mg/l	5	4.86	97.2	90-110%
Sulfate	GP8649/GN17849	0.50	0.0	mg/l	5	4.85	97.0	90-110%
Total Organic Carbon	GP8648/GN17846	1.0	0.0	mg/l	25	23.5	93.9	75-125%

Associated Samples:
Batch GP8614: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GP8648: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GP8649: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GN17804: C42698-1, C42698-2, C42698-3
Batch GN17852: C42698-4, C42698-5, C42698-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42698
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	GN17804	mg/l	250	248	0.8	
Alkalinity, Total as CaCO3	GN17852	mg/l	250	252	0.0	
Chloride	GP8614/GN17792	mg/l	5	4.83	0.6	25%
Chloride	GP8649/GN17849	mg/l	5	4.77	0.4	25%
Nitrogen, Nitrate	GP8614/GN17792	mg/l	5	4.95	0.4	25%
Sulfate	GP8614/GN17792	mg/l	5	4.79	1.5	25%
Sulfate	GP8649/GN17849	mg/l	5	4.87	0.4	25%
Total Organic Carbon	GP8648/GN17846	mg/l	25	24.1	2.8	

Associated Samples:
Batch GP8614: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GP8648: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GP8649: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GN17804: C42698-1, C42698-2, C42698-3
Batch GN17852: C42698-4, C42698-5, C42698-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42698
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	GN17804	C42664-1	mg/l	412	404	2.0	0-25%
Alkalinity, Total as CaCO3	GN17852	C42661-1	mg/l	32.0	32.0	0.0	0-25%

Associated Samples:
Batch GN17804: C42698-1, C42698-2, C42698-3
Batch GN17852: C42698-4, C42698-5, C42698-6
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42698
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
Chloride	GP8614/GN17792	C42540-3	mg/l	236	250	491	102.0	80-120%
Chloride	GP8649/GN17849	C42698-3	mg/l	188	500	674	97.2	80-120%
Nitrogen, Nitrate	GP8614/GN17792	C42540-3	mg/l	4.6	250	248	97.7	80-120%
Nitrogen, Nitrate	GP8614/GN17792	C42540-3	mg/l	3.8	250	248	97.7	80-120%
Sulfate	GP8614/GN17792	C42540-3	mg/l	107	250	325	87.2	80-120%
Sulfate	GP8649/GN17849	C42698-3	mg/l	909	500	1390	96.2	80-120%
Total Organic Carbon	GP8648/GN17846	C42693-2	mg/l	6.7	25	32.4	102.6	75-125%

Associated Samples:
Batch GP8614: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GP8648: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GP8649: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42698
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
Chloride	GP8614/GN17792	C42540-3	mg/l	236	250	491	0.0	
Chloride	GP8649/GN17849	C42698-3	mg/l	188	500	673	0.1	
Nitrogen, Nitrate	GP8614/GN17792	C42540-3	mg/l	3.8	250	248	0.0	
Nitrogen, Nitrate	GP8614/GN17792	C42540-3	mg/l	4.6	250	248	0.0	
Sulfate	GP8614/GN17792	C42540-3	mg/l	107	250	325	0.0	
Sulfate	GP8649/GN17849	C42698-3	mg/l	909	500	1390	0.0	

Associated Samples:
Batch GP8614: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
Batch GP8649: C42698-1, C42698-2, C42698-3, C42698-4, C42698-5, C42698-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
ACCUTEST
LABORATORIES

11/18/15

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C42760

Sampling Date: 11/09/15

Report to:

City of Tucson - Env.Services
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Total number of pages in report: **66**

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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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C42760

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C42760-1	11/09/15	10:40	KV	11/10/15	AQ	Ground Water	CEP-527A
C42760-2	11/09/15	11:15	KV	11/10/15	AQ	Ground Water	HQUST-524A
C42760-3	11/09/15	11:56	KV	11/10/15	AQ	Ground Water	HQUST-523A
C42760-4	11/09/15	12:18	KV	11/10/15	AQ	Ground Water	CEP-518A
C42760-5	11/09/15	00:00	KV	11/10/15	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C42760
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	11/18/2015 12:20:00 A

4 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 11/09/2015 and were received at Accutest on 11/10/2015 properly preserved, at 3.2 Deg. C and intact. These Samples received an Accutest job number of C42760. 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:** VW2181

- Sample(s) C42692-1MS, C42692-1MSD were used as the QC samples indicated.
- Sample(s) C42760-1, C42760-2, C42760-3, C42760-4 have for Carbon tetrachloride, Dibromochloromethane, Trichlorofluoromethane a CCV outside of control limits (biased high); not detected in samples.
- RPD(s) for BSD for 1,1-Dichloroethylene, 1,1-Dichloropropene, 2,2-Dichloropropane exceeded laboratory acceptance limit; BS/BSD recoveries met acceptance criteria.
- Matrix Spike Recovery and RPD for MSD for Naphthalene 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 1,2,4-Trimethylbenzene exceeded laboratory acceptance limit; MS/MSD recoveries met acceptance criteria.

Matrix: AQ **Batch ID:** VW2183

- Sample(s) C42798-5MS, C42798-5MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP10438

- Sample(s) C42732-4FMS, C42732-4FMSD, C42732-4FSDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP10438-SD1. Serial dilution indicates possible matrix interference.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP8637

- Sample(s) C42760-4MS, C42760-4MSD were used as the QC samples for Nitrogen, Nitrate, Sulfate..

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN17874

- Sample(s) C42760-2DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP8667

- Sample(s) C42798-3MS 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: C42760
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/09/15

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C42760-1	**CEP-527A**					
Chloroform		0.85	0.50		ug/l	SW846 8260B
Naphthalene		5.4	5.0		ug/l	SW846 8260B
Toluene		12.9	1.0		ug/l	SW846 8260B
Iron		4600	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		620	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		2.0	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		1220	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		12.9	1.0		mg/l	SM5310 C-00
C42760-2	**HQUST-524A**					
Alkalinity, Total as CaCO3		300	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		1.3	0.10		mg/l	EPA 300/SW846 9056A
Sulfate		859	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.4	1.0		mg/l	SM5310 C-00
C42760-3	**HQUST-523A**					
n-Butylbenzene		84.0	10		ug/l	SW846 8260B
sec-Butylbenzene		21.8	10		ug/l	SW846 8260B
Ethylbenzene		77.9	5.0		ug/l	SW846 8260B
Isopropylbenzene		21.3	5.0		ug/l	SW846 8260B
p-Isopropyltoluene		13.9	10		ug/l	SW846 8260B
Methyl Tert Butyl Ether		7.6	5.0		ug/l	SW846 8260B
Naphthalene		352	25		ug/l	SW846 8260B
n-Propylbenzene		58.7	10		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		1710	40		ug/l	SW846 8260B
1,3,5-Trimethylbenzene		318	10		ug/l	SW846 8260B
Toluene		18.9	5.0		ug/l	SW846 8260B
Xylene (total)		801	10		ug/l	SW846 8260B
Iron		9390	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		256	5.0		mg/l	SM2320 B-97
Sulfate		2420	100		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		65.9	5.0		mg/l	SM5310 C-00
C42760-4	**CEP-518A**					
Acetone		22.0	20		ug/l	SW846 8260B
sec-Butylbenzene		2.6	2.0		ug/l	SW846 8260B
Carbon disulfide		1.1	1.0		ug/l	SW846 8260B
Ethylbenzene		385	10		ug/l	SW846 8260B
Isopropylbenzene		25.3	1.0		ug/l	SW846 8260B
Naphthalene		321	50		ug/l	SW846 8260B

Summary of Hits

Job Number: C42760
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/09/15

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
n-Propylbenzene	43.0	2.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene	581	20		ug/l	SW846 8260B
1,3,5-Trimethylbenzene	192	20		ug/l	SW846 8260B
Toluene	1.6	1.0		ug/l	SW846 8260B
Xylene (total)	607	20		ug/l	SW846 8260B
Alkalinity, Total as CaCO3	498	5.0		mg/l	SM2320 B-97
Sulfate	622	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon	15.4	5.0		mg/l	SM5310 C-00

C42760-5 TRIP BLANK

No hits reported in this sample.

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C42760-1	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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	W58285.D	1	11/11/15	CV	n/a	n/a	VW2181
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	0.85	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 [a]	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 [a]	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:	C42760-1	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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	5.4	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	12.9	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	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	96%		78-125%
2037-26-5	Toluene-D8	98%		86-114%
460-00-4	4-Bromofluorobenzene	100%		80-113%

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:	C42760-1	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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) 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:	C42760-1	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	4600	200	ug/l	1	11/11/15	11/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5382
(2) Prep QC Batch: MP10438

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C42760-1	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	620	5.0	mg/l	1	11/17/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	2.0	0.10	mg/l	1	11/10/15 12:06	HD	EPA 300/SW846 9056A
Sulfate	1220	50	mg/l	100	11/10/15 13:51	HD	EPA 300/SW846 9056A
Total Organic Carbon	12.9	1.0	mg/l	1	11/17/15 12:56	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C42760-2	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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	W58283.D	1	11/11/15	CV	n/a	n/a	VW2181
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 [a]	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 [a]	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:	C42760-2	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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 [a]	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%		78-125%
2037-26-5	Toluene-D8	100%		86-114%
460-00-4	4-Bromofluorobenzene	100%		80-113%

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:	C42760-2	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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) 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:	C42760-2	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	11/11/15	11/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5382
(2) Prep QC Batch: MP10438

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-524A		
Lab Sample ID:	C42760-2	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	300	5.0	mg/l	1	11/17/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	1.3	0.10	mg/l	1	11/10/15 12:23	HD	EPA 300/SW846 9056A
Sulfate	859	50	mg/l	100	11/10/15 14:08	HD	EPA 300/SW846 9056A
Total Organic Carbon	1.4	1.0	mg/l	1	11/17/15 12:56	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C42760-3	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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	W58284.D	5	11/11/15	CV	n/a	n/a	VW2181
Run #2	W58313.D	20	11/12/15	CV	n/a	n/a	VW2183

	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	84.0	10	ug/l	
135-98-8	sec-Butylbenzene	21.8	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 [a]	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 [b]	ND	10	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane [a]	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:	C42760-3	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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	77.9	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	21.3	5.0	ug/l	
99-87-6	p-Isopropyltoluene	13.9	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	7.6	5.0	ug/l	
91-20-3	Naphthalene	352	25	ug/l	
103-65-1	n-Propylbenzene	58.7	10	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	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	1710 [c]	40	ug/l	
108-67-8	1,3,5-Trimethylbenzene	318	10	ug/l	
127-18-4	Tetrachloroethylene	ND	2.5	ug/l	
108-88-3	Toluene	18.9	5.0	ug/l	
79-01-6	Trichloroethylene	ND	2.5	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	2.5	ug/l	
75-01-4	Vinyl chloride	ND	2.5	ug/l	
1330-20-7	Xylene (total)	801	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	96%	78-125%
2037-26-5	Toluene-D8	97%	97%	86-114%
460-00-4	4-Bromofluorobenzene	103%	99%	80-113%

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:	C42760-3	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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) AZ:T2,T6
(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-523A		
Lab Sample ID:	C42760-3	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	9390	200	ug/l	1	11/11/15	11/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5382
(2) Prep QC Batch: MP10438

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-523A		
Lab Sample ID:	C42760-3	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	256	5.0	mg/l	1	11/17/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	< 0.25	0.25	mg/l	2.5	11/10/15 12:41	HD	EPA 300/SW846 9056A
Sulfate	2420	100	mg/l	200	11/10/15 14:25	HD	EPA 300/SW846 9056A
Total Organic Carbon	65.9	5.0	mg/l	5	11/17/15 12:56	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C42760-4	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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	W58286.D	1	11/11/15	CV	n/a	n/a	VW2181
Run #2	W58314.D	10	11/12/15	CV	n/a	n/a	VW2183

