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April 30, 2015

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

SUBJECT: **Periodic Site Status Report, June through November 2014**
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. Z034000069

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, 2014 to November 30, 2014. 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.
- Extraction of vapor phase petroleum hydrocarbons from wells containing free-phase gasoline using the SVE system.
- Removal of the Falco 100 scfm catalytic oxidizer, and the installation of a 250 scfm catalytic oxidizer.
- Preparation and submittal of quarterly Self-Monitoring and Reporting Forms (SMRF) to Pima County Regional Wastewater Reclamation Department (Appendix A).
- Conducted an in-situ chemical oxidation (ISCO) pilot test using sodium persulfate in monitor well HQUST-526A.

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. Monitor well locations are presented on Figure 2. Groundwater samples were collected on August and November 2014 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. Additional parameters to evaluate long-term natural attenuation were also analyzed. A summary of select VOC parameters are presented in Table 2 and on Figure 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 above the ADEQ aquifer water quality standard (AWQS) in groundwater samples collected at monitor well HQUST-526A at 3,080 micrograms per liter (µg/L) (August 2014).
- Benzene was reported below the ADEQ AWQS in groundwater samples collected at monitor wells HQUST-533A at 1.0 µg/L (August 2014) and HQUST-548 at 1.0 µg/L (August 2014) and 4.7 µg/L (November 2014).
- Toluene was reported below the ADEQ AWQS in groundwater samples collected at monitor well CEP-519A at 1.7 µg/L (November 2014).
- Ethylbenzene was reported below the ADEQ AWQS in groundwater samples collected at monitor well CEP-519A at 1.7 µg/L (November 2014).
- Total xylenes was reported below the ADEQ AWQS in groundwater samples collected at monitor well CEP-519A at 6.8 µg/L (November 2014).
- MTBE was reported in the groundwater samples collected at monitor wells HQST-526A, HQUST-533A, HQUST-547, and HQUST-548 with the maximum concentration 240 µg/L (August 2014) reported at monitor well HQUST-526A.
- During the reporting period, benzene, toluene, ethylbenzene, total xylenes (BTEX), 1,2-DCA, and PCE were not detected above analytical method detection limits in the groundwater samples collected at monitor wells CEP-520A, CEP-527A, CEP-528A, HQUST-525A, HQUST-531A, and HQUST-532A.

NAPL Bailing

On April 8, 2013 Cardno discontinued manual gauging and bailing of 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. 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.

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 5 through 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, 2014 to November 30, 2014
System modifications during reporting period:	Removed Falco 100 scfm catalytic oxidizer and replaced with a Solleco 250 scfm thermal catalytic oxidizer.
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)
06/01/14 to 11/30/14	3,724	620.6
Cumulative:	12,516	2,086

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 wastewater stream prior to discharge to 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 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 to 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 E. The 55-gallon NAPL drum is equipped with 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, 2014 to November 30, 2014
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, SM 5220D
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):	18.5-gallons (111 pounds)

System performance:

Period	Mass of Hydrocarbons Removed (Gallons)	Mass of Hydrocarbons Removed (Pounds)
06/01/14 to 11/30/14	18.5	111
Cumulative:	2,157	12,942

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 2014 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 0.005 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 2014 data. The groundwater flow gradient in November 2014 is approximately 0.008 ft/ft in a north-northwesterly direction.

Historical groundwater elevations were examined to assess groundwater trends. Based on the data, groundwater elevations have decreased approximately one to three feet between January 2007 and November 2014; 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 2,450 μg/L (May 2014) to <1.0 μg/L (November 2014). The benzene concentration at monitor well CEP-519A increased from <1.0 μg/L (May 2014) to 2.9 μg/L (November 2014). The benzene concentration at monitor well HQUST-548 increased from 1.9 μg/L (May 2014) to 4.7 μg/L (November 2014). 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 and groundwater 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.

In-situ Chemical Oxidation Pilot Test

On October 3, 2014 Cardno conducted an ISCO pilot test using sodium persulfate at monitor well HQUST-526A. The objective of the ISCO pilot test was to treat the saturated zone and evaluate the effect of sodium persulfate on existing groundwater quality. Prior to conducting the ISCO pilot test, the existing SVE remediation system was shut down, depth to water was measured, and groundwater samples were collected at monitor well HQUST-526A to assess current groundwater conditions and establish a baseline. Approximately 280 gallons of a 15-percent sodium persulfate mixture was injected into monitor well HQUST-526A. To evaluate the effectiveness of the ISCO pilot test, two additional rounds of groundwater samples were collected at monitor well HQUST-526A. Groundwater elevations, depth to water, and select analytical results are presented in Table 11. Based on the pre and post ISCO injection laboratory analyses, sodium persulfate treatment appears to have significantly reduce concentrations of dissolved phase constituents of concern.

PROPOSED FUTURE ACTIVITIES

Future activities planned over the next six-month period (November 2014 through May 2015) include the following:

- Continued operation of the SVE and PT/OWS remediation systems.
- Quarterly groundwater monitoring and sampling to evaluate remediation system and ISCO efficacy.
- 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) 813-4526 with any questions regarding this report.

Respectfully submitted,

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Enclosures:

References

Figure 1	Site Vicinity Map
Figure 2	Generalized Site Plan
Figure 3	Select Analytical Results – June through November 2014
Figure 4A	Groundwater Elevation Map – August 13 and 14, 2014
Figure 4B	Groundwater Elevation Map – November 12 and 13, 2014
Figure 5	Dissolved Phase Benzene Concentration Graph

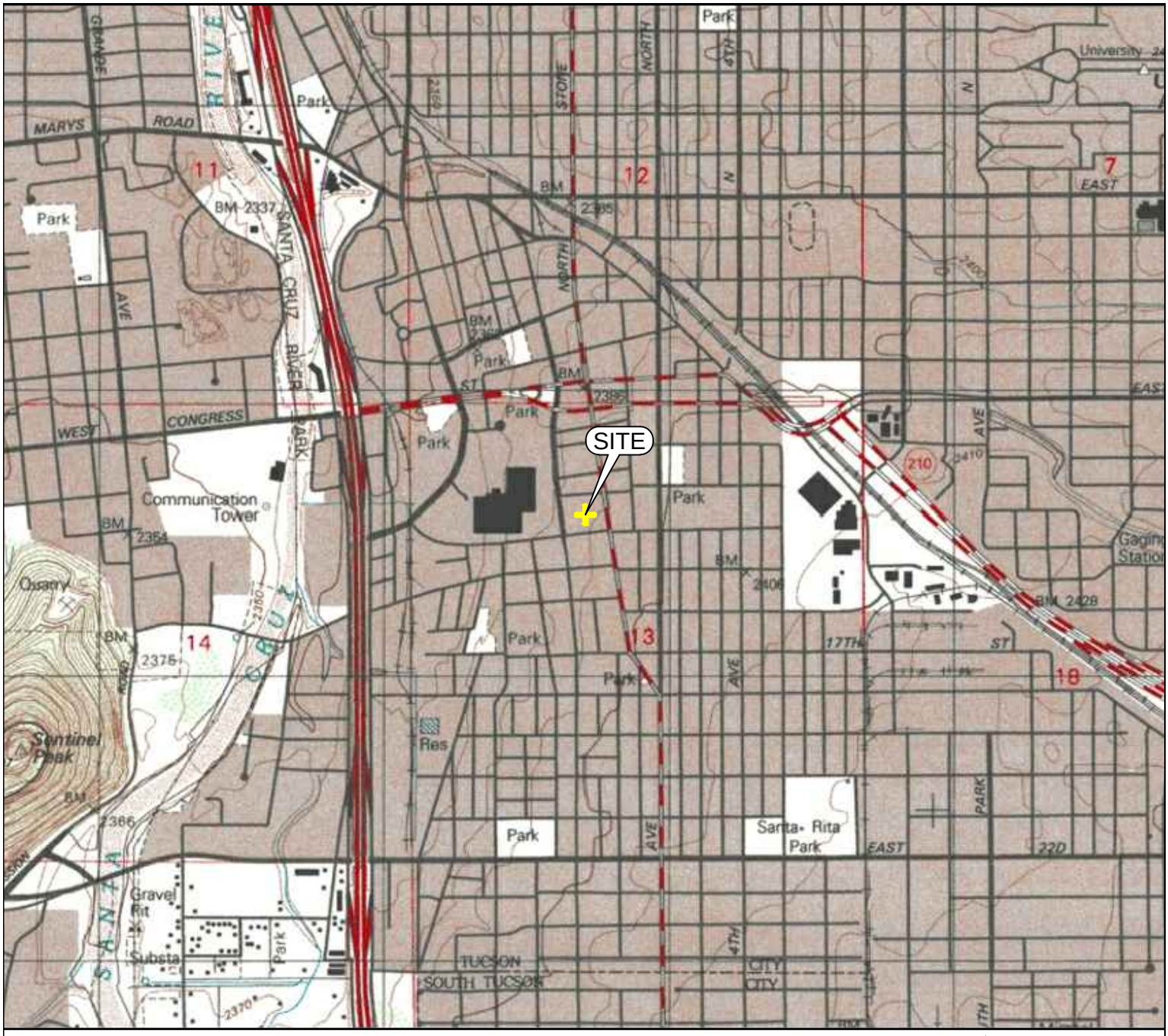
Table 1 Summary of Water / LNAPL Levels
Table 2 Select Groundwater Analytical Results – VOCs
Table 3 Select Groundwater Analytical Results – MNA Parameters
Table 4 Cumulative NAPL Removal
Table 5A Operational Period – Data for SVE System Operation and Performance
Table 5B Historical Data for SVE System Operation and Performance
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
Table 11 Sodium Persulfate Treatment Select Groundwater Analytical Results - VOCs

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 PT/OWS Compliance Sample Analytical Reports and Chain-of-Custody Records
Appendix F 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.



EXPLANATION

SOURCE: Modified from a map provided by USGS 7.5 minute series

N

APPROXIMATE SCALE

0 1,700 3,400 FEET

FN 041305ESA_TOPO

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SITE VICINITY MAP

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

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FIGURE
1

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LEGEND

HQUST-533A — Groundwater Monitor Well

DIW — Soil Vapor Extraction Well

IW-6 — SVE/Injection Well

SVE Remediation Equipment

SVE Piping

SOURCE: Modified from a map provided by Pima County

N

APPROXIMATE SCALE

0 70 140 FEET

FN 041305GSP2

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GENERALIZED SITE PLAN

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

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FIGURE
2

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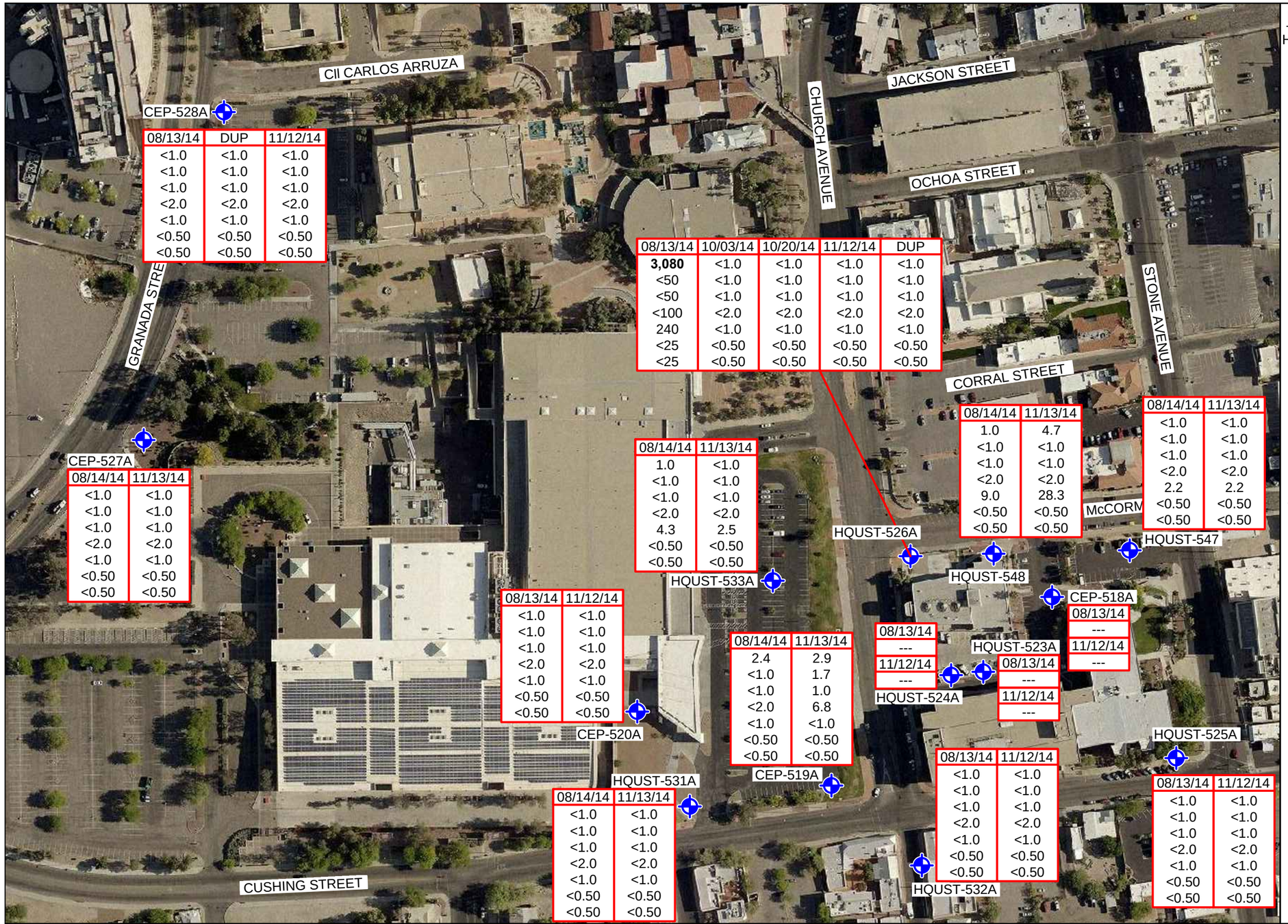

LEGEND

HQUST-533A

Groundwater Monitor Well

Analyte concentrations reported in µg/L.

08/13/14	Sampling Date
3,080	Benzene
<50	Toluene
<50	Ethylbenzene
<100	Total Xylenes
240	MTBE
<25	1,2-Dichloroethane
<25	Tetrachloroethylene
<	Less than the laboratory reporting limit.
BOLD	Concentration exceeds ADEQ AWQS.
µg/L	Micrograms per liter.
---	Not sampled, well contained free product.
DUP	Duplicate sample.
MTBE	Methyl-tert-butyl ether

SOURCE: Modified from a map provided by Pima County.

N

APPROXIMATE SCALE

0 170 340 FEET

FN 041305_PSSR.R10

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SELECT ANALYTICAL RESULTS - JUNE THROUGH NOVEMBER 2014

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

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FIGURE
3

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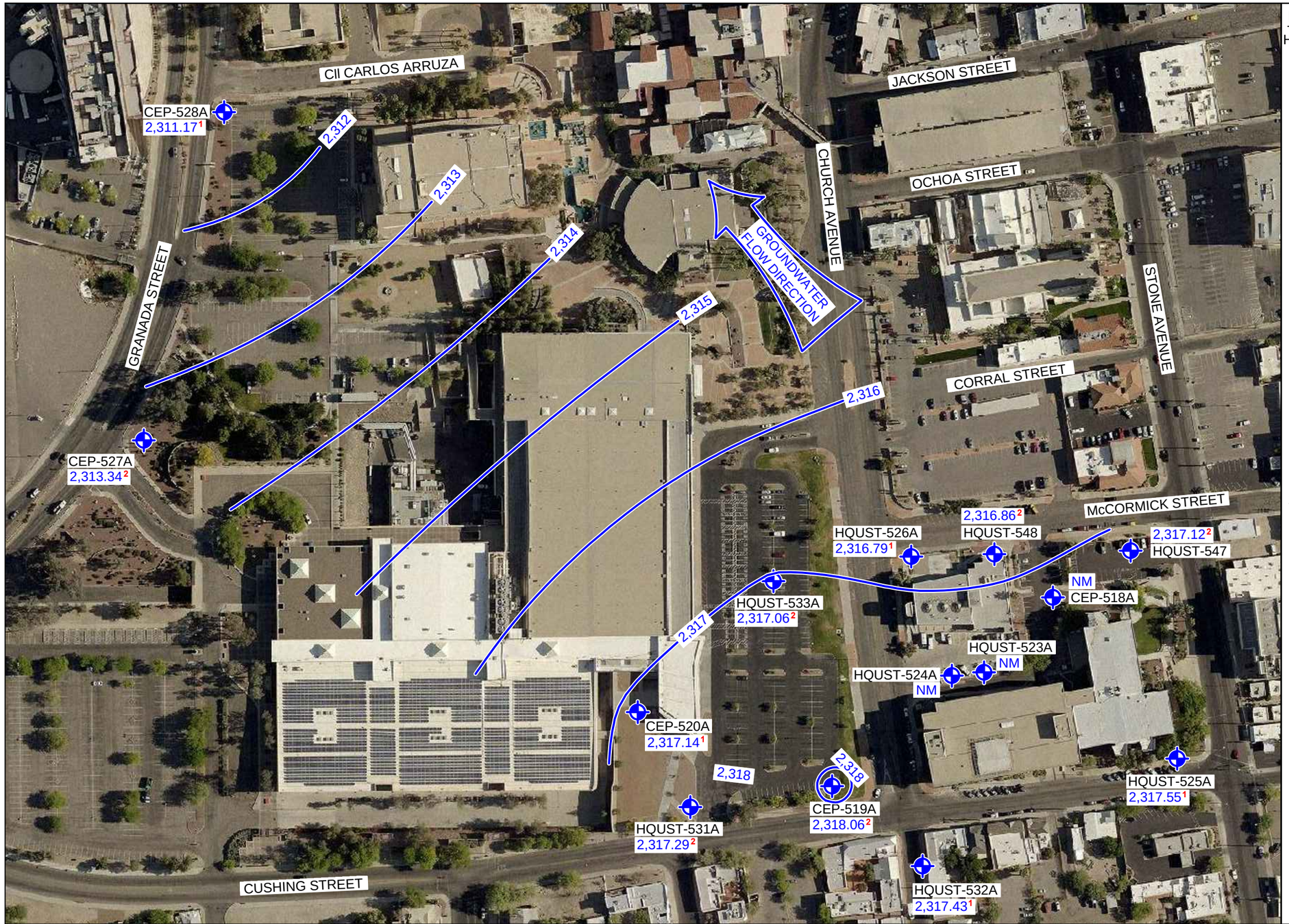

LEGEND

HQUST-533A — Groundwater Monitor Well

2,317.53 — 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 13, 2014

[2] Groundwater level measured on August 14, 2014

NM — Not measured

SOURCE: Modified from a map provided by Pima County.

N

APPROXIMATE SCALE

0 170 340 FEET

FN 041305_PSSR.R10

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GROUNDWATER ELEVATION MAP - AUGUST 13 and 14, 2014

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

PROJECT NO.
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FIGURE
4A

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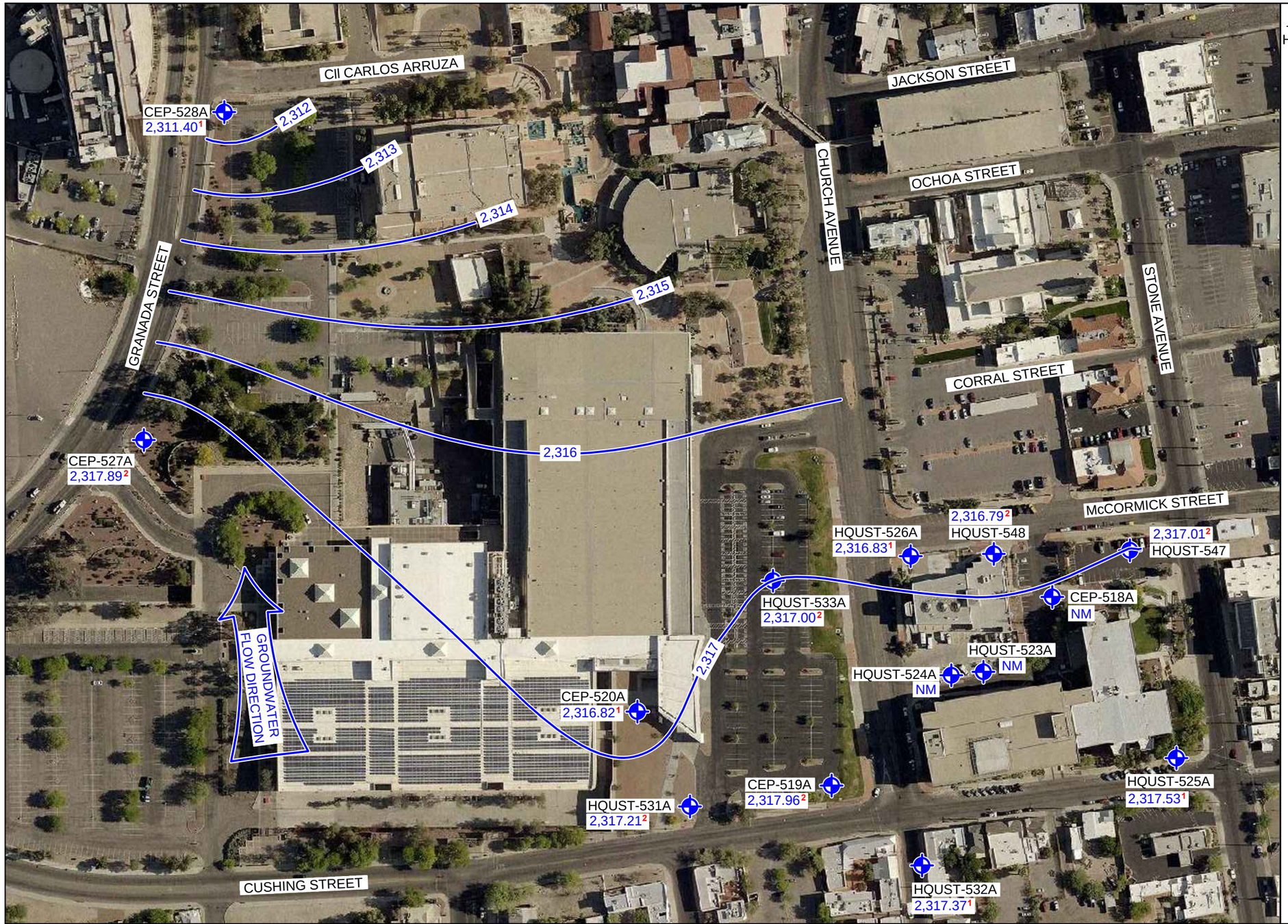

LEGEND

HQUST-533A

Groundwater Monitor Well

2,317.53 — 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 12, 2014

[2] Groundwater level measured on November 13, 2014

NM — Not measured

SOURCE: Modified from a map provided by Pima County.

N

APPROXIMATE SCALE

0 170 340 FEET

FN 041305_PSSR.R10

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GROUNDWATER ELEVATION MAP - NOVEMBER 12 and 13, 2014

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

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FIGURE
4B

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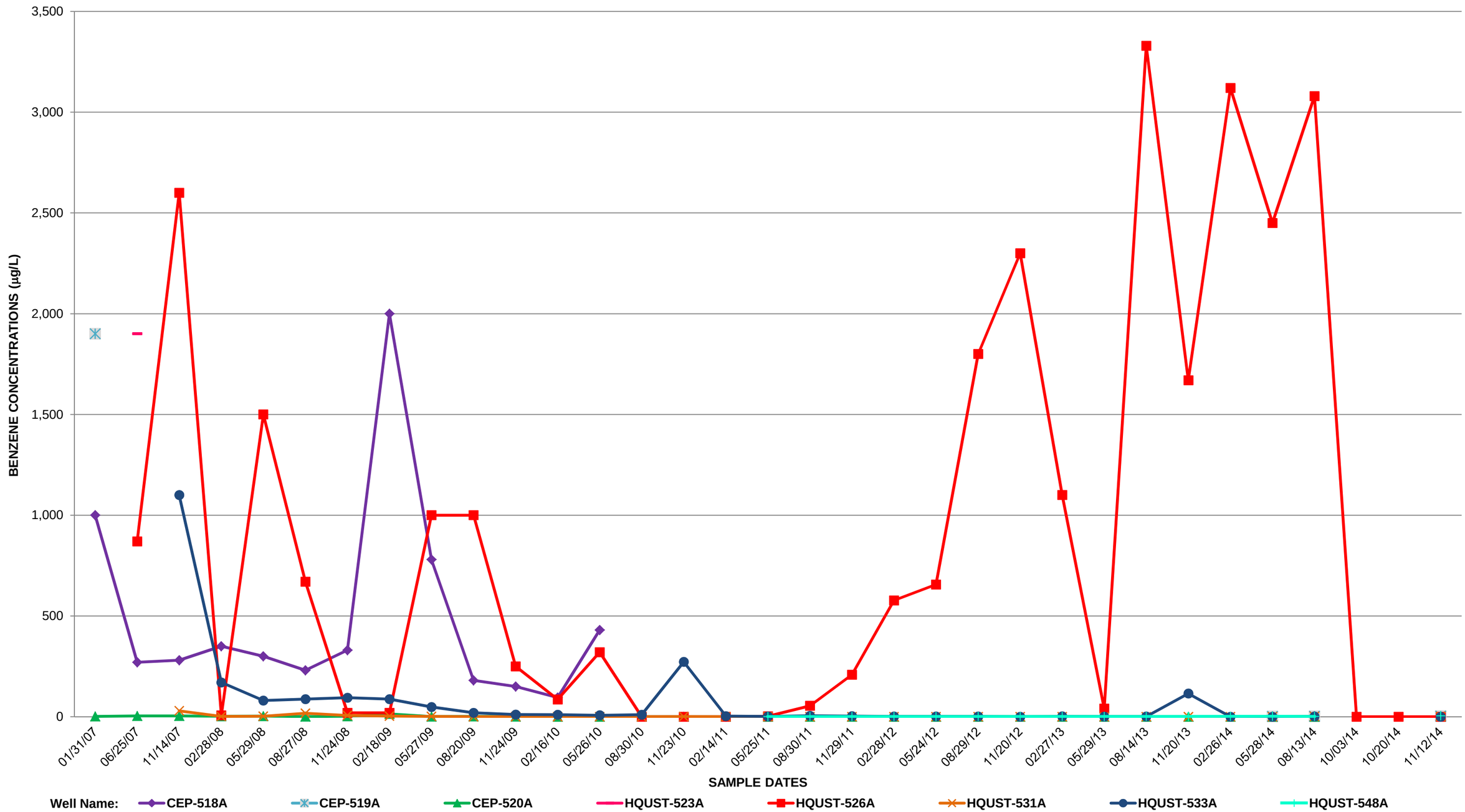

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DISSOLVED PHASE BENZENE CONCENTRATION GRAPH

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

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FIGURE
5

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

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

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

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-518A(4)	07/11/11	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-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

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

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

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

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-519A (4)	08/05/11	2,381.67	62.43	62.36	0.07	2,319.30
CEP-519A (4)	08/12/11	2,381.67	62.45	N/A	0.00	2,319.22
CEP-519A (4)	08/19/11	2,381.67	62.45	N/A	0.00	2,319.22
CEP-519A (4)	09/09/11	2,381.67	62.42	N/A	0.00	2,319.25
CEP-519A (4)	11/04/11	2,381.67	62.38	N/A	0.00	2,319.29
CEP-519A (4)	11/28/11	2,381.67	62.51	62.47	0.04	2,319.19
CEP-519A	11/29/11	2,381.67	62.50	62.47	0.03	2,319.19
CEP-519A (4)	12/09/11	2,381.67	62.94	62.44	0.50	2,319.13
CEP-519A (4)	01/06/12	2,381.67	63.31	62.55	0.76	2,318.97
CEP-519A (4)	01/13/12	2,381.67	63.28	62.60	0.68	2,318.93
CEP-519A (4)	02/15/12	2,381.67	63.29	62.58	0.71	2,318.95
CEP-519A (4)	03/14/12	2,381.67	63.15	62.61	0.54	2,318.95
CEP-519A (4)	04/06/12	2,381.67	63.13	62.59	0.54	2,318.97
CEP-519A (4)	05/23/12	2,381.67	62.97	62.85	0.12	2,318.80
CEP-519A(4) (6)	05/25/12	2,381.67	63.05	62.80	0.25	2,318.82
CEP-519A (4)	06/01/12	2,381.67	62.81	N/A	0.00	2,318.86
CEP-519A (4)	06/08/12	2,381.67	63.11	62.81	0.30	2,318.80
CEP-519A (4)	06/15/12	2,381.67	63.22	62.79	0.43	2,318.79
CEP-519A (7)	08/10/12	2,381.67	62.77	N/A	0.00	2,318.90
CEP-519A (7)	08/27/12	2,381.67	62.74	N/A	0.00	2,318.93
CEP-519A (6)	08/28/12	2,381.67	NM	NM	NM	NM
CEP-519A (7)	09/05/12	2,381.67	63.04	62.72	0.32	2,318.90
CEP-519A (7)	09/14/12	2,381.67	62.85	N/A	0.00	2,318.82
CEP-519A (7)	09/24/12	2,381.67	62.87	62.84	0.03	2,318.83
CEP-519A (7)	10/08/12	2,381.67	62.80	N/A	0.00	2,318.87
CEP-519A (7)	10/22/12	2,381.67	62.72	N/A	0.00	2,318.95
CEP-519A (7)	11/06/12	2,381.67	62.75	N/A	0.00	2,318.92
CEP-519A	11/19/12	2,381.67	NM	NM	NM	NM
CEP-519A	02/27/13	2,381.67	NM	NM	NM	NM
CEP-519A	05/29/13	2,381.67	NM	NM	NM	NM
CEP-519A	08/14/13	2,381.67	NM	NM	NM	NM
CEP-519A	11/20/13	2,381.67	NM	NM	NM	NM
CEP-519A	02/26/14	2,381.67	NM	NM	NM	NM
CEP-519A	05/29/14	2,381.67	63.58	N/A	0.00	2,318.09
CEP-519A	08/14/14	2,381.67	63.61	N/A	0.00	2,318.06
CEP-519A	11/13/14	2,381.67	63.71	N/A	0.00	2,317.96
CEP-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

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

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
CEP-520A	11/23/10	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-527A	06/27/07	2,357.48	42.30	N/A	0.00	2,315.18
CEP-527A	07/02/07	2,357.48	42.31	N/A	0.00	2,315.17
CEP-527A	08/01/07	2,357.48	41.36	N/A	0.00	2,316.12
CEP-527A	11/01/07	2,357.48	NM	NM	NM	NM
CEP-527A	01/03/08	2,357.48	42.05	N/A	0.00	2,315.43
CEP-527A	02/26/08	2,357.48	41.99	N/A	0.00	2,315.49
CEP-527A	05/27/08	2,357.48	42.61	N/A	0.00	2,314.87
CEP-527A	08/26/08	2,357.48	42.25	N/A	0.00	2,315.23
CEP-527A	11/17/08	2,357.48	42.72	N/A	0.00	2,314.76
CEP-527A	02/17/09	2,357.48	42.45	N/A	0.00	2,315.03
CEP-527A	05/27/09	2,357.48	42.51	N/A	0.00	2,314.97
CEP-527A	08/17/09	2,357.48	40.87	N/A	0.00	2,316.61
CEP-527A	08/30/10	2,357.48	43.71	N/A	0.00	2,313.77
CEP-527A	11/23/10	2,357.48	NM (3)	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	05/23/12	2,357.48	NM (3)	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-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

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	08/01/07	2,359.78	45.61	N/A	0.00	2,314.17
CEP-528A	01/03/08	2,359.78	45.89	N/A	0.00	2,313.89
CEP-528A	02/26/08	2,359.78	45.99	N/A	0.00	2,313.79
CEP-528A	05/27/08	2,359.78	46.57	N/A	0.00	2,313.21
CEP-528A	08/26/08	2,359.78	46.47	N/A	0.00	2,313.31
CEP-528A	11/17/08	2,359.78	46.63	N/A	0.00	2,313.15
CEP-528A	02/17/09	2,359.78	46.47	N/A	0.00	2,313.31
CEP-528A	05/27/09	2,359.78	46.54	N/A	0.00	2,313.24
CEP-528A	08/17/09	2,359.78	47.14	N/A	0.00	2,312.64
CEP-528A	11/24/09	2,359.78	47.36	N/A	0.00	2,312.42
CEP-528A	02/16/10	2,359.78	47.44	N/A	0.00	2,312.34
CEP-528A	05/26/10	2,359.78	47.52	N/A	0.00	2,312.26
CEP-528A	08/03/10	2,359.78	47.52	N/A	0.00	2,312.26
CEP-528A	11/23/10	2,359.78	47.36	N/A	0.00	2,312.42
CEP-528A	02/14/11	2,359.78	47.10	N/A	0.00	2,312.68
CEP-528A	05/25/11	2,359.78	47.51	N/A	0.00	2,312.27
CEP-528A	08/29/11	2,359.78	47.48	N/A	0.00	2,312.30
CEP-528A	11/30/11	2,359.78	47.83	N/A	0.00	2,311.95
CEP-528A	02/28/12	2,359.78	47.77	N/A	0.00	2,312.01
CEP-528A	05/23/12	2,359.78	48.12	N/A	0.00	2,311.66
CEP-528A	08/28/12	2,359.78	48.14	N/A	0.00	2,311.64
CEP-528A	11/19/12	2,359.78	48.45	N/A	0.00	2,311.33
CEP-528A	02/27/13	2,359.78	48.56	N/A	0.00	2,311.22
CEP-528A	05/29/13	2,359.78	48.72	N/A	0.00	2,311.06
CEP-528A	08/14/13	2,359.78	48.75	N/A	0.00	2,311.03
CEP-528A	11/20/13	2,359.78	48.94	N/A	0.00	2,310.84
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
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