	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	22.0	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	2.6	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	1.1	1.0	ug/l	
56-23-5	Carbon tetrachloride [a]	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 [a]	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-518A		
Lab Sample ID:	C42760-4	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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	385 [c]	10	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	25.3	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	321 [c]	50	ug/l	
103-65-1	n-Propylbenzene	43.0	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	581 [c]	20	ug/l	
108-67-8	1,3,5-Trimethylbenzene	192 [c]	20	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	1.6	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane [a]	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	607 [c]	20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	94%	78-125%
2037-26-5	Toluene-D8	98%	97%	86-114%
460-00-4	4-Bromofluorobenzene	101%	97%	80-113%

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:	C42760-4	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
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) AZ:T2,T6
(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:	CEP-518A		
Lab Sample ID:	C42760-4	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	11/11/15	11/15/15	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA5382
(2) Prep QC Batch: MP10438

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-518A		
Lab Sample ID:	C42760-4	**Date Sampled:**	11/09/15
Matrix:	AQ - Ground Water	**Date Received:**	11/10/15
		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	498	5.0	mg/l	1	11/17/15 17:00	PH	SM2320 B-97
Nitrogen, Nitrate	< 0.25	0.25	mg/l	2.5	11/10/15 12:58	HD	EPA 300/SW846 9056A
Sulfate	622	50	mg/l	100	11/10/15 14:43	HD	EPA 300/SW846 9056A
Total Organic Carbon	15.4	5.0	mg/l	5	11/17/15 12:56	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C42760-5	**Date Sampled:**	11/09/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/10/15
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	W58297.D	1	11/12/15	CV	n/a	n/a	VW2183
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:	C42760-5	**Date Sampled:**	11/09/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/10/15
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	93%		78-125%
2037-26-5	Toluene-D8	97%		86-114%
460-00-4	4-Bromofluorobenzene	98%		80-113%

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:	C42760-5	**Date Sampled:**	11/09/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/10/15
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

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: C42760
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.
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 # 807604360675
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C42760

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); TDC; 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	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	Alk NO3 SO4	Fe (total)	TDC	8260 VOC	LAB USE ONLY
1	CEP-527A	11/9/15	1040	KV	GW	7									X	X	X	X	
2	HQUST-524A	11/9/15	1115	KV	GW	7									X	X	X	X	
3	HQUST-523A	11/9/15	1156	KV	GW	7									X	X	X	X	
4	CEP-518A	11/9/15	1218	KV	GW	7									X	X	X	X	
5	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	11/9/15 1330	[signature]	[signature]	11/9/15 1500	Fedex
2						
3	Fedex	11/10/15 1020	[signature]			
4						
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. 4.1 / 3.2 °C

5.2 5

C42760: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C42760 **Client:** CITY OF TUCSON **Project:** HQUST

Date / Time Received: 11/10/2015 10:20:00 AM **Delivery Method:** FedEx **Airbill #'s:** 807604360675

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

C42760: 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: C42760
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
VW2181-MB	W58268.D	1	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

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: C42760
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
VW2181-MB	W58268.D	1	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

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	0.26	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	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	78-125%
2037-26-5	Toluene-D8	99%	86-114%

Method Blank Summary

Job Number: C42760
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
VW2181-MB	W58268.D	1	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	80-113%

Method Blank Summary

Job Number: C42760
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
VW2183-MB	W58296.D	1	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

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: C42760
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
VW2183-MB	W58296.D	1	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

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	0.23	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	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	91%	78-125%
2037-26-5	Toluene-D8	98%	86-114%

Method Blank Summary

Job Number: C42760
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
VW2183-MB	W58296.D	1	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	80-113%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42760
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
VW2181-BS	W58265.D	1	11/11/15	CV	n/a	n/a	VW2181
VW2181-BSD	W58266.D	1	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	75.7	95	71.3	89	6	58-137/12
71-43-2	Benzene	20	20.9	105	19.8	99	5	77-118/10
108-86-1	Bromobenzene	20	22.1	111	21.7	109	2	78-122/10
74-97-5	Bromochloromethane	20	21.5	108	20.6	103	4	76-124/10
75-27-4	Bromodichloromethane	20	23.9	120	22.6	113	6	74-121/10
75-25-2	Bromoform	20	22.8	114	22.1	111	3	58-133/10
104-51-8	n-Butylbenzene	20	20.6	103	20.5	103	0	75-125/10
135-98-8	sec-Butylbenzene	20	20.7	104	20.5	103	1	76-127/10
98-06-6	tert-Butylbenzene	20	20.8	104	20.3	102	2	76-124/10
108-90-7	Chlorobenzene	20	21.6	108	20.9	105	3	77-120/10
75-00-3	Chloroethane	20	15.8	79	16.3	82	3	63-117/10
67-66-3	Chloroform	20	21.2	106	19.8	99	7	74-123/10
95-49-8	o-Chlorotoluene	20	20.9	105	20.1	101	4	76-125/10
106-43-4	p-Chlorotoluene	20	21.8	109	21.3	107	2	76-123/10
75-15-0	Carbon disulfide	20	17.9	90	16.1	81	11	57-126/11
56-23-5	Carbon tetrachloride	20	24.5	123	21.9	110	11	72-128/11
75-34-3	1,1-Dichloroethane	20	19.0	95	17.7	89	7	70-120/10
75-35-4	1,1-Dichloroethylene	20	20.8	104	18.5	93	12* [a]	65-120/11
563-58-6	1,1-Dichloropropene	20	19.4	97	17.4	87	11* [a]	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	22.1	111	21.1	106	5	63-128/10
106-93-4	1,2-Dibromoethane	20	22.7	114	22.1	111	3	78-123/10
107-06-2	1,2-Dichloroethane	20	24.0	120	22.7	114	6	72-123/10
78-87-5	1,2-Dichloropropane	20	19.6	98	19.1	96	3	76-119/10
142-28-9	1,3-Dichloropropane	20	21.6	108	21.1	106	2	78-122/10
108-20-3	Di-Isopropyl ether	20	17.7	89	16.9	85	5	69-124/10
594-20-7	2,2-Dichloropropane	20	22.6	113	20.1	101	12* [a]	68-129/10
124-48-1	Dibromochloromethane	20	24.6	123	23.8	119	3	75-124/10
75-71-8	Dichlorodifluoromethane	20	12.4	62	12.5	63	1	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	21.2	106	20.1	101	5	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	23.8	119	23.3	117	2	76-125/10
541-73-1	m-Dichlorobenzene	20	21.5	108	21.0	105	2	77-121/10
95-50-1	o-Dichlorobenzene	20	21.5	108	21.1	106	2	77-120/10
106-46-7	p-Dichlorobenzene	20	21.3	107	21.1	106	1	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	19.3	97	17.7	89	9	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	23.6	118	23.0	115	3	73-122/10
100-41-4	Ethylbenzene	20	21.6	108	20.6	103	5	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42760
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
VW2181-BS	W58265.D	1	11/11/15	CV	n/a	n/a	VW2181
VW2181-BSD	W58266.D	1	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	90.2	113	88.0	110	2	71-139/10
87-68-3	Hexachlorobutadiene	20	22.5	113	22.5	113	0	69-127/11
98-82-8	Isopropylbenzene	20	21.7	109	20.9	105	4	77-125/10
99-87-6	p-Isopropyltoluene	20	21.5	108	21.3	107	1	76-125/10
108-10-1	4-Methyl-2-pentanone	80	90.3	113	87.1	109	4	71-132/10
74-83-9	Methyl bromide	20	18.6	93	19.6	98	5	66-123/10
74-87-3	Methyl chloride	20	17.3	87	18.4	92	6	50-138/19
74-95-3	Methylene bromide	20	23.3	117	22.5	113	3	77-125/10
75-09-2	Methylene chloride	20	19.9	100	18.7	94	6	65-124/14
78-93-3	Methyl ethyl ketone	80	88.7	111	84.5	106	5	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	20.3	102	19.3	97	5	73-124/10
91-20-3	Naphthalene	20	18.9	95	18.3	92	3	68-122/12
103-65-1	n-Propylbenzene	20	19.7	99	19.2	96	3	76-123/10
100-42-5	Styrene	20	23.2	116	22.6	113	3	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	20.9	105	20.1	101	4	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	24.5	123	23.6	118	4	79-123/10
71-55-6	1,1,1-Trichloroethane	20	22.3	112	20.2	101	10	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	20.3	102	19.7	99	3	77-123/10
79-00-5	1,1,2-Trichloroethane	20	21.1	106	20.8	104	1	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	20.8	104	20.6	103	1	70-126/11
96-18-4	1,2,3-Trichloropropane	20	23.2	116	22.2	111	4	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	21.1	106	20.9	105	1	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	20.6	103	20.2	101	2	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	21.0	105	20.6	103	2	79-127/10
127-18-4	Tetrachloroethylene	20	21.8	109	20.4	102	7	71-124/10
108-88-3	Toluene	20	21.3	107	20.3	102	5	78-120/10
79-01-6	Trichloroethylene	20	21.3	107	19.6	98	8	75-119/10
75-69-4	Trichlorofluoromethane	20	21.9	110	22.0	110	0	67-129/14
75-01-4	Vinyl chloride	20	17.9	90	18.0	90	1	60-133/15
1330-20-7	Xylene (total)	60	62.6	104	60.0	100	4	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	96%	78-125%
2037-26-5	Toluene-D8	97%	97%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42760
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
VW2181-BS	W58265.D	1	11/11/15	CV	n/a	n/a	VW2181
VW2181-BSD	W58266.D	1	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	101%	80-113%

(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: C42760
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
VW2183-BS	W58293.D	1	11/12/15	CV	n/a	n/a	VW2183
VW2183-BSD	W58294.D	1	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	75.3	94	75.9	95	1	58-137/12
71-43-2	Benzene	20	21.4	107	21.1	106	1	77-118/10
108-86-1	Bromobenzene	20	22.4	112	21.6	108	4	78-122/10
74-97-5	Bromochloromethane	20	22.1	111	21.6	108	2	76-124/10
75-27-4	Bromodichloromethane	20	22.6	113	22.5	113	0	74-121/10
75-25-2	Bromoform	20	22.5	113	22.6	113	0	58-133/10
104-51-8	n-Butylbenzene	20	22.2	111	21.6	108	3	75-125/10
135-98-8	sec-Butylbenzene	20	22.3	112	21.8	109	2	76-127/10
98-06-6	tert-Butylbenzene	20	21.8	109	21.4	107	2	76-124/10
108-90-7	Chlorobenzene	20	21.6	108	21.7	109	0	77-120/10
75-00-3	Chloroethane	20	15.9	80	15.4	77	3	63-117/10
67-66-3	Chloroform	20	20.4	102	20.3	102	0	74-123/10
95-49-8	o-Chlorotoluene	20	20.8	104	20.4	102	2	76-125/10
106-43-4	p-Chlorotoluene	20	21.7	109	21.5	108	1	76-123/10
75-15-0	Carbon disulfide	20	19.2	96	18.9	95	2	57-126/11
56-23-5	Carbon tetrachloride	20	24.4	122	25.0	125	2	72-128/11
75-34-3	1,1-Dichloroethane	20	18.8	94	18.9	95	1	70-120/10
75-35-4	1,1-Dichloroethylene	20	22.3	112	23.1	116	4	65-120/11
563-58-6	1,1-Dichloropropene	20	19.9	100	20.3	102	2	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	20	20.6	103	21.0	105	2	63-128/10
106-93-4	1,2-Dibromoethane	20	22.3	112	22.6	113	1	78-123/10
107-06-2	1,2-Dichloroethane	20	22.0	110	22.0	110	0	72-123/10
78-87-5	1,2-Dichloropropane	20	19.8	99	19.8	99	0	76-119/10
142-28-9	1,3-Dichloropropane	20	20.8	104	21.1	106	1	78-122/10
108-20-3	Di-Isopropyl ether	20	17.5	88	17.4	87	1	69-124/10
594-20-7	2,2-Dichloropropane	20	23.0	115	22.7	114	1	68-129/10
124-48-1	Dibromochloromethane	20	23.9	120	23.9	120	0	75-124/10
75-71-8	Dichlorodifluoromethane	20	10.1	51	11.2	56	10	37-149/21
156-59-2	cis-1,2-Dichloroethylene	20	21.4	107	21.1	106	1	74-121/10
10061-01-5	cis-1,3-Dichloropropene	20	23.2	116	23.2	116	0	76-125/10
541-73-1	m-Dichlorobenzene	20	21.7	109	21.2	106	2	77-121/10
95-50-1	o-Dichlorobenzene	20	21.8	109	21.3	107	2	77-120/10
106-46-7	p-Dichlorobenzene	20	21.6	108	21.3	107	1	78-118/10
156-60-5	trans-1,2-Dichloroethylene	20	19.9	100	19.9	100	0	71-118/10
10061-02-6	trans-1,3-Dichloropropene	20	22.5	113	22.5	113	0	73-122/10
100-41-4	Ethylbenzene	20	22.2	111	22.3	112	0	78-121/10