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-523A (4)	11/18/09	2,382.85	64.14	63.41	0.73	2,319.29
HQUST-523A (4)	11/20/09	2,382.85	64.14	63.38	0.76	2,319.32
HQUST-523A (4)	11/23/09	2,382.85	64.13	63.29	0.84	2,319.39
HQUST-523A (4)	11/24/09	2,382.85	64.27	63.41	0.86	2,319.27
HQUST-523A (4)	11/27/09	2,382.85	64.18	63.32	0.86	2,319.36
HQUST-523A (4)	11/30/09	2,382.85	64.20	63.30	0.90	2,319.37
HQUST-523A (4)	12/02/09	2,382.85	64.31	63.32	0.99	2,319.33
HQUST-523A (4)	12/03/09	2,382.85	63.86	63.50	0.36	2,319.28
HQUST-523A (4)	12/04/09	2,382.85	64.01	63.50	0.51	2,319.25
HQUST-523A (4)	12/07/09	2,382.85	63.64	63.40	0.24	2,319.40
HQUST-523A (4)	10/05/10	2,382.85	64.10	0.00	0.00	2,318.75
HQUST-523A	05/26/10	2,382.85	63.85	63.65	0.20	2,319.16
HQUST-523A (4)	08/16/10	2,382.85	63.20	N/A	0.00	2,319.65
HQUST-523A (4)	08/26/10	2,382.85	63.20	N/A	0.00	2,319.65
HQUST-523A (4)	08/27/10	2,382.85	63.24	N/A	0.00	2,319.61
HQUST-523A	11/10/10	2,382.85	62.75	62.73	0.02	2,320.12
HQUST-523A	11/12/10	2,382.85	61.74	61.72	0.02	2,321.13
HQUST-523A	11/15/10	2,382.85	62.71	N/A	0.00	2,320.14
HQUST-523A	11/17/10	2,382.85	62.77	N/A	0.00	2,320.08
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	2318.43
HQUST-523A (7)	09/14/12	2,382.85	64.39	N/A	0.00	2318.46
HQUST-523A (7)	09/24/12	2,382.85	64.39	N/A	0.00	2318.46
HQUST-523A (7)	10/08/12	2,382.85	64.43	64.41	0.02	2318.44
HQUST-523A (7)	10/22/12	2,382.85	64.41	N/A	0.00	2318.44
HQUST-523A (7)	11/06/12	2,382.85	64.54	64.38	0.16	2318.45
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

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-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-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-525A	06/26/07	2,391.50	71.74	N/A	0.00	2,319.76
HQUST-525A	08/01/07	2,391.50	71.78	N/A	0.00	2,319.66
HQUST-525A	11/13/07	2,391.50	71.83	N/A	0.00	2,319.67
HQUST-525A	02/26/08	2,391.50	71.82	N/A	0.00	2,319.68
HQUST-525A	05/27/08	2,391.50	71.92	N/A	0.00	2,319.58
HQUST-525A	08/26/08	2,391.50	71.79	N/A	0.00	2,319.71
HQUST-525A	11/17/08	2,391.50	71.63	N/A	0.00	2,319.87
HQUST-525A	02/17/09	2,391.50	71.95	N/A	0.00	2,319.55
HQUST-525A	05/27/09	2,391.50	71.76	N/A	0.00	2,319.74
HQUST-525A	08/17/09	2,391.50	72.11	N/A	0.00	2,319.39
HQUST-525A	11/24/09	2,391.50	72.15	N/A	0.00	2,319.35
HQUST-525A	02/16/10	2,391.50	72.02	N/A	0.00	2,319.48
HQUST-525A	05/26/10	2,391.50	72.23	N/A	0.00	2,319.27

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	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-526A	06/25/07	2,379.57	60.42	N/A	0.00	2,319.15
HQUST-526A	08/13/07	2,379.57	60.55	N/A	0.00	2,319.02
HQUST-526A	11/14/07	2,379.57	60.46	N/A	0.00	2,319.11
HQUST-526A	02/28/08	2,379.57	60.40	N/A	0.00	2,319.17
HQUST-526A	05/27/08	2,379.57	60.61	N/A	0.00	2,318.96
HQUST-526A	08/27/08	2,379.57	60.50	N/A	0.00	2,319.07
HQUST-526A	11/17/08	2,379.57	60.27	N/A	0.00	2,319.30
HQUST-526A	02/18/09	2,379.57	60.02	N/A	0.00	2,319.55
HQUST-526A	05/27/09	2,379.57	60.06	N/A	0.00	2,319.51
HQUST-526A	08/17/09	2,379.57	60.93	N/A	0.00	2,318.64
HQUST-526A	11/24/09	2,379.57	61.05	N/A	0.00	2,318.52
HQUST-526A	02/16/10	2,379.57	60.15	N/A	0.00	2,318.42
HQUST-526A	05/26/10	2,379.57	61.19	N/A	0.00	2,318.38
HQUST-526A	08/03/10	2,379.57	60.86	N/A	0.00	2,318.71
HQUST-526A (4)	11/10/10	2,379.57	60.27	N/A	0.00	2,319.30
HQUST-526A (4)	11/12/10	2,379.57	60.30	N/A	0.00	2,319.27
HQUST-526A (4)	11/15/10	2,379.57	60.28	N/A	0.00	2,319.29
HQUST-526A (4)	11/17/10	2,379.57	60.34	N/A	0.00	2,319.23
HQUST-526A	11/23/10	2,379.57	60.39	N/A	0.00	2,319.18
HQUST-526A (4)	11/23/10	2,379.57	60.33	N/A	0.00	2,319.24
HQUST-526A (4)	01/07/11	2,379.57	60.27	N/A	0.00	2,319.30
HQUST-526A (4)	01/14/11	2,379.57	60.31	N/A	0.00	2,319.26
HQUST-526A (4)	01/23/11	2,379.57	60.31	N/A	0.00	2,319.26
HQUST-526A	02/14/11	2,379.57	60.60	N/A	0.00	2,318.97
HQUST-526A (4)	02/18/11	2,379.57	60.65	N/A	0.00	2,319.92
HQUST-526A (4)	02/24/11	2,379.57	60.63	N/A	0.00	2,318.94
HQUST-526A (4)	03/03/11	2,379.57	60.68	N/A	0.00	2,318.89
HQUST-526A (4)	03/11/11	2,379.57	60.55	N/A	0.00	2,319.02
HQUST-526A (4)	03/18/11	2,379.57	60.84	N/A	0.00	2,318.73
HQUST-526A (4)	03/21/11	2,379.57	60.89	N/A	0.00	2,318.68
HQUST-526A (4)	03/25/11	2,379.57	60.89	N/A	0.00	2,318.68
HQUST-526A (4)	05/06/11	2,379.57	61.12	N/A	0.00	2,318.45

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	05/25/11	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-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

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

Well Name	Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation**
HQUST-531A	05/23/12	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-532A	11/15/07	2,382.75	62.35	N/A	0.00	2,320.40
HQUST-532A	02/28/08	2,382.75	63.15	N/A	0.00	2,319.60
HQUST-532A	05/27/08	2,382.75	63.20	N/A	0.00	2,319.55
HQUST-532A	08/28/08	2,382.75	63.24	N/A	0.00	2,319.51
HQUST-532A	02/17/09	2,382.75	63.35	N/A	0.00	2,319.40
HQUST-532A	05/27/09	2,382.75	63.55	N/A	0.00	2,319.20
HQUST-532A	08/17/09	2,382.75	63.51	N/A	0.00	2,319.24
HQUST-532A	11/24/09	2,382.75	63.69	N/A	0.00	2,319.06
HQUST-532A	02/16/10	2,382.75	63.75	N/A	0.00	2,319.00
HQUST-532A	05/26/10	2,382.75	63.80	N/A	0.00	2,318.95
HQUST-532A	08/30/10	2,382.75	63.41	N/A	0.00	2,319.34
HQUST-532A	11/23/10	2,382.75	62.98	N/A	0.00	2,319.77
HQUST-532A	02/14/11	2,382.75	63.24	N/A	0.00	2,319.51
HQUST-532A	05/25/11	2,382.75	63.96	N/A	0.00	2,318.79
HQUST-532A	08/30/11	2,382.75	64.14	N/A	0.00	2,318.61
HQUST-532A	11/29/11	2,382.75	64.28	N/A	0.00	2,318.47
HQUST-532A	02/28/12	2,382.75	64.42	N/A	0.00	2,318.33
HQUST-532A	05/23/12	2,382.75	64.54	N/A	0.00	2,318.21
HQUST-532A	08/28/12	2,382.75	64.53	N/A	0.00	2,318.22
HQUST-532A	11/19/12	2,382.75	64.60	N/A	0.00	2,318.15
HQUST-532A	02/27/13	2,382.75	64.73	N/A	0.00	2,318.02
HQUST-532A	05/29/13	2,382.75	64.85	N/A	0.00	2,317.90
HQUST-532A	08/14/13	2,382.75	64.95	N/A	0.00	2,317.80
HQUST-532A	11/20/13	2,382.75	65.05	N/A	0.00	2,317.70
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-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

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-533A	02/16/10	2,379.29	60.79	N/A	0.00	2,318.50
HQUST-533A	08/30/10	2,379.29	60.41	N/A	0.00	2,318.88
HQUST-533A	11/23/10	2,379.29	59.92	N/A	0.00	2,319.37
HQUST-533A	02/14/11	2,379.29	60.16	N/A	0.00	2,319.13
HQUST-533A	05/25/11	2,379.29	60.86	N/A	0.00	2,318.43
HQUST-533A	08/30/11	2,379.29	61.15	N/A	0.00	2,318.14
HQUST-533A	11/29/11	2,379.29	61.24	N/A	0.00	2,318.05
HQUST-533A	02/28/12	2,379.29	61.38	N/A	0.00	2,317.91
HQUST-533A	05/23/12	2,379.29	61.49	N/A	0.00	2,317.80
HQUST-533A	08/28/12	2,379.29	61.48	N/A	0.00	2,317.81
HQUST-533A	11/19/12	2,379.29	61.50	N/A	0.00	2,317.79
HQUST-533A	02/28/13	2,379.29	61.76	N/A	0.00	2,317.53
HQUST-533A	05/30/13	2,379.29	61.88	N/A	0.00	2,317.41
HQUST-533A	08/15/13	2,379.29	62.00	N/A	0.00	2,317.29
HQUST-533A	11/21/13	2,379.29	61.87	N/A	0.00	2,317.42
HQUST-533A	02/26/14	2,379.29	62.13	N/A	0.00	2,317.16
HQUST-533A	05/28/14	2,379.29	62.28	N/A	0.00	2,317.01
HQUST-533A	08/14/14	2,379.29	62.23	N/A	0.00	2,317.06
HQUST-533A	11/13/14	2,379.29	62.29	N/A	0.00	2,317.00
HQUST-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

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 (4)	05/04/12	2,389.95	71.64	N/A	0.00	2,318.31
HQUST-547 (4)	05/23/12	2,389.95	72.03	N/A	0.00	2,317.92
HQUST-547 (4) (6)	05/25/12	2,389.95	71.39	N/A	0.00	2,318.56
HQUST-547 (4)	06/01/12	2,389.95	72.00	N/A	0.00	2,317.97
HQUST-547 (4)	06/08/12	2,389.95	72.05	N/A	0.00	2,317.90
HQUST-547 (4)	06/15/12	2,389.95	72.00	N/A	0.00	2,317.95
HQUST-547	08/28/12	2,389.95	72.09	N/A	0.00	2,317.86
HQUST-547	11/19/12	2,389.95	72.08	N/A	0.00	2,317.87
HQUST-547	02/28/13	2,389.95	72.38	N/A	0.00	2,317.57
HQUST-547	05/30/13	2,389.95	72.45	N/A	0.00	2,317.50
HQUST-547	08/15/13	2,389.95	72.50	N/A	0.00	2,317.45
HQUST-547	11/21/13	2,389.95	72.54	N/A	0.00	2,317.41
HQUST-547	02/27/14	2,389.95	72.78	N/A	0.00	2,317.17
HQUST-547	05/29/14	2,389.95	72.86	N/A	0.00	2,317.09
HQUST-547	08/14/14	2,389.95	72.83	N/A	0.00	2,317.12
HQUST-547	11/13/14	2,389.95	72.94	N/A	0.00	2,317.01
HQUST-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

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)	06/01/12	2,383.34	65.64	N/A	0.00	2,317.70
HQUST-548 (4)	06/08/12	2,383.34	65.70	N/A	0.00	2,317.64
HQUST-548 (4)	06/15/12	2,383.34	65.65	N/A	0.00	2,317.69
HQUST-548	08/28/12	2,383.34	65.73	N/A	0.00	2,317.61
HQUST-548	11/19/12	2,383.34	65.72	N/A	0.00	2,317.62
HQUST-548	02/28/13	2,383.34	65.95	N/A	0.00	2,317.39
HQUST-548	05/30/13	2,383.34	66.07	N/A	0.00	2,317.27
HQUST-548	08/15/13	2,383.34	66.19	N/A	0.00	2,317.15
HQUST-548	11/21/13	2,383.34	66.14	N/A	0.00	2,317.20
HQUST-548	02/27/14	2,383.34	66.39	N/A	0.00	2,316.95
HQUST-548	05/29/14	2,383.34	66.49	N/A	0.00	2,316.85
HQUST-548	08/14/14	2,383.34	66.48	N/A	0.00	2,316.86
HQUST-548	11/13/14	2,383.34	66.55	N/A	0.00	2,316.79

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 present not sampled.							
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-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
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

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	05/23/12 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-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
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-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

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	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
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
HQUST-523A [4]	06/26/07	**1,900**	**1,100**	190	660	110.0	1	<0.5
HQUST-523A [4]	11/14/07 to present not sampled.							
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

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	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
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-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
HQUST-526A	02/27/13 DUP	**720**	<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	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-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
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-532A	11/15/07	<0.5	<3	<2	<3	<2	<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)
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
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-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

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

Well Name [1]	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-Dichloroethane (µg/L)	Tetrachloroethylene (µg/L)
HQUST-533A	11/23/10	**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	54.00	<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
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-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-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

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	08/15/13	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
HQUST-548	11/21/13	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-548	02/27/14	<1.0	<1.0	<1.0	<2.0	1.9	<0.50	<0.50
HQUST-548	05/29/14	1.9	<1.0	<1.0	<2.0	6.7	<0.50	<0.50
HQUST-548	08/14/14	1.0	<1.0	<1.0	<2.0	9.0	<0.50	<0.50
HQUST-548	11/13/14	4.7	<1.0	<1.0	<2.0	28.3	<0.50	<0.50
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)	=	Well HQUST-523A contains NAPL and was 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).
Well HQUST-524A has not been sampled, the well contained NAPL after installation.

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 present not sampled.					
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-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-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
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

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

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
CEP-527A	11/13/14	172	135	4.8	7.8	6.55
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
HQUST-525A	11/24/09	270	2,600	15	1.1	<0.10
HQUST-525A	02/16/10	240	1,800	6.8	0.78	<0.10
HQUST-525A	05/26/10	210	1,100	4.4	1	<0.1
HQUST-525A	08/30/10	162	469	2.5	N/A	1.17
HQUST-525A	11/23/10	152	364	2.37	N/A	0.441
HQUST-525A	02/14/11	174	407	2.38	1.6	<0.1
HQUST-525A	05/26/11	172	554	1.88	<1	0.819
HQUST-525A	08/30/11	186	1,210	11.3	0.53	<2
HQUST-525A	11/30/11	243	1,090	10.6	0.73	<2
HQUST-525A	02/28/12	285	973	9.08	1.6	<2
HQUST-525A	05/24/28	279	898	6.76	1.29	1.71
HQUST-525A	08/28/12	270	1,100	7.6	<1.0	0.24
HQUST-525A	11/19/12	250	790	5.4	<1.0	0.58
HQUST-525A	02/27/13	270	880	5.5	<1.0	0.25
HQUST-525A	05/29/13	270	870	5.4	<1.0	<0.10
HQUST-525A	08/14/13	246	787	4.9	<1.0	<0.20
HQUST-525A	11/20/13	268	694	4.3	<1.0	0.863
HQUST-525A	02/27/14	286	696	4.3	<1.0	3.86
HQUST-525A	05/29/14	230	702	4.5	1.0	1.17
HQUST-525A	08/13/14	273	708	4.2	<1.0	0.992
HQUST-525A	11/12/14	252	784	3.8	1.2	<0.20
HQUST-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

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

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
HQUST-526A	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-531A	11/24/09	250	750	8.1	0.81	0.11
HQUST-531A	02/16/10	250	780	8.3	1.5	<0.10
HQUST-531A	05/26/10	250	660	9.2	0.65	<0.10
HQUST-531A	08/30/10	196	528	6.01	N/A	14.1
HQUST-531A	11/23/10	248	716	8.55	N/A	3.47
HQUST-531A	02/14/11	260	805	6.79	1.66	0.789
HQUST-531A	05/25/11	236	909	8.92	1.32	10.8
HQUST-531A	08/29/11	258	877	2.05	0.57	1.21
HQUST-531A	11/29/11	239	952	9	ND	<0.2
HQUST-531A	02/29/12	245	865	8.9	1.5	<0.2
HQUST-531A	05/23/12	242	873	8.13	1.49	<0.2
HQUST-531A	08/28/12	230	990	11	<1.0	1.7
HQUST-531A	11/19/12	200	870	10	<1.0	0.50
HQUST-531A	02/28/13	230	850	12	1.2	1.10
HQUST-531A	05/30/13	250	1,000	17	<1.0	2.6
HQUST-531A	08/15/13	261	924	13.6	1.4	2.10
HQUST-531A	11/21/13	252	919	14.0	1.8	2.75
HQUST-531A	02/26/14	277	922	14.4	1.2	0.506
HQUST-531A	05/28/14	246	900	13.3	2.0	13.4
HQUST-531A	08/14/14	285	905	9.1	<1.0	4.88
HQUST-531A	11/13/14	100	56.2	2.4	4.7	2.14
HQUST-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

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

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
HQUST-532A	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-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-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

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

Well Name [1]	Sample Date	Total Alkalinity (mg/L)	Sulfate (mg/L)	Nitrate (mg/L)	Total Organic Carbon (mg/L)	Total Iron (mg/L)
HQUST-547	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-548	05/25/11	240	1,960	10.6	1.21	1.67
HQUST-548	08/30/11	308	1,900	7.23	0.95	0.579
HQUST-548	11/29/11	257	1,570	5.2	0.97	0.54
HQUST-548	02/29/12	243	1,600	6.9	2	1.1
HQUST-548	05/24/12	259	1,270	5.13	1.27	1.37
HQUST-548	08/29/12	230	1,500	12	<1.0	0.11
HQUST-548	11/20/12	250	1,300	7.6	1.2	10
HQUST-548	02/28/13	290	1,300	7.2	1.1	5.4
HQUST-548	05/30/13	320	1,200	6.7	<1.0	5.8
HQUST-548	08/15/13	391	1,030	5.4	1.3	3.18
HQUST-548	11/21/13	294	1,150	7.0	1.4	0.485
HQUST-548	02/27/14	416	976	5.6	1.7	9.75
HQUST-548	05/29/14	360	1,000	4.7	1.5	1.07
HQUST-548	08/14/14	400	1,050	3.1	2.1	0.392
HQUST-548	11/13/14	388	995	2.2	2.6	1.70

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.

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, 2014 through November 30, 2014)

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)
06/05/14	System running on arrival and departure.																						
	163	34.0	404	759	20	INF	532	100	4,900	12	17	18	65	0.37	8.8	0.0009	0.022	0.001	0.03	0.0013	0.03	0.005	0.12
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
06/12/14	System running on arrival and departure.																						
	146	34.0	383	721	21	INF	458	100															
						EFF	0.0																
06/16/14	System running on arrival and departure.																						
	156	35.0	378	712	20	INF	387	100															
						EFF	0.0																
06/26/14 (1)	System running on arrival and shutdown.																						
	161	35.0	366	691	20	INF	403	100															
						EFF	0.0																
08/28/14 (2)	System started and operating on departure. Initial operating hours 6134.																						
	145	50.0	769	1416	155	INF	364	100	3,070	6.9	12	13	74	1.78	42.8	0.0040	0.096	0.007	0.17	0.0076	0.18	0.043	1.03
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
09/02/14	System running on arrival and departure.																						
	152	45.0	770	1418	149	INF	506	99.9															
						EFF	0.7																
09/10/14	System running on arrival and departure.																						
	122	54.0	773	1423	157	INF	446	99.8	4,430	8.0	14	18	104	2.61	62.5	0.0047	0.113	0.008	0.20	0.0106	0.25	0.061	1.47
						EFF	1.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
09/16/14	System running on arrival and departure.																						
	134	54.0	769	1416	154	INF	381	100															
						EFF	0.0																
09/23/14	System running on arrival and departure.																						
	118	55.0	770	1418	162	INF	260	100															
						EFF	0.0																
10/02/14	System running on arrival and departure.																						
	135	42.0	769	1417	140	INF	425	100	1,960	3.7	7.7	6.0	39	1.03	24.7	0.0019	0.047	0.004	0.10	0.0031	0.08	0.020	0.49
						EFF	0.0		<100	<1.0	<1.0	<1.0	<3.0	---	---	---	---	---	---	---	---	---	---
10/08/14	System down on arrival; system restarted and running on departure.																						
	120	45.0	787	1448	144	INF	468	99.7															
						EFF	1.4																
10/17/14	System running on arrival and departure.																						
	108	46.0	768	1415	138	INF	334																
						EFF	0.0																
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																

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, 2014 through November 30, 2014)

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)
11/24/14	System running on arrival and departure.																						
	98	48.0	772	1422	149	INF	291	99.1															
						EFF	2.7																
Influent Averages									**3,222**	**6.8**	**11**	**12**	**63**	**1.34**	**32.2**	**0.0026**	**0.064**	**0.005**	**0.11**	**0.0051**	**0.12**	**0.029**	**0.70**

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 8021B.
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 stated laboratory reporting limit.
(1)	=	Falco 100 scfm catalytic oxidizer was shutdown and removed. and a 250 scfm catalytic oxidizer was installed.
(2)	=	250 scfm Solleco TCAT thermal/catalytic oxidizer was installed on August 25, 2014 and started on August 28, 2014.

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)	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 Temp. (deg C)	Catox Temp. (deg F)	Flow (scfm)	Sample ID	PID (ppm)	Efficiency (%)	TPH (mg/M³)	B (mg/M³)	T (mg/M³)	E (mg/M³)	X (mg/M³)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)	Hourly (lbs)	Daily (lbs)
08/05/13	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		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)
04/03/14	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																
Influent Averages									**5,491**	**16**	**36**	**33**	**102**	**1.01**	**24.3**	**0.0030**	**0.072**	**0.007**	**0.16**	**0.0058**	**0.14**	**0.020**	**0.48**

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 8021B.
Temp	=	Temperature of vapor stream.
Catox Temp.	=	Catalytic oxidizer catalyst inlet temperature.
deg C	=	Degrees Celsius
deg F	=	Degrees Fahrenheit
"H_2O	=	Inches of water column.
PID	=	Photo ionization detector measurement.
scfm	=	Standard cubic feet per minute.
ppm	=	Parts per million.
mg/M³	=	Milligrams per cubic meter.
lbs	=	Pounds
---	=	Not calculated.
<	=	Less than the stated laboratory reporting limit.
(1)	=	Falco 100 scfm catalytic oxidizer was shutdown and removed. and a 250 scfm catalytic oxidizer was installed.
(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

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)***	
06/02/14 - 06/08/14	OFF	ON	8,880	
06/09/14 - 06/15/14	OFF	ON	8,104	
06/16/14 - 06/22/14	OFF	ON	5,110	
06/23/14 - 06/29/14	OFF	ON	12,436	
06/30/14 - 07/06/14	OFF	ON	4,780	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.
07/07/14 - 07/13/14	OFF	OFF	0	
07/14/14 - 07/20/14	OFF	OFF	0	
07/21/14 - 07/27/14	OFF	ON	6,896	
07/28/14 - 08/03/14	OFF	ON	7,378	
08/04/14 - 08/10/14	OFF	ON	9,801	
08/11/14 - 08/17/14	OFF	ON	548	System was shut down on August 11, 2014 to replace the transfer pump, and was restarted on August 21, 2014.
08/18/14 - 08/24/14	OFF	OFF	0	
08/25/14 - 08/31/14	OFF	ON	5,970	
09/01/14 - 09/07/14	OFF	ON	11,632	
09/08/14 - 09/14/14	OFF	ON	9,073	
09/15/14 - 09/21/14	OFF	ON	9,590	
09/22/14 - 09/28/14	OFF	ON	10,371	
09/29/14 - 10/05/14	OFF	ON	12,603	
10/06/14 - 10/12/14	OFF	ON	111	
10/13/14 - 10/19/14	OFF	OFF	0	System was shut down the week of October 13, 2014 for air compressor maintenance. The air compressor was serviced and the system was restarted on November 12, 2014.
10/20/14 - 10/26/14	OFF	OFF	0	
10/27/14 - 11/02/14	OFF	OFF	0	
11/03/14 - 11/09/14	OFF	OFF	0	
11/10/14 - 11/16/14	OFF	ON	349	
11/17/14 - 11/23/14	OFF	ON	133	
11/24/14 - 11/30/14	OFF	ON	2,997	
Total			***126,762***	

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

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 SM 5220D.
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**

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.

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 Period (gallons) (1)	Dissolved Phase Period (gallons)	Cumulative Dissolved Phase (gallons)
07/01/07 - 11/30/12 (2)	664	287	832	1,119	1,119
12/01/12 - 05/31/13 (3)	124	10	638	648	1,767
06/01/13 - 11/30/13	130	0	127	127	1,894
12/01/13 - 05/31/14	131	0	245	245	2,139
06/01/14 - 11/30/14	131	0	18.5	18.5	2,157

Notes:

PT/OWS = Pump and treat / Oil-water separator system.
NAPL = Non-aqueous phase liquid.
days = Number of days the PT/OWS was operating.
lbs = Pounds.
(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.

TABLE 11
SODIUM PERSULFATE TREATMENT
SELECT GROUNDWATER ANALYTICAL RESULTS - VOCs
Police/Fire Station Headquarters LUST Site
260 South Stone Avenue, Tucson, Arizona
ADEQ UST Facility ID 0-005176; ADEQ LUST #3208.01

Well Name	Sample Date*	TOC Elevation	DTW	DTP	Product Thickness	Groundwater Elevation*	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Tetrachloroethylene (µg/L)
HQUST-526A [(1)]	10/03/14	2,379.57	62.68	N/A	0.00	2,316.89	**4,400**	<50	<50	<100	290	<25	<25
HQUST-526A [(2)]	10/20/14	2,379.57	62.71	N/A	0.00	2,316.86	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A [(2)]	11/12/14	2,379.57	62.74	N/A	0.00	2,316.83	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
HQUST-526A [(2)]	11/12/14 DUP	2,379.57	62.74	N/A	0.00	2,316.83	<1.0	<1.0	<1.0	<2.0	<1.0	<0.50	<0.50
ADEQ AWQS							**5.0**	**1,000**	**700**	**10,000**	**NE**	**5**	**5**

Notes:

µg/L	=	Micrograms per liter.
BOLD	=	Concentration exceeds ADEQ AWQS.
VOCs	=	Volatile organic compounds.
MTBE	=	Methyl-tert-butyl ether
1,2-DCA	=	1,2-Dichloroethane
<	=	Not reported above the specified laboratory reporting limits.
DUP	=	Duplicate sample.
ADEQ	=	Arizona Department of Environmental Quality
AWQS	=	Aquifer Water Quality Standard
NE	=	Not Established.
*	=	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.
(1)	=	Groundwater sample collected prior to sodium persulfate treatment.
(2)	=	Groundwater sample collected prior to sodium persulfate treatment.

APPENDIX A

SELF-MONITORING AND REPORTING FORMS

September 26, 2014
Cardno 04130511.S09

Cardno
114698

9185 S. Farmer Avenue
Suite 111
Tempe, AZ 85284
USA

Phone 480 813 4526
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www.cardnoeri.com

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, 2014 through August 31, 2014. Compliance samples were collected on August 28, 2014, and submitted to Accutest Laboratories of Phoenix, Arizona, a state-certified laboratory, under COC 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 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 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
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Enclosures:

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cc: Nancy Peterson, COT-ES
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, 2014 through August 31, 2014)

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)***
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[1]	06/30/14 - 07/06/14	1,675,837	1,680,617	4,780	7	683
264-265[1]	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[2]	08/11/14 - 08/17/14	1,704,692	1,705,240	548	8	69
270[2]	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
				Operational Period Average Flowrate (GPD)		799

Notes:

GPD = gallons per day

[1] 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.

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

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
53	6/14/10 - 6/20/10	257,200	274,200	17,000	7	2,429

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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
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

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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)*
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
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

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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
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

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Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
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
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

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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
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

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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
					Total Average Flowrate (GPD)	1,424

Notes:

GPD = gallons per day

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Notes:

[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.

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: 06/01/2014 to 08/31/2014 **REPORT DUE:** 09/28/2014

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	Justin T. Patton	08/28/14	16.6 mg/L
Oil and Grease	200.0 mg/L	QUARTERLY	GRAB	Grab	Justin T. Patton	08/28/14	<5.0 mg/L
pH	5.0-11 S.U.	QUARTERLY	GRAB	Grab	Justin T. Patton	08/28/14	6.97
Purgeable Aromatics	***	QUARTERLY	GRAB	Grab	Justin T. Patton	08/28/14	ND
Purgeable Halocarbons	***	QUARTERLY	GRAB	Grab	Justin T. Patton	08/28/14	ND
Total Suspended Solids	***	QUARTERLY	COMPOS	Composite	Justin T. Patton	08/28/14	<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:**	06/01/2014 to 08/31/2014
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.

MEASURED Flow (total)

Date: 08/28/14

Flow (Gallons) **799

** Flow is monitored weekly for permits. Table 1 includes flows for the reporting. Table 2 includes historic flows.

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: 09 / 26 / 2014

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

09/08/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C35732

Sampling Date: 08/28/14

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
richard.byrd@tucsonaz.gov; lori.ehman@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: Elvin Kumar 408-588-0200

Certifications: OR (CA300006) CA (08258CA) CA (ELAP 2910) AZ (AZ0762) 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: C35732

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C35732-1	08/28/14	09:00	NB	08/29/14	AQ	Ground Water	HQUST-GW-EFF
C35732-2	08/28/14	09:05	NB	08/29/14	AQ	Ground Water	HQUST-GW-CV1
C35732-3	08/28/14	09:10	NB	08/29/14	AQ	Ground Water	HQUST-GW-INF
C35732-4	08/28/14	00:00	NB	08/29/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C35732
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	9/8/2014 10:20:23 PM

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/28/2014 and were received at Accutest on 08/29/2014 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of C35732. 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:** VR1061

- All method blanks and blank spikes for this batch meet method specific criteria.
- Sample(s) C35732-2, C35732-3, C35732-4 have for Dichlorodifluoromethane a CCV outside of control limits (biased high); not detected in samples.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP6769

- All method blanks and blank spikes for this batch meet method specific criteria.
- Insufficient sample volume available for MS/MSD.

Wet Chemistry By Method HACH 8000

Matrix: AQ **Batch ID:** GP6771

- All method blanks and blank spikes for this batch meet method specific criteria.
- Sample(s) C35732-1MSD, C35732-1MS were used as the QC samples for Chemical Oxygen Demand.