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42760
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
VW2183-BS	W58293.D	1	11/12/15	CV	n/a	n/a	VW2183
VW2183-BSD	W58294.D	1	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	88.9	111	90.6	113	2	71-139/10
87-68-3	Hexachlorobutadiene	20	23.7	119	23.4	117	1	69-127/11
98-82-8	Isopropylbenzene	20	23.0	115	23.1	116	0	77-125/10
99-87-6	p-Isopropyltoluene	20	23.0	115	22.5	113	2	76-125/10
108-10-1	4-Methyl-2-pentanone	80	88.3	110	90.0	113	2	71-132/10
74-83-9	Methyl bromide	20	19.2	96	17.7	89	8	66-123/10
74-87-3	Methyl chloride	20	17.0	85	16.0	80	6	50-138/19
74-95-3	Methylene bromide	20	22.4	112	22.3	112	0	77-125/10
75-09-2	Methylene chloride	20	19.6	98	19.1	96	3	65-124/14
78-93-3	Methyl ethyl ketone	80	87.9	110	90.9	114	3	67-139/11
1634-04-4	Methyl Tert Butyl Ether	20	19.5	98	19.5	98	0	73-124/10
91-20-3	Naphthalene	20	18.2	91	18.1	91	1	68-122/12
103-65-1	n-Propylbenzene	20	20.8	104	20.6	103	1	76-123/10
100-42-5	Styrene	20	23.4	117	23.4	117	0	74-126/10
994-05-8	Tert-Amyl Methyl Ether	20	20.4	102	20.3	102	0	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	20	24.0	120	23.9	120	0	79-123/10
71-55-6	1,1,1-Trichloroethane	20	22.6	113	22.4	112	1	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	20	19.9	100	19.7	99	1	77-123/10
79-00-5	1,1,2-Trichloroethane	20	20.9	105	21.0	105	0	77-120/10
87-61-6	1,2,3-Trichlorobenzene	20	20.4	102	20.4	102	0	70-126/11
96-18-4	1,2,3-Trichloropropane	20	21.3	107	21.4	107	0	65-125/10
120-82-1	1,2,4-Trichlorobenzene	20	21.4	107	21.1	106	1	72-123/10
95-63-6	1,2,4-Trimethylbenzene	20	21.2	106	20.8	104	2	77-122/10
108-67-8	1,3,5-Trimethylbenzene	20	22.1	111	21.4	107	3	79-127/10
127-18-4	Tetrachloroethylene	20	23.4	117	24.1	121	3	71-124/10
108-88-3	Toluene	20	21.6	108	21.9	110	1	78-120/10
79-01-6	Trichloroethylene	20	21.4	107	21.7	109	1	75-119/10
75-69-4	Trichlorofluoromethane	20	19.0	95	20.5	103	8	67-129/14
75-01-4	Vinyl chloride	20	18.2	91	17.1	86	6	60-133/15
1330-20-7	Xylene (total)	60	64.2	107	64.5	108	0	78-122/10

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	95%	96%	78-125%
2037-26-5	Toluene-D8	97%	98%	86-114%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C42760
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
VW2183-BS	W58293.D	1	11/12/15	CV	n/a	n/a	VW2183
VW2183-BSD	W58294.D	1	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	97%	99%	80-113%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42760
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
C42692-1MS	W58287.D	5	11/11/15	CV	n/a	n/a	VW2181
C42692-1MSD	W58288.D	5	11/11/15	CV	n/a	n/a	VW2181
C42692-1	W58281.D	5	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

CAS No.	Compound	C42692-1 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		400	358	90	400	369	92	3	58-137/12
71-43-2	Benzene	ND		100	106	106	100	102	102	4	77-118/10
108-86-1	Bromobenzene	ND		100	115	115	100	120	120	4	78-122/10
74-97-5	Bromochloromethane	ND		100	108	108	100	105	105	3	76-124/10
75-27-4	Bromodichloromethane	ND		100	113	113	100	110	110	3	74-121/10
75-25-2	Bromoform	ND		100	109	109	100	108	108	1	58-133/10
104-51-8	n-Butylbenzene	ND		100	107	107	100	105	105	2	75-125/10
135-98-8	sec-Butylbenzene	ND		100	110	110	100	106	106	4	76-127/10
98-06-6	tert-Butylbenzene	ND		100	109	109	100	104	104	5	76-124/10
108-90-7	Chlorobenzene	ND		100	108	108	100	106	106	2	77-120/10
75-00-3	Chloroethane	ND		100	76.6	77	100	72.5	73	5	63-117/10
67-66-3	Chloroform	ND		100	103	103	100	98.7	99	4	74-123/10
95-49-8	o-Chlorotoluene	ND		100	103	103	100	101	101	2	76-125/10
106-43-4	p-Chlorotoluene	ND		100	108	108	100	105	105	3	76-123/10
75-15-0	Carbon disulfide	ND		100	101	101	100	93.4	93	8	57-126/11
56-23-5	Carbon tetrachloride	ND		100	127	127	100	120	120	6	72-128/11
75-34-3	1,1-Dichloroethane	ND		100	95.0	95	100	91.9	92	3	70-120/10
75-35-4	1,1-Dichloroethylene	ND		100	118	118	100	108	108	9	65-120/11
563-58-6	1,1-Dichloropropene	ND		100	102	102	100	97.2	97	5	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	106	106	100	105	105	1	63-128/10
106-93-4	1,2-Dibromoethane	ND		100	111	111	100	109	109	2	78-123/10
107-06-2	1,2-Dichloroethane	4.7	J	100	114	109	100	111	106	3	72-123/10
78-87-5	1,2-Dichloropropane	ND		100	98.7	99	100	96.4	96	2	76-119/10
142-28-9	1,3-Dichloropropane	ND		100	105	105	100	105	105	0	78-122/10
108-20-3	Di-Isopropyl ether	ND		100	88.2	88	100	85.9	86	3	69-124/10
594-20-7	2,2-Dichloropropane	ND		100	112	112	100	102	102	9	68-129/10
124-48-1	Dibromochloromethane	ND		100	119	119	100	118	118	1	75-124/10
75-71-8	Dichlorodifluoromethane	ND		100	60.8	61	100	53.3	53	13	37-149/21
156-59-2	cis-1,2-Dichloroethylene	233		100	330	97	100	318	85	4	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		100	112	112	100	109	109	3	76-125/10
541-73-1	m-Dichlorobenzene	ND		100	106	106	100	105	105	1	77-121/10
95-50-1	o-Dichlorobenzene	ND		100	106	106	100	106	106	0	77-120/10
106-46-7	p-Dichlorobenzene	ND		100	106	106	100	105	105	1	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		100	98.9	99	100	95.6	96	3	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		100	109	109	100	107	107	2	73-122/10
100-41-4	Ethylbenzene	ND		100	113	113	100	109	109	4	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42760
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
C42692-1MS	W58287.D	5	11/11/15	CV	n/a	n/a	VW2181
C42692-1MSD	W58288.D	5	11/11/15	CV	n/a	n/a	VW2181
C42692-1	W58281.D	5	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

CAS No.	Compound	C42692-1 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		400	446	112	400	453	113	2	71-139/10
87-68-3	Hexachlorobutadiene	ND		100	104	104	100	109	109	5	69-127/11
98-82-8	Isopropylbenzene	ND		100	116	116	100	112	112	4	77-125/10
99-87-6	p-Isopropyltoluene	ND		100	112	112	100	108	108	4	76-125/10
108-10-1	4-Methyl-2-pentanone	ND		400	440	110	400	443	111	1	71-132/10
74-83-9	Methyl bromide	ND		100	89.7	90	100	87.0	87	3	66-123/10
74-87-3	Methyl chloride	ND		100	82.6	83	100	80.3	80	3	50-138/19
74-95-3	Methylene bromide	ND		100	112	112	100	110	110	2	77-125/10
75-09-2	Methylene chloride	ND		100	97.3	97	100	94.1	94	3	65-124/14
78-93-3	Methyl ethyl ketone	ND		400	439	110	400	434	109	1	67-139/11
1634-04-4	Methyl Tert Butyl Ether	ND		100	98.8	99	100	96.4	96	2	73-124/10
91-20-3	Naphthalene	ND		100	236	236* [a]	100	103	103	78* [b]	68-122/12
103-65-1	n-Propylbenzene	ND		100	104	104	100	100	100	4	76-123/10
100-42-5	Styrene	ND		100	117	117	100	114	114	3	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		100	105	105	100	102	102	3	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	120	120	100	118	118	2	79-123/10
71-55-6	1,1,1-Trichloroethane	ND		100	117	117	100	111	111	5	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	98.7	99	100	98.8	99	0	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		100	105	105	100	104	104	1	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		100	93.5	94	100	100	100	7	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		100	100	100	100	98.4	98	2	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		100	98.9	99	100	103	103	4	72-123/10
95-63-6	1,2,4-Trimethylbenzene	ND		100	116	116	100	103	103	12* [c]	77-122/10
108-67-8	1,3,5-Trimethylbenzene	ND		100	114	114	100	105	105	8	79-127/10
127-18-4	Tetrachloroethylene	ND		100	118	118	100	113	113	4	71-124/10
108-88-3	Toluene	1.0	J	100	110	109	100	107	106	3	78-120/10
79-01-6	Trichloroethylene	1.9	J	100	111	109	100	107	105	4	75-119/10
75-69-4	Trichlorofluoromethane	ND		100	103	103	100	95.0	95	8	67-129/14
75-01-4	Vinyl chloride	ND		100	87.8	88	100	82.2	82	7	60-133/15
1330-20-7	Xylene (total)	ND		300	325	108	300	313	104	4	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C42692-1	Limits
1868-53-7	Dibromofluoromethane	96%	94%	98%	78-125%
2037-26-5	Toluene-D8	98%	98%	98%	86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42760
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
C42692-1MS	W58287.D	5	11/11/15	CV	n/a	n/a	VW2181
C42692-1MSD	W58288.D	5	11/11/15	CV	n/a	n/a	VW2181
C42692-1	W58281.D	5	11/11/15	CV	n/a	n/a	VW2181