Wet Chemistry By Method SM2540 D-07

Matrix: AQ **Batch ID:** GN14386

- All method blanks for this batch meet method specific criteria.
- Sample(s) C35754-1DUP 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: C35732
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/28/14

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C35732-1	**HQUST-GW-EFF**					
Chemical Oxygen Demand		16.6	10		mg/l	HACH 8000
C35732-2	**HQUST-GW-CV1**					
No hits reported in this sample.						
C35732-3	**HQUST-GW-INF**					
Benzene		3.2	1.0		ug/l	EPA 624
Ethylbenzene		5.7	1.0		ug/l	EPA 624
Methyl Tert Butyl Ether		2.5	1.0		ug/l	EPA 624
Naphthalene		53.5	5.0		ug/l	EPA 624
1,2,4-Trimethylbenzene		110	4.0		ug/l	EPA 624
1,3,5-Trimethylbenzene		37.8	2.0		ug/l	EPA 624
Toluene		1.3	1.0		ug/l	EPA 624
m,p-Xylene		83.8	1.0		ug/l	EPA 624
o-Xylene		39.2	1.0		ug/l	EPA 624
Chemical Oxygen Demand		19.0	10		mg/l	HACH 8000
C35732-4	**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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	R28454.D	1	09/02/14	TN	n/a	n/a	VR1061
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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	85%		70-130%
2037-26-5	Toluene-D8	93%		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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	87%		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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
		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	16.6	10	mg/l	1	09/04/14 12:55	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	09/03/14 14:50	RL	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	09/03/14 09:55	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C35732-2	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	R28421.D	1	08/31/14	TN	n/a	n/a	VR1061
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 [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
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:	C35732-2	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	91%		70-130%
2037-26-5	Toluene-D8	93%		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:	C35732-2	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	87%		70-130%

(a) 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-GW-INF		
Lab Sample ID:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	R28419.D	1	08/31/14	TN	n/a	n/a	VR1061
Run #2	R28455.D	2	09/02/14	TN	n/a	n/a	VR1061

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

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	3.2	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 [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
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:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	5.7	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	2.5	1.0	ug/l	
91-20-3	Naphthalene	53.5	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	110 [b]	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	37.8	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	1.3	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	83.8	1.0	ug/l	
95-47-6	o-Xylene	39.2	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	108%	70-130%
2037-26-5	Toluene-D8	94%	87%	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:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	92%	92%	70-130%

(a) CCV outside of control limits (biased high); not detected in sample. AZ:V1
(b) Result is from Run# 2

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-INF		
Lab Sample ID:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
		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	19.0	10	mg/l	1	09/04/14 12:55	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	09/03/14 14:50	RL	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	09/03/14 09:55	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C35732-4	**Date Sampled:**	08/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/29/14
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	R28418.D	1	08/31/14	TN	n/a	n/a	VR1061
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 [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
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:	C35732-4	**Date Sampled:**	08/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/29/14
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	89%		70-130%
2037-26-5	Toluene-D8	93%		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:	C35732-4	**Date Sampled:**	08/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/29/14
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	86%		70-130%

(a) 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: C35732
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
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

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 # 7704 8464 3182
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C 635732

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: Norman Buxton

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	Na2SO4	MeOH	NONE	COD	VOC 624	O&G 1664	TSS	LAB USE ONLY
1	HQUST-GW-EFF	08/28/14	0900	NB	GW	8	3			4				1	X	X	X	X	
2	HQUST-GW-CV1	08/28/14	0905	NB	GW	3	3									X			
3	HQUST-GW-INF	08/28/14	0910	NB	GW	8	3			4				1	X	X	X	X	
4	Trip Blank						3									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	8/28/14 1350	1	2	8/28/14 1700	2 fed-Ex
Relinquished by: 3 Fedex	Date Time: 8-29-14 0933	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Y	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N; Cooler Temp. 4.1-0.3=3.8 oC

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C35732: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C35732 **Client:** CITY OF TUCSON **Project:** HQUST P01152

Date / Time Received: 8/29/2014 **Delivery Method:** FedEx **Airbill #'s:** 770984643182

Cooler Temps (Initial/Adjusted): #1: (4.1/3.8);

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. Cooler temp verification:	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

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C35732: 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: C35732
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
VR1061-MB	R28394.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

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: C35732
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
VR1061-MB	R28394.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

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	86%	70-130%

Method Blank Summary

Job Number: C35732
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
VR1061-MB	R28394.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	87%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35732
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
VR1061-BS	R28391.D	1	08/31/14	TN	n/a	n/a	VR1061
VR1061-BSD	R28392.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	20.4	102	20.3	102	0	77-122/25
108-86-1	Bromobenzene	20	20.4	102	20.4	102	0	76-126/17
74-97-5	Bromochloromethane	20	19.8	99	19.6	98	1	77-130/17
75-27-4	Bromodichloromethane	20	20.7	104	20.4	102	1	75-127/16
75-25-2	Bromoform	20	19.6	98	19.5	98	1	69-141/17
104-51-8	n-Butylbenzene	20	21.4	107	21.3	107	0	72-129/18
135-98-8	sec-Butylbenzene	20	23.0	115	23.2	116	1	74-128/18
98-06-6	tert-Butylbenzene	20	22.7	114	22.8	114	0	73-127/18
108-90-7	Chlorobenzene	20	21.3	107	21.1	106	1	77-122/16
75-00-3	Chloroethane	20	18.8	94	18.8	94	0	69-133/18
67-66-3	Chloroform	20	19.7	99	19.3	97	2	74-126/17
95-49-8	o-Chlorotoluene	20	21.4	107	21.8	109	2	72-127/20
106-43-4	p-Chlorotoluene	20	21.6	108	21.1	106	2	68-127/18
56-23-5	Carbon tetrachloride	20	23.6	118	23.1	116	2	71-133/19
75-34-3	1,1-Dichloroethane	20	18.9	95	18.8	94	1	71-125/17
75-35-4	1,1-Dichloroethylene	20	21.5	108	21.2	106	1	66-125/20
563-58-6	1,1-Dichloropropene	20	23.2	116	22.9	115	1	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	21.5	108	21.0	105	2	65-131/20
106-93-4	1,2-Dibromoethane	20	21.1	106	20.9	105	1	75-135/17
107-06-2	1,2-Dichloroethane	20	20.2	101	19.7	99	3	71-131/17
78-87-5	1,2-Dichloropropane	20	20.4	102	20.3	102	0	78-124/16
142-28-9	1,3-Dichloropropane	20	20.4	102	20.2	101	1	78-123/16
108-20-3	Di-Isopropyl ether	20	18.5	93	18.4	92	1	68-129/17
594-20-7	2,2-Dichloropropane	20	21.0	105	20.5	103	2	70-131/19
124-48-1	Dibromochloromethane	20	21.2	106	21.1	106	0	76-132/16
75-71-8	Dichlorodifluoromethane	20	24.9	125	23.5	118	6	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	19.7	99	19.6	98	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	21.9	110	21.9	110	0	72-130/16
541-73-1	m-Dichlorobenzene	20	21.2	106	21.2	106	0	75-124/16
95-50-1	o-Dichlorobenzene	20	21.0	105	21.1	106	0	76-124/16
106-46-7	p-Dichlorobenzene	20	20.0	100	20.1	101	0	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	19.5	98	19.4	97	1	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	20.9	105	20.8	104	0	71-126/16
100-41-4	Ethylbenzene	20	21.3	107	21.1	106	1	76-126/17
637-92-3	Ethyl Tert Butyl Ether	20	20.3	102	20.2	101	0	75-134/17
591-78-6	2-Hexanone	80	91.1	114	89.6	112	2	67-150/22

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35732
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
VR1061-BS	R28391.D	1	08/31/14	TN	n/a	n/a	VR1061
VR1061-BSD	R28392.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	20	21.4	107	21.3	107	0	69-135/20
98-82-8	Isopropylbenzene	20	22.6	113	22.5	113	0	61-125/17
99-87-6	p-Isopropyltoluene	20	21.3	107	21.4	107	0	68-127/18
108-10-1	4-Methyl-2-pentanone	80	87.1	109	85.8	107	2	71-142/21
74-83-9	Methyl bromide	20	22.0	110	21.8	109	1	68-132/18
74-87-3	Methyl chloride	20	19.8	99	20.0	100	1	39-150/28
74-95-3	Methylene bromide	20	20.9	105	20.6	103	1	77-127/16
75-09-2	Methylene chloride	20	17.6	88	17.5	88	1	67-128/18
78-93-3	Methyl ethyl ketone	80	84.1	105	82.9	104	1	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	18.7	94	18.7	94	0	73-132/17
91-20-3	Naphthalene	20	21.0	105	21.0	105	0	70-136/20
103-65-1	n-Propylbenzene	20	22.0	110	22.1	111	0	71-127/17
100-42-5	Styrene	20	19.5	98	19.5	98	0	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	20.2	101	20.1	101	0	73-133/17
75-65-0	Tert-Butyl Alcohol	100	106	106	100	100	6	60-149/26
630-20-6	1,1,1,2-Tetrachloroethane	20	21.4	107	21.3	107	0	77-130/16
71-55-6	1,1,1-Trichloroethane	20	21.4	107	21.0	105	2	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	20.9	105	20.9	105	0	77-129/17
79-00-5	1,1,2-Trichloroethane	20	20.2	101	20.0	100	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	20.4	102	20.4	102	0	70-133/18
96-18-4	1,2,3-Trichloropropane	20	20.9	105	20.6	103	1	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	20.3	102	20.3	102	0	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	21.4	107	21.3	107	0	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	22.4	112	22.3	112	0	77-129/17
127-18-4	Tetrachloroethylene	20	20.6	103	20.8	104	1	69-127/20
108-88-3	Toluene	20	20.8	104	20.7	104	0	75-122/17
79-01-6	Trichloroethylene	20	21.0	105	20.8	104	1	78-123/17
75-69-4	Trichlorofluoromethane	20	22.3	112	21.9	110	2	65-136/23
75-01-4	Vinyl chloride	20	22.4	112	21.8	109	3	57-146/22
	m,p-Xylene	40	43.2	108	43.1	108	0	76-125/17
95-47-6	o-Xylene	20	22.3	112	22.2	111	0	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	87%	86%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35732
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
VR1061-BS	R28391.D	1	08/31/14	TN	n/a	n/a	VR1061
VR1061-BSD	R28392.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
2037-26-5	Toluene-D8	93%	92%	70-130%
460-00-4	4-Bromofluorobenzene	93%	93%	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: C35732
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	GP6771/GN14402	10	7.3	mg/l	50	49.4	98.8	90-110%
HEM Oil and Grease	GP6769/GN14397	5.0	0.0	mg/l	40	35.1	87.8	78-114%
Solids, Total Suspended	GN14386	5.0	0.0	mg/l				

Associated Samples:
Batch GP6769: C35732-1, C35732-3
Batch GP6771: C35732-1, C35732-3
Batch GN14386: C35732-1, C35732-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GP6771/GN14402	mg/l	50	49.4	0.0	25%
HEM Oil and Grease	GP6769/GN14397	mg/l	40	34.7	1.1	18%

Associated Samples:
Batch GP6769: C35732-1, C35732-3
Batch GP6771: C35732-1, C35732-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GN14386	C35754-1	mg/l	19.0	19.0	0.0	0-25%

Associated Samples:
Batch GN14386: C35732-1, C35732-3
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GP6771/GN14402	C35732-1	mg/l	16.6	50	56.4	79.6(a)	90-110%

Associated Samples:
Batch GP6771: C35732-1, C35732-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Within 75-125% criteria for method COD HACH 8000.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GP6771/GN14402	C35732-1	mg/l	16.6	50	58.8	4.1	25%

Associated Samples:
Batch GP6771: C35732-1, C35732-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

APPENDIX C

FIELD DATA SHEET

OPERATION AND MAINTENANCE PUMP AND TREAT SYSTEM READINGS

City of Tucson Fire and Police Headquarters

265 South Church Avenue, Tucson, Arizona

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

PCWW Permit No. 12916

		Water Filters			Carbon vessels			Air compressor		Water Parameters			Well Pumps			
		INF	EFF	Discharge	CV1	CV2	CV2	Tank	Outlet	HQUST-GW-EFF			523A	523A	524A	524A
Date	Discharge Totalizer	Filter (PSI)	Filter (PSI)	Filter (PSI)	Top gauge (PSI)	Top gauge (PSI)	Lower gauge (PSI)	(PSI)	(PSI)	pH	Temp. (^{o}F)	Conductivity (µS/cm)	Counter	Pressure (PSI)	Counter	Pressure (PSI)
08/28/14	1,711,210	NT	NT	NT	NT	NT	NT	130	85	6.97	82.8	2.81	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

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December 9, 2014
Cardno 04130511.S10

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, 2014 through November 30, 2014. Compliance samples were collected on November 12, 2014, and submitted to Accutest Laboratories of Phoenix, Arizona, a state-certified laboratory, under COC protocol (Appendix B). Monitored parameters did not exceed the permit limits during the reporting period (Appendix C).

Discharge sample collection and a site inspection were conducted on September 23, 2014 by Pima County staff. An Inspection Report form was completed by Pima County and submitted to COT-ES with no issues noted in the Inspection Report (Appendix D).

LIMITATIONS

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

This document was prepared in accordance with generally accepted standards of environmental, geological, and engineering practices in Arizona at the time of investigation. No soil engineering 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 with Cardno at (602) 909-3448 or Mr. Richard Byrd with the City of Tucson at (520) 837-3710 with questions regarding this Site.

Respectfully submitted,

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

Enclosures:

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

cc: Nancy Peterson, COT-ES
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, 2014 through November 30, 2014)

Week No.	***Dates***	***Previous Weeks' Total (Gallons)***	***Weeks' Total (Gallons)***	***Total Volume for Week(s) (Gallons)***	***Well Pump Run Time (Days)***	***Average Daily Flow Rate (GPD)***
272	09/01/14 - 09/07/14	1,711,210	1,722,842	11,632	5	2,326
273	09/08/14 - 09/14/14	1,722,842	1,731,915	9,073	8	1,134
274	09/15/14 - 09/21/14	1,731,915	1,741,505	9,590	6	1,598
275	09/22/14 - 09/28/14	1,741,505	1,751,876	10,371	7	1,482
276	09/29/14 - 10/05/14	1,751,876	1,764,479	12,603	9	1,400
277	10/06/14 - 10/12/14	1,764,479	1,764,590	111	6	19
278-281[1]	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
				Operational Period Average Flowrate (GPD)		858

Notes:

GPD = gallons per day

[1] 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.

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
53	6/14/10 - 6/20/10	257,200	274,200	17,000	7	2,429

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Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
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
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

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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)*
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
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

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Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
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
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

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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)*
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
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

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Week No.	*Dates*	*Previous Weeks' Total (Gallons)*	*Weeks' Total (Gallons)*	*Total Volume for Week(s) (Gallons)*	*Well Pump Run Time (Days)*	*Average Daily Flow Rate (GPD)*
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
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

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)*
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
					Total Average Flowrate (GPD)	1,385

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.

Notes:

[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.

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

Notes:

[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.

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: 09/01/2014 to 11/30/2014 **REPORT DUE:** 12/28/2014

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	Norman Buxton	11/12/14	<10 mg/L
Oil and Grease	200.0 mg/L	QUARTERLY	GRAB	Grab	Norman Buxton	11/12/14	<5.0 mg/L
pH	5.0-11 S.U.	QUARTERLY	GRAB	Grab	Norman Buxton	11/12/14	6.95
Purgeable Aromatics	***	QUARTERLY	GRAB	Grab	Norman Buxton	11/12/14	ND
Purgeable Halocarbons	***	QUARTERLY	GRAB	Grab	Norman Buxton	11/12/14	ND
Total Suspended Solids	***	QUARTERLY	COMPOS	Composite	Norman Buxton	11/12/14	13.0 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:**	09/01/2014 to 11/30/2014
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.

MEASURED Flow (total)

Date: 11/12/14

Flow (Gallons) **858

** Flow is monitored weekly for permits. Table 1 includes flows for the reporting. Table 2 includes historic flows.

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: 12 / 8 / 2014

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

11/25/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C37154

Sampling Date: 11/12/14

Report to:

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

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

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: Elvin Kumar 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: C37154

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C37154-1	11/12/14	12:15	NB	11/15/14	AQ	Ground Water	HQUST-GW-EFF
C37154-2	11/12/14	12:20	NB	11/15/14	AQ	Ground Water	HQUST-GW-CV1
C37154-3	11/12/14	12:25	NB	11/15/14	AQ	Ground Water	HQUST-GW-INF
C37154-4	11/12/14	00:00	NB	11/15/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C37154
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	11/25/2014 2:56:22 A

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 11/12/2014 and were received at Accutest on 11/15/2014 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of C37154. 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.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP7091

- Sample(s) C37091-1MS were used as the QC samples for HEM Oil and Grease. Insufficient sample volume available for MSD.
- Matrix Spike Recovery(s) for HEM Oil and Grease are outside control limits. Spike recovery outside of acceptable QC criteria due to matrix interference. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.

Wet Chemistry By Method HACH 8000

Matrix: AQ **Batch ID:** GP7078

- Sample(s) C37154-1MS, C37154-1MSD were used as the QC samples for Chemical Oxygen Demand.