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

C42760-1, C42760-2, C42760-3, C42760-4

CAS No.	Surrogate Recoveries	MS	MSD	C42692-1	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	101%	80-113%

(a) Outside laboratory control limits. AZ:M1
(b) Outside laboratory control limits. AZ:R9
(c) Outside laboratory control limits. AZ:R5

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42760
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
C42798-5MS	W58315.D	20	11/12/15	CV	n/a	n/a	VW2183
C42798-5MSD	W58316.D	20	11/12/15	CV	n/a	n/a	VW2183
C42798-5	W58309.D	20	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

CAS No.	Compound	C42798-5 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		1600	1460	91	1600	1410	88	3	58-137/12
71-43-2	Benzene	ND		400	417	104	400	413	103	1	77-118/10
108-86-1	Bromobenzene	ND		400	448	112	400	454	114	1	78-122/10
74-97-5	Bromochloromethane	ND		400	425	106	400	417	104	2	76-124/10
75-27-4	Bromodichloromethane	ND		400	451	113	400	447	112	1	74-121/10
75-25-2	Bromoform	ND		400	411	103	400	409	102	0	58-133/10
104-51-8	n-Butylbenzene	ND		400	415	104	400	425	106	2	75-125/10
135-98-8	sec-Butylbenzene	ND		400	429	107	400	444	111	3	76-127/10
98-06-6	tert-Butylbenzene	ND		400	435	109	400	446	112	2	76-124/10
108-90-7	Chlorobenzene	ND		400	424	106	400	423	106	0	77-120/10
75-00-3	Chloroethane	ND		400	307	77	400	296	74	4	63-117/10
67-66-3	Chloroform	ND		400	406	102	400	401	100	1	74-123/10
95-49-8	o-Chlorotoluene	ND		400	406	102	400	413	103	2	76-125/10
106-43-4	p-Chlorotoluene	ND		400	427	107	400	426	107	0	76-123/10
75-15-0	Carbon disulfide	ND		400	372	93	400	371	93	0	57-126/11
56-23-5	Carbon tetrachloride	ND		400	501	125	400	511	128	2	72-128/11
75-34-3	1,1-Dichloroethane	ND		400	369	92	400	368	92	0	70-120/10
75-35-4	1,1-Dichloroethylene	ND		400	445	111	400	454	114	2	65-120/11
563-58-6	1,1-Dichloropropene	ND		400	393	98	400	405	101	3	69-125/10
96-12-8	1,2-Dibromo-3-chloropropane	ND		400	410	103	400	404	101	1	63-128/10
106-93-4	1,2-Dibromoethane	ND		400	437	109	400	438	110	0	78-123/10
107-06-2	1,2-Dichloroethane	ND		400	445	111	400	438	110	2	72-123/10
78-87-5	1,2-Dichloropropane	ND		400	388	97	400	383	96	1	76-119/10
142-28-9	1,3-Dichloropropane	ND		400	415	104	400	415	104	0	78-122/10
108-20-3	Di-Isopropyl ether	ND		400	344	86	400	338	85	2	69-124/10
594-20-7	2,2-Dichloropropane	ND		400	421	105	400	412	103	2	68-129/10
124-48-1	Dibromochloromethane	ND		400	468	117	400	458	115	2	75-124/10
75-71-8	Dichlorodifluoromethane	ND		400	239	60	400	226	57	6	37-149/21
156-59-2	cis-1,2-Dichloroethylene	7.0		400	427	105	400	414	102	3	74-121/10
10061-01-5	cis-1,3-Dichloropropene	ND		400	437	109	400	435	109	0	76-125/10
541-73-1	m-Dichlorobenzene	ND		400	425	106	400	421	105	1	77-121/10
95-50-1	o-Dichlorobenzene	ND		400	425	106	400	424	106	0	77-120/10
106-46-7	p-Dichlorobenzene	ND		400	422	106	400	425	106	1	78-118/10
156-60-5	trans-1,2-Dichloroethylene	ND		400	387	97	400	387	97	0	71-118/10
10061-02-6	trans-1,3-Dichloropropene	ND		400	417	104	400	420	105	1	73-122/10
100-41-4	Ethylbenzene	ND		400	435	109	400	438	110	1	78-121/10

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42760
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
C42798-5MS	W58315.D	20	11/12/15	CV	n/a	n/a	VW2183
C42798-5MSD	W58316.D	20	11/12/15	CV	n/a	n/a	VW2183
C42798-5	W58309.D	20	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

CAS No.	Compound	C42798-5 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		1600	1760	110	1600	1720	108	2	71-139/10
87-68-3	Hexachlorobutadiene	ND		400	435	109	400	471	118	8	69-127/11
98-82-8	Isopropylbenzene	ND		400	447	112	400	452	113	1	77-125/10
99-87-6	p-Isopropyltoluene	ND		400	440	110	400	454	114	3	76-125/10
108-10-1	4-Methyl-2-pentanone	ND		1600	1770	111	1600	1700	106	4	71-132/10
74-83-9	Methyl bromide	ND		400	367	92	400	344	86	6	66-123/10
74-87-3	Methyl chloride	ND		400	337	84	400	312	78	8	50-138/19
74-95-3	Methylene bromide	ND		400	451	113	400	442	111	2	77-125/10
75-09-2	Methylene chloride	ND		400	382	96	400	376	94	2	65-124/14
78-93-3	Methyl ethyl ketone	ND		1600	1680	105	1600	1670	104	1	67-139/11
1634-04-4	Methyl Tert Butyl Ether	ND		400	393	98	400	381	95	3	73-124/10
91-20-3	Naphthalene	ND		400	395	99	400	367	92	7	68-122/12
103-65-1	n-Propylbenzene	ND		400	400	100	400	410	103	2	76-123/10
100-42-5	Styrene	ND		400	459	115	400	458	115	0	74-126/10
994-05-8	Tert-Amyl Methyl Ether	ND		400	412	103	400	398	100	3	76-127/10
630-20-6	1,1,1,2-Tetrachloroethane	ND		400	478	120	400	465	116	3	79-123/10
71-55-6	1,1,1-Trichloroethane	ND		400	458	115	400	454	114	1	73-124/10
79-34-5	1,1,2,2-Tetrachloroethane	ND		400	394	99	400	394	99	0	77-123/10
79-00-5	1,1,2-Trichloroethane	ND		400	413	103	400	412	103	0	77-120/10
87-61-6	1,2,3-Trichlorobenzene	ND		400	387	97	400	405	101	5	70-126/11
96-18-4	1,2,3-Trichloropropane	ND		400	380	95	400	375	94	1	65-125/10
120-82-1	1,2,4-Trichlorobenzene	ND		400	411	103	400	413	103	0	72-123/10
95-63-6	1,2,4-Trimethylbenzene	ND		400	421	105	400	417	104	1	77-122/10
108-67-8	1,3,5-Trimethylbenzene	ND		400	430	108	400	434	109	1	79-127/10
127-18-4	Tetrachloroethylene	26.0		400	472	112	400	493	117	4	71-124/10
108-88-3	Toluene	ND		400	422	106	400	432	108	2	78-120/10
79-01-6	Trichloroethylene	1210		400	1590	95	400	1630	105	2	75-119/10
75-69-4	Trichlorofluoromethane	ND		400	431	108	400	411	103	5	67-129/14
75-01-4	Vinyl chloride	ND		400	352	88	400	333	83	6	60-133/15
1330-20-7	Xylene (total)	ND		1200	1250	104	1200	1260	105	1	78-122/10

CAS No.	Surrogate Recoveries	MS	MSD	C42798-5	Limits
1868-53-7	Dibromofluoromethane	95%	92%	94%	78-125%
2037-26-5	Toluene-D8	97%	97%	98%	86-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C42760
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
C42798-5MS	W58315.D	20	11/12/15	CV	n/a	n/a	VW2183
C42798-5MSD	W58316.D	20	11/12/15	CV	n/a	n/a	VW2183
C42798-5	W58309.D	20	11/12/15	CV	n/a	n/a	VW2183

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

C42760-3, C42760-4, C42760-5

CAS No.	Surrogate Recoveries	MS	MSD	C42798-5	Limits
460-00-4	4-Bromofluorobenzene	98%	96%	98%	80-113%

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

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: C42760
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10438
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/11/15

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	0.10	<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 MP10438: C42760-1, C42760-2, C42760-3, C42760-4

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: C42760
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10438
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/11/15

Metal	C42732-4F Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper	anr				
Iron	9900	22700	12500	102.4	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	anr				
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc	anr				

Associated samples MP10438: C42760-1, C42760-2, C42760-3, C42760-4

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: C42760
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10438 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/11/15

Metal	C42732-4F Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	9900	22800	12500	103.2	0.4	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	anr					

Associated samples MP10438: C42760-1, C42760-2, C42760-3, C42760-4

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: C42760
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10438
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/11/15

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	13100	12500	104.8	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP10438: C42760-1, C42760-2, C42760-3, C42760-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C42760
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP10438 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/11/15

Metal	C42732-4F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	9900	13600	37.5*(a)	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP10438: C42760-1, C42760-2, C42760-3, C42760-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

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: C42760
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	GN17874	5.0	0.0	mg/l	250	254	101.6	75-125%
Chloride	GP8637/GN17829	0.50	0.0	mg/l	5	4.64	92.8	90-110%
Nitrogen, Nitrate	GP8637/GN17829	0.10	0.0	mg/l	5	4.80	96.0	90-110%
Sulfate	GP8637/GN17829	0.50	0.0	mg/l	5	4.74	94.8	90-110%
Total Organic Carbon	GP8667/GN17875	1.0	0.0	mg/l	25	21.5	85.8	75-125%

Associated Samples:
Batch GP8637: C42760-1, C42760-2, C42760-3, C42760-4
Batch GP8667: C42760-1, C42760-2, C42760-3, C42760-4
Batch GN17874: C42760-1, C42760-2, C42760-3, C42760-4
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42760
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	GN17874	mg/l	250	254	0.0	
Chloride	GP8637/GN17829	mg/l	5	4.65	0.2	25%
Nitrogen, Nitrate	GP8637/GN17829	mg/l	5	4.83	0.6	25%
Sulfate	GP8637/GN17829	mg/l	5	4.78	0.8	25%
Total Organic Carbon	GP8667/GN17875	mg/l	25	23.8	10.6	

Associated Samples:
Batch GP8637: C42760-1, C42760-2, C42760-3, C42760-4
Batch GP8667: C42760-1, C42760-2, C42760-3, C42760-4
Batch GN17874: C42760-1, C42760-2, C42760-3, C42760-4
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42760
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	GN17874	C42760-2	mg/l	300	300	0.0	0-25%

Associated Samples:
Batch GN17874: C42760-1, C42760-2, C42760-3, C42760-4
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42760
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
Chloride	GP8637/GN17829	C42760-4	mg/l	187	500	667	96.0	80-120%
Nitrogen, Nitrate	GP8637/GN17829	C42760-4	mg/l	0.0	500	474	94.8	80-120%
Sulfate	GP8637/GN17829	C42760-4	mg/l	622	500	1090	93.6	80-120%
Total Organic Carbon	GP8667/GN17875	C42798-3	mg/l	0.0	25	23.4	92.5	75-125%

Associated Samples:
Batch GP8637: C42760-1, C42760-2, C42760-3, C42760-4
Batch GP8667: C42760-1, C42760-2, C42760-3, C42760-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C42760
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
Chloride	GP8637/GN17829	C42760-4	mg/l	187	500	669	0.3	
Nitrogen, Nitrate	GP8637/GN17829	C42760-4	mg/l	0.0	500	474	0.0	
Sulfate	GP8637/GN17829	C42760-4	mg/l	622	500	1090	0.0	

Associated Samples:
Batch GP8637: C42760-1, C42760-2, C42760-3, C42760-4
(*) 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: June 29, 2015

Client:	Richard Byrd	Work Order #:	15F030
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	6/24/2015

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: June 29, 2015

Client:	Richard Byrd	Work Order #:	15F030
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	6/24/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15F030-01	HQUST-AIR-EFF	8260B AZ Vapor	6/24/2015	10:30
		8015 GRO		
15F030-02	HQUST-AIR-INF	8260B AZ Vapor	6/24/2015	10:00
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: June 29, 2015

Client:	Richard Byrd	Work Order #:	15F030
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	6/24/2015

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.

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:	15F030	Collection:	6/24/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	6/24/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	6/24/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/24/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/24/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	6/24/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	6/24/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	6/24/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	6/24/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	6/24/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	6/24/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	6/24/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	6/24/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	6/24/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	6/24/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	6/24/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	6/24/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	6/24/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	6/24/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	6/24/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	6/24/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	6/24/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	6/24/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	6/24/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.6	98.3	%REC, 70-130%
Surr: Toluene-d8	24.0	95.8	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.2	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:	15F030	Collection:	6/24/2015
Lab ID:	01	Matrix:	Air in bag

	ug/l		ppmv				
Analyses	**Result**	**Limit**	**Result**	**Limit**	**Qual**	**DF**	**Date Analyzed**
Gasoline Range Organics		**8015 by GC/MS**					Analyst: YM
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	T3	1	6/24/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.0	108	%REC, 70-130%
Surr: Toluene-d8	25.9	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.2	96.8	%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:	15F030	Collection:	6/24/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	6/24/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	6/24/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**11**	**1.0**	**2.24**	**0.20**	1	6/24/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**5.0**	**1.0**	**1.01**	**0.20**	1	6/24/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
Benzene	**1.4**	**1.0**	**0.45**	**0.31**	1	6/24/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	6/24/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	6/24/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	6/24/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	6/24/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	6/24/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	6/24/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	6/24/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	6/24/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	6/24/2015	8260B AZ Vapor	
Ethylbenzene	**4.3**	**1.0**	**1.00**	**0.23**	1	6/24/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	6/24/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	6/24/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	6/24/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	6/24/2015	8260B AZ Vapor	
Toluene	**4.4**	**1.0**	**1.18**	**0.27**	1	6/24/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	6/24/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	6/24/2015	8260B AZ Vapor	
Xylenes, Total	**26**	**3.0**	**5.95**	**0.69**	1	6/24/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.1	96.2	%REC, 70-130%
Surr: Toluene-d8	23.8	95.1	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.5	98.0	%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:	15F030	Collection:	6/24/2015
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: YM
GRO, C^6 - C^{10}	1,870	100	435	23.3	T3	1	6/24/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.4	106	%REC, 70-130%
Surr: Toluene-d8	25.9	103	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.1	96.5	%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:	15F030	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020624

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	6/24/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	6/24/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	6/24/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/24/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/24/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/24/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	6/24/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	6/24/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	6/24/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	6/24/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	6/24/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	6/24/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	6/24/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	6/24/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	6/24/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	6/24/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	6/24/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	6/24/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	6/24/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	6/24/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	6/24/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	6/24/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/24/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/24/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	6/24/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	6/24/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	6/24/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	6/24/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.2	97	%REC, 70-130%
Surr: Toluene-d8	23.1	92.5	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.1	96	%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:	N/A
Project:	HQUST	Project Number:	P01152
Lab Order:	15F030	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 6/24/2015 Batch: MS020624 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)	18.3	73.3	18.3	73.2	25.0	0.2				25.4-154.3
Chloromethane	20.3	81.3	20.5	81.9	25.0	0.7				41.0-131.3
Vinyl Chloride	22.7	90.7	22.8	91.0	25.0	0.4				14.0-146.4
Bromomethane	27.7	111	27.7	111	25.0	0.1				17.6-310.5
Chloroethane	23.4	93.7	23.7	94.6	25.0	1.0				44.5-159.5
Trichlorofluoromethane (F-11)	27.3	109	27.5	110	25.0	0.8				50.6-158.2
1,1-Dichloroethene	24.9	99.5	25.0	100	25.0	0.4				50.4-130
Methylene Chloride	23.6	94.3	23.8	95.0	25.0	0.7				65.9-130
trans-1,2-Dichloroethene	24.9	100	25.0	100	25.0	0.4				70-130
Methyl tert-butyl ether (MTBE)	25.2	101	25.9	104	25.0	2.8				51.7-135.4
1,1-Dichloroethane	24.7	98.7	24.9	99.4	25.0	0.8				48.2-142.4
cis-1,2-Dichloroethene	25.2	101	25.3	101	25.0	0.3				70-130
Chloroform	24.9	100	25.1	101	25.0	1.0				56.8-135.5
1,1,1-Trichloroethane	25.9	104	26.0	104	25.0	0.2				65.5-138.3
Carbon tetrachloride	26.4	106	26.3	105	25.0	0.3				70-140.8
Benzene	23.7	94.7	24.0	95.9	25.0	1.3				58.6-130
1,2-Dichloroethane	26.9	107	27.4	110	25.0	2.1				43.1-156.5
Trichloroethene	24.0	96.2	24.0	96.0	25.0	0.2				70-130
1,2-Dichloropropane	25.0	100	25.2	101	25.0	0.9				70-130
Bromodichloromethane	25.3	101	25.3	101	25.0	0.2				70-130
cis-1,3-Dichloropropene	25.3	101	25.2	101	25.0	0.4				70-130
Toluene	24.5	98.2	24.1	96.2	25.0	2.0				70-130
trans-1,3-Dichloropropene	26.4	105	26.2	105	25.0	0.6				70-130
1,1,2-Trichloroethane	25.6	102	25.6	102	25.0	0.2				70-130
Tetrachloroethene	23.3	93.2	23.5	93.8	25.0	0.6				67.9-150.2
Dibromochloromethane	25.7	103	25.9	103	25.0	0.7				70-130
1,2-Dibromoethane	26.5	106	26.3	105	25.0	0.5				70-130
Chlorobenzene	24.6	98.3	24.7	98.8	25.0	0.5				70-130
Ethylbenzene	24.7	99.0	24.8	99.3	25.0	0.3				70-130
Xylene, total	74.5	99.3	74.8	100	75.0	0.4				70-130
Bromoform	26.7	107	27.1	108	25.0	1.6				70-135.8
1,1,2,2-Tetrachloroethane	24.5	97.9	24.9	99.5	25.0	1.6				66.8-130
1,3,5-Trimethylbenzene	24.5	98.1	24.5	98.2	25.0	0.0				70-130
1,2,4-Trimethylbenzene	25.2	101	25.2	101	25.0	0.2				70-130
1,3-Dichlorobenzene	23.2	92.6	23.4	93.4	25.0	0.9				70-130
1,4-Dichlorobenzene	23.4	93.7	23.6	94.6	25.0	0.9				70-130
1,2-Dichlorobenzene	23.6	94.2	23.8	95.2	25.0	1.0				70-130
Naphthalene	23.7	94.7	24.6	98.4	25.0	3.8				70-130

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.5	98.0	24.3	97.3	70 -130 %
Surr: Toluene-d8	24.0	95.8	23.3	93.2	70 -130 %
Surr: 4-Bromofluorobenzene	24.2	96.9	23.9	95.6	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:	15F030	Collection:	6/24/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020624

Source Sample: 15F030-02 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	6/24/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	11	11	1	0.7	6/24/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	5.0	4.9	1	0.4	6/24/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Benzene	1.4	1.4	1	0.7	6/24/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Ethylbenzene	4.3	4.2	1	2.3	6/24/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	6/24/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	6/24/2015	8260B AZ Vapor	
Toluene	4.4	4.4	1	1.8	6/24/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	6/24/2015	8260B AZ Vapor	
Xylenes, Total	26	25	1	1.8	6/24/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.1	96.2	24.2	96.8	70-130%
Surr: Toluene-d8	23.8	95.1	23.4	93.8	70-130%
Surr: 4-Bromofluorobenzene	24.5	98.0	24.1	96.2	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:	15F030	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020624

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	6/24/2015	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.6	106	%REC, 70-130%
Surr: Toluene-d8	25.0	100	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.9	96	%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:	15F030	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 6/24/2015 Batch: MS020624 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}	485	96.9	505	101	500	4.2				6/24/2015	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	26.7	107	26.0	104	25.0	70 -130 %					
Surr: Toluene-d8	25.0	100	25.0	100	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	23.8	95.3	23.7	94.7	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:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15F030	Collection:	6/24/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020624

Method: 8015 by GC/MS **Source Sample: 15F030-02**

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}	1,870	1,790	1	4.4	6/24/2015	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.4	106	26.6	106	70-130%
Surr: Toluene-d8	25.9	103	25.5	102	70-130%
Surr: 4-Bromofluorobenzene	24.1	96.5	24.3	97.2	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: John Manley Phone:	15F030
		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

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours

_____ 72 Hours

_____ 5 working Day

_____ Standard 10 Working Days

Please fill the information below:

Sample Type

A: ambient air **WW**: waste water

I: indoor air

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	6-24-15	10:30	1					X		X				
02			6, 1, bag	HQUST-AIR-INF	6-24-15	10:00	1					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:
6-24-15	15:00	John Manley	James Jones - Airtech

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: August 5, 2015

Client:	Richard Byrd	Work Order #:	15G020
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	7/28/2015

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: August 5, 2015

Client:	Richard Byrd	Work Order #:	15G020
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	7/28/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15G020-01	HQUST-AIR-EFF	8260B AZ Vapor	7/28/2015	09:30
		8015 GRO		
15G020-02	HQUST-AIR-INF	8260B AZ Vapor	7/28/2015	09:00
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: August 5, 2015

Client:	Richard Byrd	Work Order #:	15G020
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	7/28/2015

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.