Wet Chemistry By Method SM2540 D-07

Matrix: AQ **Batch ID:** GN15012

- Sample(s) C37154-1DUP 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: C37154
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/12/14

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37154-1	**HQUST-GW-EFF**					
Solids, Total Suspended		13.0	5.0		mg/l	SM2540 D-07
C37154-2	**HQUST-GW-CV1**					
No hits reported in this sample.						
C37154-3	**HQUST-GW-INF**					
Benzene		14.6	2.0		ug/l	EPA 624
Ethylbenzene		37.4	2.0		ug/l	EPA 624
Isopropylbenzene		2.8	2.0		ug/l	EPA 624
Naphthalene		49.5	10		ug/l	EPA 624
n-Propylbenzene		5.2	4.0		ug/l	EPA 624
1,2,4-Trimethylbenzene		47.6	4.0		ug/l	EPA 624
1,3,5-Trimethylbenzene		21.7	4.0		ug/l	EPA 624
Toluene		2.5	2.0		ug/l	EPA 624
m,p-Xylene		38.9	2.0		ug/l	EPA 624
o-Xylene		40.6	2.0		ug/l	EPA 624
Chemical Oxygen Demand		32.3	10		mg/l	HACH 8000
C37154-4	**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:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	W49413.D	1	11/17/14	TN	n/a	n/a	VW1787
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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%

(a) AZ:T2,T6

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
		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	< 10	10	mg/l	1	11/17/14 15:35	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	11/20/14 10:30	PH	EPA 1664A
Solids, Total Suspended	13.0	5.0	mg/l	1	11/19/14 08:00	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C37154-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	W49414.D	1	11/17/14	TN	n/a	n/a	VW1787
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C37154-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	102%		70-130%

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C37154-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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%

(a) AZ:T2,T6

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-INF		
Lab Sample ID:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	W49415.D	2	11/17/14	TN	n/a	n/a	VW1787
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	14.6	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	
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	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	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:	HQUST-GW-INF		
Lab Sample ID:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	1.0	ug/l	
100-41-4	Ethylbenzene	37.4	2.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	4.0	ug/l	
591-78-6	2-Hexanone	ND	20	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.0	ug/l	
98-82-8	Isopropylbenzene	2.8	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	49.5	10	ug/l	
103-65-1	n-Propylbenzene	5.2	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	
75-65-0	Tert-Butyl Alcohol	ND	20	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	47.6	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	21.7	4.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	2.5	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	
	m,p-Xylene	38.9	2.0	ug/l	
95-47-6	o-Xylene	40.6	2.0	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:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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%

(a) AZ:T2,T6

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-INF		
Lab Sample ID:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
		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	32.3	10	mg/l	1	11/17/14 15:35	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	11/20/14 10:30	PH	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	11/19/14 08:00	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37154-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/15/14
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	W49412.D	1	11/17/14	TN	n/a	n/a	VW1787
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37154-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/15/14
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

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

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

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

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37154-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/15/14
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	102%		70-130%

(a) AZ:T2,T6

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

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

Northern California ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: C37154
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

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

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

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 # 7718 6942 8651
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C37154

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: Norman Buxton

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	11/12/14	1215	NB	GW	8	3			4				1		X	X	X	X							
-2	HQUST-GW-CV1	11/12/14	1220	NB	GW	3	3										X									
-3	HQUST-GW-INF	11/12/14	1225	NB	GW	8	3			4				1		X	X	X	X							
-4	Trip Blank						3										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	11.14.14 1455	1	2	11/14/14 1700	2 Fed-Ex
3 FEDEX 11/15/14	Date Time: 1000	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time: 1030	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Headspace Y / N; On Ice Y / N; Labels match Coc? Y / N; Separate Receiving Check List used: Y / N	Cooler Temp. 2.2/2.2 oC

C37154: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C37154 **Client:** CITY OF TUCSON **Project:** HQUST P01152

Date / Time Received: 11/15/2014 10:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 771869428651

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

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. Cooler temp verification:	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

5.2

5

C37154: 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: C37154
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
VW1787-MB	W49390.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

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: C37154
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
VW1787-MB	W49390.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

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: C37154
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
VW1787-MB	W49390.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37154
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
VW1787-BS	W49387.D	1	11/17/14	TN	n/a	n/a	VW1787
VW1787-BSD	W49388.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	20.4	102	20.3	102	0	77-122/25
108-86-1	Bromobenzene	20	19.9	100	20.7	104	4	76-126/17
74-97-5	Bromochloromethane	20	21.8	109	21.8	109	0	77-130/17
75-27-4	Bromodichloromethane	20	20.3	102	20.1	101	1	75-127/16
75-25-2	Bromoform	20	21.9	110	21.9	110	0	69-141/17
104-51-8	n-Butylbenzene	20	21.0	105	21.4	107	2	72-129/18
135-98-8	sec-Butylbenzene	20	19.6	98	20.2	101	3	74-128/18
98-06-6	tert-Butylbenzene	20	19.0	95	19.6	98	3	73-127/18
108-90-7	Chlorobenzene	20	19.8	99	20.0	100	1	77-122/16
75-00-3	Chloroethane	20	16.6	83	16.3	82	2	69-133/18
67-66-3	Chloroform	20	21.1	106	21.0	105	0	74-126/17
95-49-8	o-Chlorotoluene	20	20.0	100	21.8	109	9	72-127/20
106-43-4	p-Chlorotoluene	20	20.1	101	19.5	98	3	68-127/18
56-23-5	Carbon tetrachloride	20	21.2	106	21.0	105	1	71-133/19
75-34-3	1,1-Dichloroethane	20	20.8	104	20.5	103	1	71-125/17
75-35-4	1,1-Dichloroethylene	20	21.3	107	21.3	107	0	66-125/20
563-58-6	1,1-Dichloropropene	20	20.4	102	20.2	101	1	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	22.0	110	21.7	109	1	65-131/20
106-93-4	1,2-Dibromoethane	20	20.1	101	20.3	102	1	75-135/17
107-06-2	1,2-Dichloroethane	20	20.6	103	20.3	102	1	71-131/17
78-87-5	1,2-Dichloropropane	20	20.2	101	20.2	101	0	78-124/16
142-28-9	1,3-Dichloropropane	20	20.1	101	20.1	101	0	78-123/16
108-20-3	Di-Isopropyl ether	20	21.0	105	20.8	104	1	68-129/17
594-20-7	2,2-Dichloropropane	20	22.1	111	21.8	109	1	70-131/19
124-48-1	Dibromochloromethane	20	20.0	100	20.0	100	0	76-132/16
75-71-8	Dichlorodifluoromethane	20	18.6	93	17.1	86	8	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	21.0	105	21.1	106	0	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	20.6	103	20.5	103	0	72-130/16
541-73-1	m-Dichlorobenzene	20	19.9	100	20.7	104	4	75-124/16
95-50-1	o-Dichlorobenzene	20	20.0	100	20.6	103	3	76-124/16
106-46-7	p-Dichlorobenzene	20	19.5	98	20.3	102	4	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	20.3	102	20.3	102	0	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	19.3	97	19.3	97	0	71-126/16
100-41-4	Ethylbenzene	20	20.3	102	20.2	101	0	76-126/17
637-92-3	Ethyl Tert Butyl Ether	20	23.2	116	23.0	115	1	75-134/17
591-78-6	2-Hexanone	80	83.7	105	83.5	104	0	67-150/22

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37154
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
VW1787-BS	W49387.D	1	11/17/14	TN	n/a	n/a	VW1787
VW1787-BSD	W49388.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	20	20.6	103	21.2	106	3	69-135/20
98-82-8	Isopropylbenzene	20	20.1	101	19.8	99	2	61-125/17
99-87-6	p-Isopropyltoluene	20	19.7	99	20.2	101	3	68-127/18
108-10-1	4-Methyl-2-pentanone	80	82.1	103	83.2	104	1	71-142/21
74-83-9	Methyl bromide	20	18.3	92	18.4	92	1	68-132/18
74-87-3	Methyl chloride	20	18.1	91	18.0	90	1	39-150/28
74-95-3	Methylene bromide	20	21.1	106	21.0	105	0	77-127/16
75-09-2	Methylene chloride	20	20.6	103	20.7	104	0	67-128/18
78-93-3	Methyl ethyl ketone	80	81.4	102	81.0	101	0	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	21.9	110	22.1	111	1	73-132/17
91-20-3	Naphthalene	20	20.4	102	20.6	103	1	70-136/20
103-65-1	n-Propylbenzene	20	19.5	98	20.0	100	3	71-127/17
100-42-5	Styrene	20	20.8	104	20.9	105	0	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	22.1	111	22.3	112	1	73-133/17
75-65-0	Tert-Butyl Alcohol	100	130	130	123	123	6	60-149/26
630-20-6	1,1,1,2-Tetrachloroethane	20	20.9	105	20.8	104	0	77-130/16
71-55-6	1,1,1-Trichloroethane	20	21.5	108	21.3	107	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	20.7	104	21.4	107	3	77-129/17
79-00-5	1,1,2-Trichloroethane	20	19.7	99	19.8	99	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	22.7	114	23.0	115	1	70-133/18
96-18-4	1,2,3-Trichloropropane	20	23.2	116	22.5	113	3	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	21.2	106	21.9	110	3	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	20.0	100	20.7	104	3	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	20.6	103	21.3	107	3	77-129/17
127-18-4	Tetrachloroethylene	20	19.1	96	18.9	95	1	69-127/20
108-88-3	Toluene	20	20.0	100	19.8	99	1	75-122/17
79-01-6	Trichloroethylene	20	19.3	97	19.4	97	1	78-123/17
75-69-4	Trichlorofluoromethane	20	18.1	91	17.4	87	4	65-136/23
75-01-4	Vinyl chloride	20	17.8	89	17.3	87	3	57-146/22
	m,p-Xylene	40	40.2	101	40.2	101	0	76-125/17
95-47-6	o-Xylene	20	20.5	103	20.5	103	0	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	106%	105%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37154
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
VW1787-BS	W49387.D	1	11/17/14	TN	n/a	n/a	VW1787
VW1787-BSD	W49388.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
2037-26-5	Toluene-D8	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	103%	101%	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: C37154
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	GP7078/GN15000	10	0.0	mg/l	50	51.9	103.7	90-110%
HEM Oil and Grease	GP7091/GN15019	5.0	0.0	mg/l	40	33	82.8	78-114%
Solids, Total Suspended	GN15012	5.0	0.0	mg/l				

Associated Samples:
Batch GP7078: C37154-1, C37154-3
Batch GP7091: C37154-1, C37154-3
Batch GN15012: C37154-1, C37154-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GP7078/GN15000	mg/l	50	54.3	4.6	25%
HEM Oil and Grease	GP7091/GN15019	mg/l	40	33	0.6	18%

Associated Samples:
Batch GP7078: C37154-1, C37154-3
Batch GP7091: C37154-1, C37154-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GN15012	C37154-1	mg/l	13.0	13.0	0.0	0-25%

Associated Samples:
Batch GN15012: C37154-1, C37154-3
(*) Outside of QC limits

7.3

7

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GP7078/GN15000	C37154-1	mg/l	0.0	50	47.0	92.8	90-110%
HEM Oil and Grease	GP7091/GN15019	C37091-1	mg/l	0.0	40	30.4	74.6*(a)	78-114%

Associated Samples:
Batch GP7078: C37154-1, C37154-3
Batch GP7091: C37154-1, C37154-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery outside of acceptable QC criteria due to matrix interference. However, LCS/LCSD is within control limits. AZ:M2

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GP7078/GN15000	C37154-1	mg/l	0.0	50	47.0	0.0	25%

Associated Samples:
Batch GP7078: C37154-1, C37154-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

APPENDIX C

FIELD DATA SHEET

OPERATION AND MAINTENANCE PUMP AND TREAT SYSTEM READINGS

City of Tucson Fire and Police Headquarters

265 South Church Avenue, Tucson, Arizona

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

PCWW Permit No. 12916

		Water Filters			Carbon vessels			Air compressor		Water Parameters			Well Pumps			
		INF	EFF	Discharge	CV1	CV2	CV2	Tank	Outlet	HQUST-GW-EFF			523A	523A	524A	524A
Date	Discharge Totalizer	Filter (PSI)	Filter (PSI)	Filter (PSI)	Top gauge (PSI)	Top gauge (PSI)	Lower gauge (PSI)	(PSI)	(PSI)	pH	Temp. (^{o}F)	Conductivity (µS/cm)	Counter	Pressure (PSI)	Counter	Pressure (PSI)
11/12/14	1,764,590	NT	NT	NT	NT	NT	NT	NT	NT	6.95	78.7	2.79	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 D

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

PIMA COUNTY
WASTEWATER RECLAMATION

October 20, 2014

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

PERMIT NO. 12916

Dear Mr. Byrd:

RE: INSPECTION REPORT NO. 14-406C

Pima County's Industrial Wastewater Control Section (IWC) inspected your facility on September 23, 2014. A copy of the report regarding this inspection is attached for your information and files.

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

Sincerely,

Douglas Kirkland
Supervisor – IWC

DK:lw
Enclosure

Industrial Wastewater Control

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

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

PERMIT NO.
12916

IWC INSPECTION NO.
14-406C

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

INSPECTION DATE AND TIME
09/23/14 @ 0815 Hrs.

SERVICE ADDRESS OF FACILITY
265 South Church Avenue
Tucson, Arizona

NAME OF AUTHORIZED REPRESENTATIVE
Mr. Richard Byrd

ON-SITE REPRESENTATIVE
Mr. Norman Buxton; Operations and Maintenance Coordinator; Cardno ERI
(480) 518-3751

NAME AND SIGNATURE OF INSPECTOR **DATE**

Rodrigo Morales _____ 10-17-14

NAME AND SIGNATURE OF REVIEWER **DATE**

Robert Speir _____ 17 Oct 14
for Robert Speir

INSPECTION TYPE

Significant Industrial User, Compliance (C).

PURPOSE OF INSPECTION

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

FINDINGS OF INSPECTION

Type of Business

The Permittee is a political subdivision which has contracted with a consulting company (Cardno ERI) to construct and operate a soil and groundwater remediation facility. The facility incorporates extraction wells that pull contaminated groundwater and run it through various treatment processes. The remediation equipment is located inside of an enclosed yard and is automated and unmanned. A representative from Cardno ERI is assigned to this package plant and comes to inspect and maintain equipment about once a week. The facility operates twenty-four hours a day, seven days a week. The facility has been determined to be an Industrial User that meets the criteria for inclusion to the list of Significant Industrial Users as defined by CFR 403.3(v). Operations at the facility have been identified as having the North American Industry Classification (NAICS) Code of 562910.

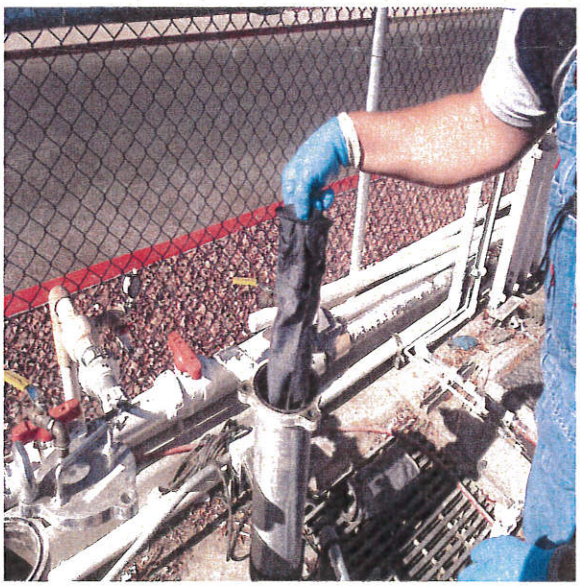
Industrial Wastewater Generated

Industrial wastewater is generated from the extraction and treatment of contaminated groundwater. The contaminates, such as petroleum hydrocarbons, diesel oil, gasoline, aromatic hydrocarbons, solvents and other volatile organic compounds, are associated with the former City of Tucson fueling facility where police and fire department vehicles were fueled. Industrial wastewater is discharged to the POTW contributory to the Pima County Agua Nueva Water Reclamation Facility. Oily water from the sand and oil separator is collected in 55 gallon drums, manifested, and hauled off-site by a hazardous waste shipping contractor as needed.

Pretreatment Equipment and Process

Pneumatic pumps continuously pull water from at least one of three wells and discharge into an oil and water separator (1). Oily or fuel containing water is discharged into the 55 gallon drums (2) mentioned above and the remaining water is fed into a 300 gallon poly tank (3).