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:	15G020	Collection:	7/28/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	7/30/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	7/30/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	7/30/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	7/30/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	7/30/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	7/30/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	7/30/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	7/30/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	7/30/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	7/30/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	7/30/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	7/30/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	7/30/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	7/30/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	7/30/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	7/30/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	7/30/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	7/30/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	7/30/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	7/30/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	7/30/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	7/30/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	7/30/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.5	94.0	%REC, 70-130%
Surr: Toluene-d8	22.7	90.9	%REC, 70-130%
Surr: 4-Bromofluorobenzene	22.6	90.5	%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:	15G020	Collection:	7/28/2015
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: YM
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	T3	1	7/30/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	%REC, 70-130%
Surr: Toluene-d8	24.5	98.0	%REC, 70-130%
Surr: 4-Bromofluorobenzene	22.8	91.3	%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:	15G020	Collection:	7/28/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	7/30/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	7/30/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**6.9**	**1.0**	**1.39**	**0.20**	1	7/30/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**3.3**	**1.0**	**0.66**	**0.20**	1	7/30/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	7/30/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	7/30/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	7/30/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	7/30/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	7/30/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	7/30/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	7/30/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	7/30/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	7/30/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	7/30/2015	8260B AZ Vapor	
Ethylbenzene	**2.4**	**1.0**	**0.55**	**0.23**	1	7/30/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	7/30/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	7/30/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	7/30/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	7/30/2015	8260B AZ Vapor	
Toluene	**2.4**	**1.0**	**0.63**	**0.27**	1	7/30/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	7/30/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	7/30/2015	8260B AZ Vapor	
Xylenes, Total	**15**	**3.0**	**3.35**	**0.69**	1	7/30/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	22.2	88.7	%REC, 70-130%
Surr: Toluene-d8	21.8	87.1	%REC, 70-130%
Surr: 4-Bromofluorobenzene	22.0	88.0	%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:	15G020	Collection:	7/28/2015
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: YM
GRO, C^6 - C^{10}	1,080	100	251	23.3	T3	1	7/30/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.4	97.5	%REC, 70-130%
Surr: Toluene-d8	23.7	94.6	%REC, 70-130%
Surr: 4-Bromofluorobenzene	21.8	87.2	%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:	15G020	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020730

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	7/30/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	7/30/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	7/30/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	7/30/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	7/30/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	7/30/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	7/30/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	7/30/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	7/30/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	7/30/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	7/30/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	7/30/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	7/30/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	7/30/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	7/30/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	7/30/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	7/30/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	7/30/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	7/30/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	7/30/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	7/30/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	7/30/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	7/30/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	7/30/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	7/30/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	7/30/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	7/30/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	7/30/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.5	102	%REC, 70-130%
Surr: Toluene-d8	24.9	99.7	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.1	100	%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:	15G020	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 7/30/2015 Batch: MS020730 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)	17.4	69.4	15.9	63.6	25.0	8.7				25.4-154.3
Chloromethane	18.6	74.2	17.4	69.6	25.0	6.4				41.0-131.3
Vinyl Chloride	21.2	84.7	19.5	78.1	25.0	8.1				14.0-146.4
Bromomethane	23.4	93.6	22.7	90.7	25.0	3.1				17.6-310.5
Chloroethane	23.0	91.9	21.6	86.4	25.0	6.2				44.5-159.5
Trichlorofluoromethane (F-11)	24.8	99.2	22.6	90.2	25.0	9.5				50.6-158.2
1,1-Dichloroethene	23.2	92.8	21.8	87.0	25.0	6.4				50.4-130
Methylene Chloride	22.4	89.6	21.3	85.0	25.0	5.3				65.9-130
trans-1,2-Dichloroethene	23.4	93.7	22.3	89.0	25.0	5.1				70-130
Methyl tert-butyl ether (MTBE)	24.1	96.2	22.9	91.5	25.0	5.0				51.7-135.4
1,1-Dichloroethane	23.4	93.6	22.4	89.5	25.0	4.5				48.2-142.4
cis-1,2-Dichloroethene	23.9	95.5	22.7	91.0	25.0	4.8				70-130
Chloroform	23.8	95.3	22.8	91.1	25.0	4.5				56.8-135.5
1,1,1-Trichloroethane	24.8	99.1	23.4	93.4	25.0	5.9				65.5-138.3
Carbon tetrachloride	25.0	100	23.3	93.2	25.0	7.2				70-140.8
Benzene	22.6	90.5	21.7	86.8	25.0	4.2				58.6-130
1,2-Dichloroethane	25.2	101	24.1	96.4	25.0	4.5				43.1-156.5
Trichloroethene	22.9	91.5	21.8	87.2	25.0	4.8				70-130
1,2-Dichloropropane	23.5	94.0	22.9	91.8	25.0	2.4				70-130
Bromodichloromethane	24.1	96.3	23.1	92.3	25.0	4.2				70-130
cis-1,3-Dichloropropene	24.0	96.2	23.0	92.0	25.0	4.4				70-130
Toluene	23.3	93.3	22.2	88.6	25.0	5.1				70-130
trans-1,3-Dichloropropene	24.7	98.9	23.6	94.4	25.0	4.7				70-130
1,1,2-Trichloroethane	24.0	96.1	23.0	91.9	25.0	4.5				70-130
Tetrachloroethene	22.1	88.4	20.6	82.2	25.0	7.2				67.9-150.2
Dibromochloromethane	25.0	99.9	23.6	94.6	25.0	5.5				70-130
1,2-Dibromoethane	24.8	99.3	23.8	95.3	25.0	4.1				70-130
Chlorobenzene	24.0	95.8	22.7	90.6	25.0	5.6				70-130
Ethylbenzene	23.8	95.1	22.7	90.6	25.0	4.8				70-130
Xylene, total	72.4	96.5	68.6	91.5	75.0	5.3				70-130
Bromoform	25.7	103	23.9	95.5	25.0	7.4				70-135.8
1,1,2,2-Tetrachloroethane	23.7	94.8	22.5	90.0	25.0	5.2				66.8-130
1,3,5-Trimethylbenzene	23.9	95.4	22.4	89.4	25.0	6.5				70-130
1,2,4-Trimethylbenzene	24.7	98.6	23.1	92.4	25.0	6.5				70-130
1,3-Dichlorobenzene	22.4	89.4	21.4	85.7	25.0	4.2				70-130
1,4-Dichlorobenzene	22.7	90.7	21.4	85.4	25.0	6.0				70-130
1,2-Dichlorobenzene	23.0	91.8	21.9	87.6	25.0	4.7				70-130
Naphthalene	22.9	91.5	22.4	89.6	25.0	2.1				70-130

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	22.7	90.7	22.9	91.4	70 -130 %
Surr: Toluene-d8	22.4	89.5	22.4	89.7	70 -130 %
Surr: 4-Bromofluorobenzene	22.3	89.4	22.1	88.3	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:	15G020	Collection:	7/28/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020730

Source Sample: 15G020-02 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	7/30/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	6.9	7.2	1	4.8	7/30/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	3.3	3.4	1	4.2	7/30/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Ethylbenzene	2.4	2.5	1	5.3	7/30/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	7/30/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	7/30/2015	8260B AZ Vapor	
Toluene	2.4	2.6	1	6.9	7/30/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	7/30/2015	8260B AZ Vapor	
Xylenes, Total	15	16	1	7.2	7/30/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	22.2	88.7	22.7	90.9	70-130%
Surr: Toluene-d8	21.8	87.1	22.9	91.8	70-130%
Surr: 4-Bromofluorobenzene	22.0	88.0	23.1	92.4	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:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15G020	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020730

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	7/30/2015	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.1	112	%REC, 70-130%
Surr: Toluene-d8	27.0	108	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.3	101	%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:	15G020	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 7/30/2015 Batch: MS020730 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}	499	99.7	485	97	500	2.8				7/30/2015	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	26.1	104	25.6	103	25.0	70 -130 %					
Surr: Toluene-d8	25.2	101	25.0	100	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	23.8	95.2	23.4	93.7	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:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15G020	Collection:	7/28/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020730

Method: 8015 by GC/MS **Source Sample: 15G020-02**

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}	1,080	1,150	1	6.3	7/30/2015	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.4	97.5	25.0	100	70-130%
Surr: Toluene-d8	23.7	94.6	24.9	99.7	70-130%
Surr: 4-Bromofluorobenzene	21.8	87.2	23.0	91.9	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: John Manley Phone:	15G020
		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

Temperature_____ °C
Custody Seals: Yes_____ No_____
Custody Seals Intact: Yes_____ No_____
Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours
_____ 72 Hours
_____ 5 working Day
_____ Standard 10 Working Days

Please fill the information below:

Sample Type
A: ambient air **WW**: waste water
I: indoor air
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	7-28-15	9:30	1					X		X				
02			6, 1, bag	HQUST-AIR-INF	7-28-15	8:00	1					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:
7-28-15	14:15	John Manley	[illegible]

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: September 8, 2015

Client:	Richard Byrd	Work Order #:	15H030
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	8/31/2015

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: September 8, 2015

Client:	Richard Byrd	Work Order #:	15H030
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	8/31/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15H030-01	HQUST-AIR-EFF	8260B AZ Vapor 8015 GRO	8/31/2015	11:00
15H030-02	HQUST-AIR-INF	8260B AZ Vapor 8015 GRO	8/31/2015	10:30

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: September 8, 2015

Client:	Richard Byrd	Work Order #:	15H030
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	8/31/2015

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.

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:	15H030	Collection:	8/31/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	8/31/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	8/31/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	8/31/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	8/31/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	8/31/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	8/31/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	8/31/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	8/31/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	8/31/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	8/31/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	8/31/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	8/31/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	8/31/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	8/31/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	8/31/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	8/31/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	8/31/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	8/31/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	8/31/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	8/31/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.8	95.1	%REC, 70-130%
Surr: Toluene-d8	23.2	92.8	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.6	98.5	%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:	15H030	Collection:	8/31/2015
Lab ID:	01	Matrix:	Air in bag

Analyses	ug/l Result	ug/l Limit	ppmv Result	ppmv Limit	Qual	DF	Date Analyzed
Gasoline Range Organics		**8015 by GC/MS**					Analyst: YM
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	T3	1	8/31/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.4	106	%REC, 70-130%
Surr: Toluene-d8	26.0	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.3	97.1	%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:	15H030	Collection:	8/31/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	8/31/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	8/31/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	8/31/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	8/31/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	8/31/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	8/31/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	8/31/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	8/31/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	8/31/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	8/31/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	8/31/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
Ethylbenzene	**2.0**	**1.0**	**0.47**	**0.23**	1	8/31/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	8/31/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	8/31/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	8/31/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	8/31/2015	8260B AZ Vapor	
Toluene	**2.9**	**1.0**	**0.78**	**0.27**	1	8/31/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	8/31/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	8/31/2015	8260B AZ Vapor	
Xylenes, Total	**12**	**3.0**	**2.68**	**0.69**	1	8/31/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.3	93.0	%REC, 70-130%
Surr: Toluene-d8	22.8	91.2	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.3	97.0	%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:	15H030	Collection:	8/31/2015
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: YM
GRO, C^6 - C^{10}	1,560	100	363	23.3	T3	1	8/31/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	%REC, 70-130%
Surr: Toluene-d8	25.7	103	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.8	95.3	%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:	15H030	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020831