Water is pumped from the poly tank through a liquid filter sleeve, which was changed a week before September 16th. The left picture below shows the sleeve after a week's worth of use. The right picture shows a new sleeve prior to installation.



Following the liquid filter, the water is pumped through a two stage G.A.C (granulated activated carbon) filter system. (Flow enters vessel #2 and discharges into vessel #1).

As a final precaution to prevent the discharge of pollutants, another liquid filter is in place after the G.A.C. units. This filter is changed every two weeks and the carbon was changed prior to the sampling event.

Sample Location

Samples shall be taken at the sampling valve on the discharge side of the package treatment plant immediately following the second liquid filter. Samples were taken on September 23, 2014 at 0840 from the sampling valve on the discharge side of the package pretreatment plant. These samples were submitted to the Pima County Regional Wastewater Reclamation Department Compliance and Regulatory Affairs Office Laboratory for analysis of permitted parameters (Lab ID 1409188). Results are pending.

Spill and Slug-load Control

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

Summary of Findings

This inspection consisted of reviewing previous inspection reports, interviewing the on-site representative and a walk-through of the facility. The facility is an enclosed remediation pumping station that treats an underground storage tank.

Cardno ERI installed a ball valve to control the amount of discharge to the liquid filter sleeve (above pic, top right). This would decrease the amount of filter solids the sleeve would trap and improve efficiency during treatment. The pump currently used was provided by the City of Tucson – Environmental Services and in use since July 2013.

CONCERNS/FOLLOW-UP REQUIRED

None.

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

08/21/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C35493

Sampling Date: 08/13/14

Report to:

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

Total number of pages in report: **84**

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: Elvin Kumar 408-588-0200

Certifications: OR (CA300006) CA (08258CA) CA (ELAP 2910) AZ (AZ0762) 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: C35493

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C35493-1	08/13/14	07:10	GB	08/14/14	AQ	Ground Water	HQUST-532A
C35493-2	08/13/14	07:40	GB	08/14/14	AQ	Ground Water	HQUST-526A
C35493-3	08/13/14	08:05	GB	08/14/14	AQ	Ground Water	CEP-528A
C35493-4	08/13/14	08:10	GB	08/14/14	AQ	Ground Water	CEP-528A DUP
C35493-5	08/13/14	08:25	GB	08/14/14	AQ	Ground Water	HQUST-525A
C35493-6	08/13/14	09:00	GB	08/14/14	AQ	Ground Water	CEP-520A
C35493-7	08/13/14	00:00	GB	08/14/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C35493
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	8/21/2014 10:48:42 P

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/13/2014 and were received at Accutest on 08/14/2014 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of C35493. 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:** VR1037

- Sample(s) C35493-2MS, C35493-2MSD were used as the QC samples indicated.
- RPD for BSD for Methylene bromide outside laboratory control limits for sample VR1037-BSD. BS/BSD recoveries met acceptance criteria.

Matrix: AQ **Batch ID:** VR1040

- Sample(s) C35442-2MS, C35442-2MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for 1,2,4-Trimethylbenzene, Styrene are outside control limits. Probable cause due to matrix interference.

Matrix: AQ **Batch ID:** VR1043

- Sample(s) C35415-6MS, C35415-6MSD were used as the QC samples indicated.
- C35493-4: Sample vial contained more than 0.5cm of sediment.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP8267

- Sample(s) C35507-1MS, C35507-1MSD, C35507-1SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP6710

- Sample(s) C35483-3MS, C35483-3MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP6722

- Sample(s) C35468-2MS, C35468-2MSD were used as the QC samples for Sulfate.

Matrix: AQ **Batch ID:** GP6725

- Sample(s) C35585-1MS, C35585-1MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN14282

- Sample(s) C35493-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP6708

- Sample(s) C35458-1MS 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: C35493
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/13/14

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C35493-1	**HQUST-532A**					
Iron		2510	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		218	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		5.7	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		634	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.6	1.0		mg/l	SM5310 C-00
C35493-2	**HQUST-526A**					
Benzene		3080	50		ug/l	SW846 8260B
Methyl Tert Butyl Ether		240	50		ug/l	SW846 8260B
Iron		1480	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		707	5.0		mg/l	SM2320 B-97
Sulfate		517	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		5.2	1.0		mg/l	SM5310 C-00
C35493-3	**CEP-528A**					
Iron		10600	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		384	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		20.8	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		976	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.4	1.0		mg/l	SM5310 C-00
C35493-4	**CEP-528A DUP**					
Chloroform [a]		0.50	0.50		ug/l	SW846 8260B
Iron		30800	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		408	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		22.1	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		966	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.8	1.0		mg/l	SM5310 C-00
C35493-5	**HQUST-525A**					
Iron		992	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		273	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.2	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		708	25		mg/l	EPA 300/SW846 9056A
C35493-6	**CEP-520A**					
Iron		11100	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		123	5.0		mg/l	SM2320 B-97

Summary of Hits

Job Number: C35493
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/13/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nitrogen, Nitrate		2.5	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		112	5.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.9	1.0		mg/l	SM5310 C-00

C35493-7 **TRIP BLANK**

No hits reported in this sample.

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

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C35493-1	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	R27874.D	1	08/15/14	RD	n/a	n/a	VR1037
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:	C35493-1	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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 [b]	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	99%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	98%		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-532A		
Lab Sample ID:	C35493-1	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:R7

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

J = Indicates 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:	C35493-1	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	2510	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C35493-1	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	218	5.0	mg/l	1	08/20/14 12:45	DQ	SM2320 B-97
Nitrogen, Nitrate	5.7	0.25	mg/l	2.5	08/14/14 19:33	RL	EPA 300/SW846 9056A
Sulfate	634	25	mg/l	50	08/21/14 10:48	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.6	1.0	mg/l	1	08/18/14 11:06	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C35493-2	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	R27875.D	50	08/15/14	RD	n/a	n/a	VR1037
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	1000	ug/l	
71-43-2	Benzene	3080	50	ug/l	
108-86-1	Bromobenzene	ND	50	ug/l	
74-97-5	Bromochloromethane	ND	50	ug/l	
75-27-4	Bromodichloromethane	ND	25	ug/l	
75-25-2	Bromoform	ND	25	ug/l	
104-51-8	n-Butylbenzene	ND	100	ug/l	
135-98-8	sec-Butylbenzene	ND	100	ug/l	
98-06-6	tert-Butylbenzene	ND	100	ug/l	
108-90-7	Chlorobenzene	ND	25	ug/l	
75-00-3	Chloroethane	ND	25	ug/l	
67-66-3	Chloroform	ND	25	ug/l	
95-49-8	o-Chlorotoluene	ND	100	ug/l	
106-43-4	p-Chlorotoluene	ND	100	ug/l	
75-15-0	Carbon disulfide	ND	50	ug/l	
56-23-5	Carbon tetrachloride	ND	25	ug/l	
75-34-3	1,1-Dichloroethane	ND	25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	25	ug/l	
563-58-6	1,1-Dichloropropene	ND	50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	ug/l	
106-93-4	1,2-Dibromoethane	ND	50	ug/l	
107-06-2	1,2-Dichloroethane	ND	25	ug/l	
78-87-5	1,2-Dichloropropane	ND	25	ug/l	
142-28-9	1,3-Dichloropropane	ND	50	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	100	ug/l	
594-20-7	2,2-Dichloropropane	ND	50	ug/l	
124-48-1	Dibromochloromethane	ND	25	ug/l	
75-71-8	Dichlorodifluoromethane	ND	25	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	25	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	25	ug/l	
541-73-1	m-Dichlorobenzene	ND	25	ug/l	
95-50-1	o-Dichlorobenzene	ND	25	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:	C35493-2	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	25	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	25	ug/l	
100-41-4	Ethylbenzene	ND	50	ug/l	
591-78-6	2-Hexanone	ND	500	ug/l	
87-68-3	Hexachlorobutadiene	ND	100	ug/l	
98-82-8	Isopropylbenzene	ND	50	ug/l	
99-87-6	p-Isopropyltoluene	ND	100	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	500	ug/l	
74-83-9	Methyl bromide	ND	100	ug/l	
74-87-3	Methyl chloride	ND	50	ug/l	
74-95-3	Methylene bromide [b]	ND	50	ug/l	
75-09-2	Methylene chloride	ND	250	ug/l	
78-93-3	Methyl ethyl ketone	ND	500	ug/l	
1634-04-4	Methyl Tert Butyl Ether	240	50	ug/l	
91-20-3	Naphthalene	ND	250	ug/l	
103-65-1	n-Propylbenzene	ND	100	ug/l	
100-42-5	Styrene	ND	50	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	100	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	25	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	25	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	100	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	100	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	100	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	100	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	100	ug/l	
127-18-4	Tetrachloroethylene	ND	25	ug/l	
108-88-3	Toluene	ND	50	ug/l	
79-01-6	Trichloroethylene	ND	25	ug/l	
75-69-4	Trichlorofluoromethane	ND	25	ug/l	
75-01-4	Vinyl chloride	ND	25	ug/l	
1330-20-7	Xylene (total)	ND	100	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	98%		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-526A		
Lab Sample ID:	C35493-2	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:R7

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

J = Indicates 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:	C35493-2	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	1480	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C35493-2	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	707	5.0	mg/l	1	08/20/14 12:45	DQ	SM2320 B-97
Nitrogen, Nitrate	< 0.25	0.25	mg/l	2.5	08/14/14 19:51	RL	EPA 300/SW846 9056A
Sulfate	517	25	mg/l	50	08/19/14 19:35	RL	EPA 300/SW846 9056A
Total Organic Carbon	5.2	1.0	mg/l	1	08/18/14 11:06	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C35493-3	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	R27939.D	1	08/18/14	RD	n/a	n/a	VR1040
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	

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

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

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C35493-3	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene [b]	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	104%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	98%		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:	CEP-528A		
Lab Sample ID:	C35493-3	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:M2

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

J = Indicates 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:	C35493-3	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	10600	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C35493-3	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	384	5.0	mg/l	1	08/20/14 12:45	DQ	SM2320 B-97
Nitrogen, Nitrate	20.8	0.25	mg/l	2.5	08/14/14 20:08	RL	EPA 300/SW846 9056A
Sulfate	976	50	mg/l	100	08/19/14 19:18	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.4	1.0	mg/l	1	08/18/14 11:06	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A DUP		
Lab Sample ID:	C35493-4	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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]	R27993.D	1	08/19/14	RD	n/a	n/a	VR1043
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	0.50	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	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 DUP		
Lab Sample ID:	C35493-4	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	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%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	96%		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:	CEP-528A DUP		
Lab Sample ID:	C35493-4	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

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

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

J = Indicates 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 DUP		
Lab Sample ID:	C35493-4	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	30800	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A DUP		
Lab Sample ID:	C35493-4	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	408	5.0	mg/l	1	08/20/14 12:45	DQ	SM2320 B-97
Nitrogen, Nitrate	22.1	0.25	mg/l	2.5	08/14/14 20:25	RL	EPA 300/SW846 9056A
Sulfate	966	50	mg/l	100	08/19/14 19:00	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.8	1.0	mg/l	1	08/18/14 11:06	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C35493-5	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	R27940.D	1	08/18/14	RD	n/a	n/a	VR1040
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:	C35493-5	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene [b]	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [a]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene [b]	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	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:	HQUST-525A		
Lab Sample ID:	C35493-5	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q

(a) AZ:T2,T6
(b) AZ:M2

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

J = Indicates 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:	C35493-5	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	992	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C35493-5	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	273	5.0	mg/l	1	08/20/14 12:45	DQ	SM2320 B-97
Nitrogen, Nitrate	4.2	0.25	mg/l	2.5	08/14/14 20:43	RL	EPA 300/SW846 9056A
Sulfate	708	25	mg/l	50	08/19/14 18:43	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/18/14 11:06	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C35493-6	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	R27994.D	1	08/19/14	RD	n/a	n/a	VR1043
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	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:	C35493-6	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	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:	CEP-520A		
Lab Sample ID:	C35493-6	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	11100	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C35493-6	**Date Sampled:**	08/13/14
Matrix:	AQ - Ground Water	**Date Received:**	08/14/14
		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	123	5.0	mg/l	1	08/20/14 12:45	DQ	SM2320 B-97
Nitrogen, Nitrate	2.5	0.25	mg/l	2.5	08/14/14 21:00	RL	EPA 300/SW846 9056A
Sulfate	112	5.0	mg/l	10	08/19/14 18:26	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.9	1.0	mg/l	1	08/18/14 11:06	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C35493-7	**Date Sampled:**	08/13/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/14/14
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	R27995.D	1	08/19/14	RD	n/a	n/a	VR1043
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	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:	C35493-7	**Date Sampled:**	08/13/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/14/14
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	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: C35493
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.

PHOENIX ACCUTEST LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 7708 2742 6760
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C35493

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: G. Bejarano

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	Alkalinity - NO3 - SO4	Fe (total)	TOC	VOC 8260
1	HQUST-532A	8/13/14	0710	GB	GW	7									X	X	X	X
2	HQUST-526A	8/13/14	0740	GB	GW	7									X	X	X	X
3	CEP-528A	8/13/14	0805	GB	GW	7									X	X	X	X
4	CEP-528A dup	8/13/14	0810	GB	GW	7									X	X	X	X
5	HQUST-525A	8/13/14	0825	GB	GW	7									X	X	X	X
6	CEP-520A	8/13/14	0900	GB	GW	7									X	X	X	X
7	TRIP BLANK					3												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)

LAB USE ONLY

Turnaround Time (Business days)

Approved By/ Date:

- 10 Day
- 5 Day
- 3 Day
- 2 Day
- 1 Day
- Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

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

Comments / Remarks

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

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 G Bejarano	8/13/14	1 FEDEX	2 FEDEX	8/14/14 1013	2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N	Headspace Y / N
				Labels match Coc? Y / N	Separate Receiving Check List used: Y / N

On Ice Y / N
Cooler Temp. 3.9-0.3=3.6 oC

C35493: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C35493 **Client:** CITY OF TUCSON **Project:** HQUST

Date / Time Received: 8/14/2014 **Delivery Method:** FedEx **Airbill #'s:** 770827426760

Cooler Temps (Initial/Adjusted): #1: (3.9/3.6);

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

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

C35493: 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: C35493
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
VR1037-MB	R27858.D	1	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C35493
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
VR1037-MB	R27858.D	1	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	101%	70-130%

Method Blank Summary

Job Number: C35493
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
VR1037-MB	R27858.D	1	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	97%	70-130%

Method Blank Summary

Job Number: C35493
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
VR1040-MB	R27929.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

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: C35493
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
VR1040-MB	R27929.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	70-130%
2037-26-5	Toluene-D8	100%	70-130%

Method Blank Summary

Job Number: C35493
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
VR1040-MB	R27929.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	96%	70-130%

Method Blank Summary

Job Number: C35493
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
VR1043-MB	R27988.D	1	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

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: C35493
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
VR1043-MB	R27988.D	1	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

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	97%	70-130%
2037-26-5	Toluene-D8	100%	70-130%