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	8/31/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	8/31/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	8/31/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/31/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	8/31/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	8/31/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	8/31/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	8/31/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	8/31/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	8/31/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	8/31/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	8/31/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	8/31/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	8/31/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	8/31/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	8/31/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	8/31/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	8/31/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	8/31/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	8/31/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/31/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/31/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	8/31/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	8/31/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	8/31/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	8/31/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.3	93.0	%REC, 70-130%
Surr: Toluene-d8	22.6	90.3	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.1	96.3	%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:	15H030	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 8/31/2015 Batch: MS020831 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)	18.8	75.2	19.2	76.8	25.0	2.1				25.4-154.3
Chloromethane	20.2	80.9	20.0	80.1	25.0	1.0				41.0-131.3
Vinyl Chloride	22.0	88.0	21.8	87.4	25.0	0.8				14.0-146.4
Bromomethane	25.8	103	26.6	107	25.0	3.2				17.6-310.5
Chloroethane	22.4	89.7	22.1	88.2	25.0	1.7				44.5-159.5
Trichlorofluoromethane (F-11)	24.5	98.0	24.1	96.4	25.0	1.7				50.6-158.2
1,1-Dichloroethene	23.9	95.6	23.6	94.3	25.0	1.3				50.4-130
Methylene Chloride	23.8	95.1	23.3	93.1	25.0	2.2				65.9-130
trans-1,2-Dichloroethene	23.9	95.6	23.5	94.0	25.0	1.7				70-130
Methyl tert-butyl ether (MTBE)	23.7	94.8	22.2	88.6	25.0	6.7				51.7-135.4
1,1-Dichloroethane	24.1	96.5	23.7	95.0	25.0	1.6				48.2-142.4
cis-1,2-Dichloroethene	24.3	97.4	23.8	95.3	25.0	2.2				70-130
Chloroform	24.5	98.2	23.7	95.0	25.0	3.3				56.8-135.5
1,1,1-Trichloroethane	24.8	99.4	24.2	96.7	25.0	2.7				65.5-138.3
Carbon tetrachloride	25.6	102	24.7	99.0	25.0	3.3				70-140.8
Benzene	23.9	95.4	23.6	94.5	25.0	1.0				58.6-130
1,2-Dichloroethane	24.8	99.3	23.8	95.3	25.0	4.1				43.1-156.5
Trichloroethene	24.9	99.6	24.7	98.6	25.0	1.0				70-130
1,2-Dichloropropane	25.0	99.9	24.6	98.2	25.0	1.7				70-130
Bromodichloromethane	25.6	102	24.9	99.5	25.0	2.8				70-130
cis-1,3-Dichloropropene	25.2	101	24.2	96.9	25.0	4.1				70-130
Toluene	24.4	97.4	25.3	101	25.0	3.6				70-130
trans-1,3-Dichloropropene	26.1	104	24.5	98.2	25.0	6.1				70-130
1,1,2-Trichloroethane	24.5	98.0	23.8	95.0	25.0	3.1				70-130
Tetrachloroethene	25.0	99.9	25.0	100	25.0	0.2				67.9-150.2
Dibromochloromethane	26.8	107	25.0	100	25.0	6.6				70-130
1,2-Dibromoethane	25.5	102	24.8	99.0	25.0	2.8				70-130
Chlorobenzene	24.9	99.5	24.9	99.5	25.0	0.0				70-130
Ethylbenzene	24.9	99.5	25.1	100	25.0	0.7				70-130
Xylene, total	74.9	99.8	76.4	102	75.0	2.0				70-130
Bromoform	26.4	106	24.2	96.8	25.0	8.7				70-135.8
1,1,2,2-Tetrachloroethane	24.7	98.9	23.4	93.4	25.0	5.7				66.8-130
1,3,5-Trimethylbenzene	25.1	100	24.9	99.5	25.0	0.8				70-130
1,2,4-Trimethylbenzene	24.5	98.2	24.6	98.6	25.0	0.4				70-130
1,3-Dichlorobenzene	25.3	101	24.8	99.4	25.0	1.9				70-130
1,4-Dichlorobenzene	25.2	101	25.0	99.9	25.0	1.0				70-130
1,2-Dichlorobenzene	25.1	100	24.9	99.5	25.0	0.7				70-130
Naphthalene	24.0	96.2	22.8	91.2	25.0	5.3				70-130

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.1	96.5	23.3	93.2	70 -130 %
Surr: Toluene-d8	22.7	90.9	23.4	93.7	70 -130 %
Surr: 4-Bromofluorobenzene	23.9	95.6	24.5	98.1	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:	15H030	Collection:	8/31/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020831

Source Sample: 15H030-02

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	8/31/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Ethylbenzene	2.0	2.1	1	1.5	8/31/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	8/31/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	8/31/2015	8260B AZ Vapor	
Toluene	2.9	3.0	1	1.4	8/31/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	8/31/2015	8260B AZ Vapor	
Xylenes, Total	12	12	1	0.3	8/31/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.3	93.0	23.7	95.0	70-130%
Surr: Toluene-d8	22.8	91.2	23.4	93.5	70-130%
Surr: 4-Bromofluorobenzene	24.3	97.0	24.7	98.6	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:	15H030	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020831

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	8/31/2015	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	%REC, 70-130%
Surr: Toluene-d8	25.3	101	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.6	94.2	%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:	15H030	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 8/31/2015 Batch: MS020831 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}	462	92.3	464	92.8	500	0.5				8/31/2015	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	25.7	103	26.0	104	25.0	70 -130 %					
Surr: Toluene-d8	25.0	100	25.4	102	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	23.7	94.6	23.4	93.4	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:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	15H030	Collection:	8/31/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020831

Method: 8015 by GC/MS **Source Sample: 15H030-02**

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}	1,560	1,570	1	0.6	8/31/2015	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	26.4	105	70-130%
Surr: Toluene-d8	25.7	103	26.3	105	70-130%
Surr: 4-Bromofluorobenzene	23.8	95.3	24.4	97.6	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: John Manley	Phone:	15H030
	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

Temperature_____ °C

Custody Seals: Yes_____ No_____

Custody Seals Intact: Yes_____ No_____

Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours

_____ 72 Hours

_____ 5 working Day

_____ Standard 10 Working Days

Please fill the information below:

Sample Type

A: ambient air **WW**: waste water

I: indoor air

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	8-31-15	11:00	1					X		X				
02			6, 1, bag	HQUST-AIR-INF	8-31-15	10:30	1					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:
8-31-15	12:50	John Manley	[illegible]

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: October 2, 2015

Client:	Richard Byrd	Work Order #:	15I031
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	9/28/2015

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: October 2, 2015

Client:	Richard Byrd	Work Order #:	15I031
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	9/28/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15I031-01	HQUST-AIR-EFF	8260B AZ Vapor 8015 GRO	9/28/2015	10:00
15I031-02	HQUST-AIR-INF	8260B AZ Vapor 8015 GRO	9/28/2015	10:15

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: October 2, 2015

Client:	Richard Byrd	Work Order #:	15I031
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	9/28/2015

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.

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:	15I031	Collection:	9/28/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	9/29/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	9/29/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/29/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/29/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	9/29/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	9/29/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	9/29/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	9/29/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	9/29/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	9/29/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	9/29/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	9/29/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	9/29/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	9/29/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	9/29/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	9/29/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	9/29/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	9/29/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	9/29/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	9/29/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	9/29/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	9/29/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	9/29/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.7	98.6	%REC, 70-130%
Surr: Toluene-d8	23.9	95.7	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.2	101	%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:	15I031	Collection:	9/28/2015
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: YM
GRO, C^6 - C^{10}	< 100	100	< 23.3	23.3	T3	1	9/29/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.4	110	%REC, 70-130%
Surr: Toluene-d8	26.8	107	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.8	99.1	%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:	15I031	Collection:	9/28/2015
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: YM		
1,1,1-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	9/29/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	9/29/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**7.0**	**1.0**	**1.42**	**0.20**	1	9/29/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**4.1**	**1.0**	**0.84**	**0.20**	1	9/29/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	9/29/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	9/29/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	9/29/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	9/29/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	9/29/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	9/29/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	9/29/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	9/29/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	9/29/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	9/29/2015	8260B AZ Vapor	
Ethylbenzene	**2.8**	**1.0**	**0.65**	**0.23**	1	9/29/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	9/29/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	9/29/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	9/29/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	9/29/2015	8260B AZ Vapor	
Toluene	**3.0**	**1.0**	**0.79**	**0.27**	1	9/29/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	9/29/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	9/29/2015	8260B AZ Vapor	
Xylenes, Total	**19**	**3.0**	**4.44**	**0.69**	1	9/29/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.3	93.1	%REC, 70-130%
Surr: Toluene-d8	23.1	92.5	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.6	98.4	%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:	15I031	Collection:	9/28/2015
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: YM
GRO, C^6 - C^{10}	1,600	100	372	23.3	T3	1	9/29/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.9	103	%REC, 70-130%
Surr: Toluene-d8	26.0	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.8	95.1	%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:	15I031	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020929

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	9/29/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	9/29/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	9/29/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/29/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/29/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/29/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	9/29/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	9/29/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	9/29/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	9/29/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	9/29/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	9/29/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	9/29/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	9/29/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	9/29/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	9/29/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	9/29/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	9/29/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	9/29/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	9/29/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	9/29/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	9/29/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/29/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/29/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	9/29/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	9/29/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	9/29/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	9/29/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.5	94.0	%REC, 70-130%
Surr: Toluene-d8	23.1	92.4	%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:	15I031	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 9/29/2015 Batch: MS020929 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)	25.0	100	24.4	97.5	25.0	2.6				31.5-131.4
Chloromethane	22.1	88.3	21.8	87.2	25.0	1.3				62.1-130
Vinyl Chloride	23.2	92.7	22.8	91.4	25.0	1.5				70-130
Bromomethane	26.4	105	35.1	140	25.0	28.4				38.1-204.3
Chloroethane	22.9	91.5	22.1	88.4	25.0	3.4				64.4-130.9
Trichlorofluoromethane (F-11)	26.1	104	25.5	102	25.0	2.1				70-130
1,1-Dichloroethene	24.7	98.7	24.4	97.4	25.0	1.3				70-130
Methylene Chloride	23.9	95.5	23.1	92.2	25.0	3.5				70-130
trans-1,2-Dichloroethene	24.4	97.4	24.0	95.9	25.0	1.6				70-130
Methyl tert-butyl ether (MTBE)	25.4	101	22.2	89.0	25.0	13.1				67.3-130
1,1-Dichloroethane	24.1	96.3	23.9	95.7	25.0	0.6				70-130
cis-1,2-Dichloroethene	24.7	98.7	24.2	96.7	25.0	2.1				70-130
Chloroform	24.6	98.3	24.0	95.8	25.0	2.6				70-130
1,1,1-Trichloroethane	25.1	101	24.8	99.2	25.0	1.4				70-130
Carbon tetrachloride	27.1	108	26.3	105	25.0	2.8				70-130
Benzene	24.0	95.8	23.6	94.4	25.0	1.5				70-130
1,2-Dichloroethane	25.8	103	24.2	96.8	25.0	6.5				70-130
Trichloroethene	25.2	101	24.4	97.4	25.0	3.5				70-130
1,2-Dichloropropane	24.6	98.5	23.3	93.3	25.0	5.4				70-130
Bromodichloromethane	26.4	106	24.6	98.2	25.0	7.3				70-130
cis-1,3-Dichloropropene	25.8	103	23.8	95.3	25.0	8.1				70-130
Toluene	25.0	100	23.9	95.7	25.0	4.4				70-130
trans-1,3-Dichloropropene	27.0	108	24.4	97.6	25.0	10.0				70-130
1,1,2-Trichloroethane	25.5	102	22.5	89.8	25.0	12.7				70-130
Tetrachloroethene	24.9	100	23.6	94.4	25.0	5.4				70-130
Dibromochloromethane	28.1	113	24.7	98.8	25.0	13.0				70-130
1,2-Dibromoethane	27.4	110	23.9	95.6	25.0	13.7				70-130
Chlorobenzene	25.2	101	24.2	96.7	25.0	4.2				70-130
Ethylbenzene	25.4	101	24.4	97.7	25.0	3.8				70-130
Xylene, total	75.3	100	73.0	97.3	75.0	3.1				70-130
Bromoform	28.5	114	24.5	97.8	25.0	15.3				70-130
1,1,2,2-Tetrachloroethane	25.7	103	22.3	89.1	25.0	14.2				70-130
1,3,5-Trimethylbenzene	24.8	99.0	24.5	98.1	25.0	0.9				70-130
1,2,4-Trimethylbenzene	24.5	97.9	24.1	96.2	25.0	1.7				70-130
1,3-Dichlorobenzene	25.0	100	24.1	96.4	25.0	3.8				70-130
1,4-Dichlorobenzene	25.2	101	24.2	96.7	25.0	4.0				70-130
1,2-Dichlorobenzene	25.3	101	23.9	95.4	25.0	5.9				70-130
Naphthalene	25.4	101	21.5	85.8	25.0	16.7				70-130

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.0	96.0	23.6	94.4	70 -130 %
Surr: Toluene-d8	23.3	93.0	22.6	90.2	70 -130 %
Surr: 4-Bromofluorobenzene	24.9	99.5	23.8	95.3	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:	15I031	Collection:	9/28/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020929

Source Sample: 15I031-02 Analyst: YM

Analyses 8260B AZ	Sample	Dup	DF	RPD,<30%	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	9/29/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	7.0	7.0	1	0.9	9/29/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	4.1	4.0	1	2.2	9/29/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Ethylbenzene	2.8	2.7	1	2.9	9/29/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	9/29/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	9/29/2015	8260B AZ Vapor	
Toluene	3.0	3.0	1	0.3	9/29/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	9/29/2015	8260B AZ Vapor	
Xylenes, Total	19	19	1	2.8	9/29/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.3	93.1	24.1	96.4	70-130%
Surr: Toluene-d8	23.1	92.5	23.5	93.9	70-130%
Surr: 4-Bromofluorobenzene	24.6	98.4	24.7	98.8	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:	15I031	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020929

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	9/29/2015	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.1	104	%REC, 70-130%
Surr: Toluene-d8	25.8	103	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.0	96.1	%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:	15I031	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 9/29/2015 Batch: MS020929 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}	500	99.9	494	98.7	500	1.2				9/29/2015	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	25.1	100	26.7	107	25.0	70 -130 %					
Surr: Toluene-d8	26.5	106	26.4	106	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	24.5	97.9	23.6	94.3	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:	15I031	Collection:	9/28/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020929

Method: 8015 by GC/MS **Source Sample: 15I031-02**

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}	1,600	1,540	1	3.8	9/29/2015	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.9	103	26.8	107	70-130%
Surr: Toluene-d8	26.0	104	26.4	105	70-130%
Surr: 4-Bromofluorobenzene	23.8	95.1	23.6	94.6	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 1 of 1		AEL Lab #
Address: 4004 S. Park ave	Sampler: John Manley	Phone: 480-894-2056	15I031
	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

Temperature_____ °C
Custody Seals: Yes_____ No_____
Custody Seals Intact: Yes_____ No_____
Total # of Containers:_____

Turn Around Request

_____ 24 Hours _____ 48 Hours
_____ 72 Hours
_____ 5 working Day
_____ Standard 10 Working Days

Please fill the information below:

Sample Type
A: ambient air
I: indoor air
S: soil extraction vapor
GW: ground water
WW: waste 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	9-28-15	10:00	1					X		X				
02			6, (1), (bag)	HQUST-AIR-INF	9-28-15	10:15	1					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:
9-28-15	13:20	John Manley	

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: October 30, 2015

Client:	Richard Byrd	Work Order #:	15J027
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	10/26/2015

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: October 30, 2015

Client:	Richard Byrd	Work Order #:	15J027
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	10/26/2015

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
15J027-01	HQUST-AIR-EFF	8260B AZ Vapor 8015 GRO	10/26/2015	09:45
15J027-02	HQUST-AIR-INF	8260B AZ Vapor 8015 GRO	10/26/2015	09:30

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: October 30, 2015

Client:	Richard Byrd	Work Order #:	15J027
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	10/26/2015

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.

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:	15J027	Collection:	10/26/2015
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	10/27/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	10/27/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	10/27/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/27/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/27/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	10/27/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	10/27/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	10/27/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	10/27/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	10/27/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	10/27/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	10/27/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	10/27/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	10/27/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	10/27/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	10/27/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	10/27/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	10/27/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	10/27/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	10/27/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	10/27/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	10/27/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	10/27/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	10/27/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	10/27/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.2	96.6	%REC, 70-130%
Surr: Toluene-d8	23.4	93.6	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.9	99.4	%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:	15J027	Collection:	10/26/2015
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	10/27/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.8	107	%REC, 70-130%
Surr: Toluene-d8	26.2	105	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.2	96.6	%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:	15J027	Collection:	10/26/2015
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	10/27/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	10/27/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	10/27/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**3.2**	**1.0**	**0.66**	**0.20**	1	10/27/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**2.2**	**1.0**	**0.46**	**0.20**	1	10/27/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	10/27/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	10/27/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	10/27/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	10/27/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	10/27/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	10/27/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	10/27/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	10/27/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	10/27/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	10/27/2015	8260B AZ Vapor	
Ethylbenzene	**2.1**	**1.0**	**0.48**	**0.23**	1	10/27/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	10/27/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	10/27/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	10/27/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	10/27/2015	8260B AZ Vapor	
Toluene	**2.9**	**1.0**	**0.76**	**0.27**	1	10/27/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	10/27/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	10/27/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	10/27/2015	8260B AZ Vapor	
Xylenes, Total	**15**	**3.0**	**3.50**	**0.69**	1	10/27/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.4	97.4	%REC, 70-130%
Surr: Toluene-d8	23.6	94.4	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.3	101	%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:	15J027	Collection:	10/26/2015
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}	1,490	100	347	23.3	T3	1	10/27/2015

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.1	108	%REC, 70-130%
Surr: Toluene-d8	26.6	106	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.5	98.0	%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:	15J027	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021027

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	10/27/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	10/27/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	10/27/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/27/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/27/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/27/2015	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	10/27/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	10/27/2015	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	10/27/2015	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	10/27/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	10/27/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	10/27/2015	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	10/27/2015	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	10/27/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	10/27/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	10/27/2015	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	10/27/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	10/27/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	10/27/2015	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	10/27/2015	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	10/27/2015	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	10/27/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/27/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/27/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	10/27/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	10/27/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	10/27/2015	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	10/27/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.2	101	%REC, 70-130%
Surr: Toluene-d8	23.7	94.8	%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:	15J027	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 10/27/2015 Batch: MS021027 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)	18.5	73.8	18.2	72.7	25.0	1.5				31.5-131.4
Chloromethane	17.7	71.0	18.8	75.4	25.0	6.0				62.1-130
Vinyl Chloride	21.2	84.8	21.2	84.9	25.0	0.0				70-130
Bromomethane	26.1	105	25.4	102	25.0	2.8				38.1-204.3
Chloroethane	22.8	91.0	21.0	84.2	25.0	7.8				64.4-130.9
Trichlorofluoromethane (F-11)	26.0	104	25.8	103	25.0	0.7				70-130
1,1-Dichloroethene	24.9	99.5	24.8	99.3	25.0	0.2				70-130
Methylene Chloride	23.9	95.5	24.1	96.2	25.0	0.8				70-130
trans-1,2-Dichloroethene	24.8	99.2	24.8	99.2	25.0	0.0				70-130
Methyl tert-butyl ether (MTBE)	25.5	102	26.4	105	25.0	3.4				67.3-130
1,1-Dichloroethane	24.4	97.6	24.8	99.0	25.0	1.5				70-130
cis-1,2-Dichloroethene	25.0	100	25.2	101	25.0	0.8				70-130
Chloroform	25.1	100	25.3	101	25.0	0.6				70-130
1,1,1-Trichloroethane	26.0	104	26.1	104	25.0	0.6				70-130
Carbon tetrachloride	28.1	112	27.9	112	25.0	0.8				70-130
Benzene	24.1	96.4	24.3	97.2	25.0	0.7				70-130
1,2-Dichloroethane	26.4	106	27.1	109	25.0	2.6				70-130
Trichloroethene	25.7	103	25.9	104	25.0	0.9				70-130
1,2-Dichloropropane	25.5	102	25.4	102	25.0	0.4				70-130
Bromodichloromethane	26.8	107	27.3	109	25.0	1.9				70-130
cis-1,3-Dichloropropene	26.2	105	26.3	105	25.0	0.4				70-130
Toluene	25.4	101	25.6	103	25.0	1.1				70-130
trans-1,3-Dichloropropene	27.6	110	28.0	112	25.0	1.7				70-130
1,1,2-Trichloroethane	25.6	102	26.5	106	25.0	3.3				70-130
Tetrachloroethene	25.4	102	25.4	101	25.0	0.2				70-130
Dibromochloromethane	28.7	115	29.4	117	25.0	2.4				70-130
1,2-Dibromoethane	27.5	110	28.1	113	25.0	2.2				70-130
Chlorobenzene	25.4	102	25.3	101	25.0	0.6				70-130
Ethylbenzene	25.9	104	25.5	102	25.0	1.4				70-130
Xylene, total	77.1	103	76.6	102	75.0	0.7				70-130
Bromoform	29.7	119	29.9	119	25.0	0.5				70-130
1,1,2,2-Tetrachloroethane	25.6	103	26.3	105	25.0	2.5				70-130
1,3,5-Trimethylbenzene	25.3	101	25.1	100	25.0	0.8				70-130
1,2,4-Trimethylbenzene	24.9	99.6	24.7	98.7	25.0	0.9				70-130
1,3-Dichlorobenzene	24.2	96.7	25.2	101	25.0	4.1				70-130
1,4-Dichlorobenzene	25.2	101	25.2	101	25.0	0.1				70-130
1,2-Dichlorobenzene	23.8	95.2	25.6	102	25.0	7.2				70-130
Naphthalene	25.0	100	26.0	104	25.0	4.0				70-130

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.7	95.0	24.3	97.1	70 -130 %
Surr: Toluene-d8	23.1	92.4	23.2	92.8	70 -130 %
Surr: 4-Bromofluorobenzene	24.8	99.3	25.0	100	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:	15J027	Collection:	10/26/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS021027

Source Sample: 15J027-02 Analyst: PS

Analyses 8260B AZ	Sample	Dup	DF	RPD,<30%	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	10/27/2015	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,2,4-Trimethylbenzene	3.2	3.5	1	7.5	10/27/2015	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
1,3,5-Trimethylbenzene	2.2	2.4	1	6.9	10/27/2015	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Ethylbenzene	2.1	2.2	1	5.6	10/27/2015	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	10/27/2015	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	1	0.0	10/27/2015	8260B AZ Vapor	
Toluene	2.9	2.9	1	1.7	10/27/2015	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	10/27/2015	8260B AZ Vapor	
Xylenes, Total	15	16	1	5.8	10/27/2015	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.4	97.4	23.6	94.3	70-130%
Surr: Toluene-d8	23.6	94.4	22.8	91.3	70-130%
Surr: 4-Bromofluorobenzene	25.3	101	24.5	97.9	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:	15J027	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021027

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	10/27/2015	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.0	112	%REC, 70-130%
Surr: Toluene-d8	26.5	106	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.8	99.0	%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:	15J027	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 10/27/2015 Batch: MS021027 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}	480	95.9	499	99.8	500	4.0				10/27/2015	60-140
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	26.0	104	26.9	108	25.0	70 -130 %					
Surr: Toluene-d8	25.2	101	26.0	104	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	23.8	95.0	24.6	98.3	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:	15J027	Collection:	10/26/2015
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS021027

Method: 8015 by GC/MS **Source Sample: 15J027-02**

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}	1,490	1,550	1	3.9	10/27/2015	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.1	108	26.2	105	70-130%
Surr: Toluene-d8	26.6	106	25.7	103	70-130%
Surr: 4-Bromofluorobenzene	24.5	98.0	23.6	94.4	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 1 of 1		AEL Lab #
Address: 4004 S. Park ave	Sampler: J. Mawley	Phone:	15J027
	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	10-26-15	9:45	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	10-26-15	9:30	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:
10-26-15	13:25	John Mawley	[illegible]

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:

Andrew Quigley
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."

Signature of UST owner, operator or volunteer

February 15, 2016
Date

Andrew Quigley
Name of UST owner, operator or volunteer (printed)

Director of Environmental Services
Title

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM

Periodic Site Status Report

DATE FORM COMPLETED: 02/15/16 (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: 02/15/16 (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: 45-73 feet bgs (known) / estimated Aquifer type: ☒ unconfined ☐ confined ☐ perched

Groundwater Flow Direction: NW Gradient: 0.005 (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