Method Blank Summary

Job Number: C35493
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
VR1043-MB	R27988.D	1	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	96%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1037-BS	R27855.D	1	08/15/14	RD	n/a	n/a	VR1037
VR1037-BSD	R27856.D	1	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	96.7	121	79.0	99	20	38-159/24
71-43-2	Benzene	20	23.2	116	19.9	100	15	77-122/25
108-86-1	Bromobenzene	20	22.9	115	19.8	99	15	76-126/17
74-97-5	Bromochloromethane	20	23.8	119	20.3	102	16	77-130/17
75-27-4	Bromodichloromethane	20	23.1	116	20.0	100	14	75-127/16
75-25-2	Bromoform	20	23.3	117	20.3	102	14	69-141/17
104-51-8	n-Butylbenzene	20	21.4	107	18.7	94	13	72-129/18
135-98-8	sec-Butylbenzene	20	21.9	110	19.0	95	14	74-128/18
98-06-6	tert-Butylbenzene	20	21.8	109	18.9	95	14	73-127/18
108-90-7	Chlorobenzene	20	23.3	117	19.8	99	16	77-122/16
75-00-3	Chloroethane	20	21.7	109	18.3	92	17	69-133/18
67-66-3	Chloroform	20	22.7	114	19.5	98	15	74-126/17
95-49-8	o-Chlorotoluene	20	22.4	112	19.9	100	12	72-127/20
106-43-4	p-Chlorotoluene	20	22.0	110	18.8	94	16	68-127/18
75-15-0	Carbon disulfide	20	21.4	107	18.4	92	15	56-137/19
56-23-5	Carbon tetrachloride	20	21.6	108	18.5	93	15	71-133/19
75-34-3	1,1-Dichloroethane	20	22.8	114	19.5	98	16	71-125/17
75-35-4	1,1-Dichloroethylene	20	22.4	112	18.7	94	18	66-125/20
563-58-6	1,1-Dichloropropene	20	22.4	112	19.1	96	16	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	22.7	114	19.4	97	16	65-131/20
106-93-4	1,2-Dibromoethane	20	24.0	120	20.2	101	17	75-135/17
107-06-2	1,2-Dichloroethane	20	22.1	111	19.0	95	15	71-131/17
78-87-5	1,2-Dichloropropane	20	23.2	116	20.0	100	15	78-124/16
142-28-9	1,3-Dichloropropane	20	23.3	117	19.8	99	16	78-123/16
108-20-3	Di-Isopropyl ether	20	23.6	118	20.2	101	16	68-129/17
594-20-7	2,2-Dichloropropane	20	21.5	108	18.4	92	16	70-131/19
124-48-1	Dibromochloromethane	20	23.2	116	20.0	100	15	76-132/16
75-71-8	Dichlorodifluoromethane	20	14.8	74	12.5	63	17	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	23.5	118	19.9	100	17	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	23.5	118	20.2	101	15	72-130/16
541-73-1	m-Dichlorobenzene	20	22.3	112	19.5	98	13	75-124/16
95-50-1	o-Dichlorobenzene	20	22.5	113	19.6	98	14	76-124/16
106-46-7	p-Dichlorobenzene	20	22.2	111	19.3	97	14	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	22.9	115	19.6	98	16	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	23.4	117	20.0	100	16	71-126/16
100-41-4	Ethylbenzene	20	23.2	116	19.9	100	15	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1037-BS	R27855.D	1	08/15/14	RD	n/a	n/a	VR1037
VR1037-BSD	R27856.D	1	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	100	125	82.7	103	19	67-150/22
87-68-3	Hexachlorobutadiene	20	20.2	101	17.7	89	13	69-135/20
98-82-8	Isopropylbenzene	20	23.0	115	19.7	99	15	61-125/17
99-87-6	p-Isopropyltoluene	20	21.9	110	19.1	96	14	68-127/18
108-10-1	4-Methyl-2-pentanone	80	99.4	124	83.5	104	17	71-142/21
74-83-9	Methyl bromide	20	21.6	108	18.3	92	17	68-132/18
74-87-3	Methyl chloride	20	19.8	99	16.8	84	16	39-150/28
74-95-3	Methylene bromide	20	23.6	118	20.0	100	17* [a]	77-127/16
75-09-2	Methylene chloride	20	22.8	114	19.4	97	16	67-128/18
78-93-3	Methyl ethyl ketone	80	103	129	83.0	104	22	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	23.6	118	20.1	101	16	73-132/17
91-20-3	Naphthalene	20	23.8	119	20.5	103	15	70-136/20
103-65-1	n-Propylbenzene	20	22.2	111	19.4	97	13	71-127/17
100-42-5	Styrene	20	24.1	121	20.6	103	16	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	23.9	120	20.3	102	16	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	23.0	115	19.7	99	15	77-130/16
71-55-6	1,1,1-Trichloroethane	20	22.1	111	18.8	94	16	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	23.7	119	20.5	103	14	77-129/17
79-00-5	1,1,2-Trichloroethane	20	23.8	119	20.2	101	16	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	21.8	109	19.1	96	13	70-133/18
96-18-4	1,2,3-Trichloropropane	20	22.2	111	19.1	96	15	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	21.5	108	18.9	95	13	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	22.4	112	19.5	98	14	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	22.5	113	19.6	98	14	77-129/17
127-18-4	Tetrachloroethylene	20	22.0	110	19.1	96	14	69-127/20
108-88-3	Toluene	20	23.5	118	20.0	100	16	75-122/17
79-01-6	Trichloroethylene	20	22.9	115	19.7	99	15	78-123/17
75-69-4	Trichlorofluoromethane	20	20.5	103	17.8	89	14	65-136/23
75-01-4	Vinyl chloride	20	19.8	99	16.9	85	16	57-146/22
1330-20-7	Xylene (total)	60	69.7	116	59.9	100	15	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	99%	70-130%
2037-26-5	Toluene-D8	102%	100%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1037-BS	R27855.D	1	08/15/14	RD	n/a	n/a	VR1037
VR1037-BSD	R27856.D	1	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	99%	70-130%

(a) Outside laboratory control limits. AZ:R7

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1040-BS	R27926.D	1	08/18/14	RD	n/a	n/a	VR1040
VR1040-BSD	R27927.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	64.7	81	63.8	80	1	38-159/24
71-43-2	Benzene	20	16.5	83	16.3	82	1	77-122/25
108-86-1	Bromobenzene	20	17.2	86	16.8	84	2	76-126/17
74-97-5	Bromochloromethane	20	17.1	86	16.7	84	2	77-130/17
75-27-4	Bromodichloromethane	20	17.4	87	17.1	86	2	75-127/16
75-25-2	Bromoform	20	18.8	94	18.4	92	2	69-141/17
104-51-8	n-Butylbenzene	20	16.5	83	15.9	80	4	72-129/18
135-98-8	sec-Butylbenzene	20	16.6	83	16.2	81	2	74-128/18
98-06-6	tert-Butylbenzene	20	16.8	84	16.4	82	2	73-127/18
108-90-7	Chlorobenzene	20	17.2	86	16.9	85	2	77-122/16
75-00-3	Chloroethane	20	14.8	74	14.8	74	0	69-133/18
67-66-3	Chloroform	20	16.6	83	16.1	81	3	74-126/17
95-49-8	o-Chlorotoluene	20	16.6	83	16.3	82	2	72-127/20
106-43-4	p-Chlorotoluene	20	16.9	85	16.4	82	3	68-127/18
75-15-0	Carbon disulfide	20	14.2	71	13.9	70	2	56-137/19
56-23-5	Carbon tetrachloride	20	16.4	82	16.1	81	2	71-133/19
75-34-3	1,1-Dichloroethane	20	16.0	80	15.7	79	2	71-125/17
75-35-4	1,1-Dichloroethylene	20	15.1	76	14.7	74	3	66-125/20
563-58-6	1,1-Dichloropropene	20	16.2	81	15.8	79	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	17.1	86	16.6	83	3	65-131/20
106-93-4	1,2-Dibromoethane	20	17.6	88	17.3	87	2	75-135/17
107-06-2	1,2-Dichloroethane	20	16.8	84	16.6	83	1	71-131/17
78-87-5	1,2-Dichloropropane	20	16.6	83	16.5	83	1	78-124/16
142-28-9	1,3-Dichloropropane	20	17.1	86	16.7	84	2	78-123/16
108-20-3	Di-Isopropyl ether	20	16.2	81	16.0	80	1	68-129/17
594-20-7	2,2-Dichloropropane	20	15.7	79	15.3	77	3	70-131/19
124-48-1	Dibromochloromethane	20	17.9	90	17.4	87	3	76-132/16
75-71-8	Dichlorodifluoromethane	20	9.0	45	9.1	46	1	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	16.5	83	16.1	81	2	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	17.2	86	17.2	86	0	72-130/16
541-73-1	m-Dichlorobenzene	20	17.0	85	16.6	83	2	75-124/16
95-50-1	o-Dichlorobenzene	20	17.3	87	16.9	85	2	76-124/16
106-46-7	p-Dichlorobenzene	20	16.9	85	16.6	83	2	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	15.8	79	15.5	78	2	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	17.7	89	17.3	87	2	71-126/16
100-41-4	Ethylbenzene	20	17.1	86	16.7	84	2	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1040-BS	R27926.D	1	08/18/14	RD	n/a	n/a	VR1040
VR1040-BSD	R27927.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	72.8	91	70.9	89	3	67-150/22
87-68-3	Hexachlorobutadiene	20	16.4	82	15.9	80	3	69-135/20
98-82-8	Isopropylbenzene	20	17.3	87	16.9	85	2	61-125/17
99-87-6	p-Isopropyltoluene	20	16.8	84	16.4	82	2	68-127/18
108-10-1	4-Methyl-2-pentanone	80	72.3	90	70.9	89	2	71-142/21
74-83-9	Methyl bromide	20	14.8	74	14.6	73	1	68-132/18
74-87-3	Methyl chloride	20	13.5	68	13.3	67	1	39-150/28
74-95-3	Methylene bromide	20	17.4	87	17.3	87	1	77-127/16
75-09-2	Methylene chloride	20	15.8	79	15.3	77	3	67-128/18
78-93-3	Methyl ethyl ketone	80	71.4	89	69.1	86	3	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	16.6	83	16.2	81	2	73-132/17
91-20-3	Naphthalene	20	18.3	92	17.7	89	3	70-136/20
103-65-1	n-Propylbenzene	20	16.7	84	16.3	82	2	71-127/17
100-42-5	Styrene	20	17.6	88	17.3	87	2	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	16.6	83	16.5	83	1	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	17.6	88	17.1	86	3	77-130/16
71-55-6	1,1,1-Trichloroethane	20	16.3	82	15.8	79	3	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	17.5	88	17.2	86	2	77-129/17
79-00-5	1,1,2-Trichloroethane	20	17.5	88	17.2	86	2	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	17.6	88	17.0	85	3	70-133/18
96-18-4	1,2,3-Trichloropropane	20	17.9	90	17.7	89	1	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	17.2	86	16.7	84	3	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	17.0	85	16.5	83	3	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	16.9	85	16.5	83	2	77-129/17
127-18-4	Tetrachloroethylene	20	16.7	84	16.4	82	2	69-127/20
108-88-3	Toluene	20	16.9	85	16.6	83	2	75-122/17
79-01-6	Trichloroethylene	20	16.6	83	16.3	82	2	78-123/17
75-69-4	Trichlorofluoromethane	20	15.0	75	15.2	76	1	65-136/23
75-01-4	Vinyl chloride	20	13.2	66	13.2	66	0	57-146/22
1330-20-7	Xylene (total)	60	51.9	87	50.7	85	2	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	99%	70-130%
2037-26-5	Toluene-D8	101%	99%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1040-BS	R27926.D	1	08/18/14	RD	n/a	n/a	VR1040
VR1040-BSD	R27927.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	100%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1043-BS	R27985.D	1	08/19/14	RD	n/a	n/a	VR1043
VR1043-BSD	R27986.D	1	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	73.9	92	74.8	94	1	38-159/24
71-43-2	Benzene	20	22.4	112	22.5	113	0	77-122/25
108-86-1	Bromobenzene	20	22.6	113	22.9	115	1	76-126/17
74-97-5	Bromochloromethane	20	22.9	115	23.2	116	1	77-130/17
75-27-4	Bromodichloromethane	20	22.4	112	22.6	113	1	75-127/16
75-25-2	Bromoform	20	22.9	115	23.8	119	4	69-141/17
104-51-8	n-Butylbenzene	20	21.3	107	21.7	109	2	72-129/18
135-98-8	sec-Butylbenzene	20	22.7	114	23.0	115	1	74-128/18
98-06-6	tert-Butylbenzene	20	22.4	112	22.7	114	1	73-127/18
108-90-7	Chlorobenzene	20	23.3	117	23.6	118	1	77-122/16
75-00-3	Chloroethane	20	19.2	96	19.3	97	1	69-133/18
67-66-3	Chloroform	20	22.1	111	21.9	110	1	74-126/17
95-49-8	o-Chlorotoluene	20	22.9	115	23.1	116	1	72-127/20
106-43-4	p-Chlorotoluene	20	22.5	113	22.6	113	0	68-127/18
75-15-0	Carbon disulfide	20	19.2	96	19.6	98	2	56-137/19
56-23-5	Carbon tetrachloride	20	22.4	112	22.8	114	2	71-133/19
75-34-3	1,1-Dichloroethane	20	21.0	105	21.1	106	0	71-125/17
75-35-4	1,1-Dichloroethylene	20	21.2	106	21.8	109	3	66-125/20
563-58-6	1,1-Dichloropropene	20	23.0	115	23.1	116	0	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	20.5	103	20.7	104	1	65-131/20
106-93-4	1,2-Dibromoethane	20	22.6	113	22.8	114	1	75-135/17
107-06-2	1,2-Dichloroethane	20	22.2	111	22.0	110	1	71-131/17
78-87-5	1,2-Dichloropropane	20	21.8	109	22.0	110	1	78-124/16
142-28-9	1,3-Dichloropropane	20	21.6	108	21.8	109	1	78-123/16
108-20-3	Di-Isopropyl ether	20	19.9	100	19.8	99	1	68-129/17
594-20-7	2,2-Dichloropropane	20	21.0	105	21.0	105	0	70-131/19
124-48-1	Dibromochloromethane	20	22.5	113	22.9	115	2	76-132/16
75-71-8	Dichlorodifluoromethane	20	19.7	99	19.9	100	1	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	22.1	111	22.3	112	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	23.1	116	23.3	117	1	72-130/16
541-73-1	m-Dichlorobenzene	20	23.3	117	23.5	118	1	75-124/16
95-50-1	o-Dichlorobenzene	20	23.4	117	23.6	118	1	76-124/16
106-46-7	p-Dichlorobenzene	20	22.1	111	22.3	112	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	21.5	108	21.6	108	0	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	21.5	108	21.8	109	1	71-126/16
100-41-4	Ethylbenzene	20	22.4	112	22.6	113	1	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1043-BS	R27985.D	1	08/19/14	RD	n/a	n/a	VR1043
VR1043-BSD	R27986.D	1	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	84.6	106	85.9	107	2	67-150/22
87-68-3	Hexachlorobutadiene	20	21.6	108	22.2	111	3	69-135/20
98-82-8	Isopropylbenzene	20	23.5	118	23.7	119	1	61-125/17
99-87-6	p-Isopropyltoluene	20	22.0	110	22.4	112	2	68-127/18
108-10-1	4-Methyl-2-pentanone	80	84.5	106	85.5	107	1	71-142/21
74-83-9	Methyl bromide	20	22.3	112	22.3	112	0	68-132/18
74-87-3	Methyl chloride	20	21.4	107	21.2	106	1	39-150/28
74-95-3	Methylene bromide	20	23.1	116	23.0	115	0	77-127/16
75-09-2	Methylene chloride	20	21.5	108	21.7	109	1	67-128/18
78-93-3	Methyl ethyl ketone	80	80.8	101	81.8	102	1	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	20.8	104	21.0	105	1	73-132/17
91-20-3	Naphthalene	20	22.6	113	23.6	118	4	70-136/20
103-65-1	n-Propylbenzene	20	22.2	111	22.5	113	1	71-127/17
100-42-5	Styrene	20	23.3	117	23.5	118	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	21.9	110	22.2	111	1	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	23.0	115	23.2	116	1	77-130/16
71-55-6	1,1,1-Trichloroethane	20	21.9	110	22.1	111	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	22.1	111	22.2	111	0	77-129/17
79-00-5	1,1,2-Trichloroethane	20	22.4	112	22.5	113	0	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	22.9	115	23.7	119	3	70-133/18
96-18-4	1,2,3-Trichloropropane	20	19.9	100	20.2	101	1	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	22.6	113	23.0	115	2	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	22.1	111	22.3	112	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	22.8	114	23.2	116	2	77-129/17
127-18-4	Tetrachloroethylene	20	22.1	111	22.5	113	2	69-127/20
108-88-3	Toluene	20	22.4	112	22.6	113	1	75-122/17
79-01-6	Trichloroethylene	20	22.6	113	22.7	114	0	78-123/17
75-69-4	Trichlorofluoromethane	20	21.2	106	21.5	108	1	65-136/23
75-01-4	Vinyl chloride	20	20.9	105	21.1	106	1	57-146/22
1330-20-7	Xylene (total)	60	69.9	117	70.5	118	1	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	99%	70-130%
2037-26-5	Toluene-D8	99%	100%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35493
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
VR1043-BS	R27985.D	1	08/19/14	RD	n/a	n/a	VR1043
VR1043-BSD	R27986.D	1	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	100%	70-130%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C35493
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
VR1043-LCS	R27987.D	1	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35493-2MS	R27878.D	50	08/15/14	RD	n/a	n/a	VR1037
C35493-2MSD	R27879.D	50	08/15/14	RD	n/a	n/a	VR1037
C35493-2	R27875.D	50	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Compound	C35493-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		4000	3580	90	4000	3650	91	2	38-159/24
71-43-2	Benzene	3080		1000	4060	98	1000	4200	112	3	77-122/16
108-86-1	Bromobenzene	ND		1000	1040	104	1000	1060	106	2	76-126/17
74-97-5	Bromochloromethane	ND		1000	1050	105	1000	1090	109	4	77-130/17
75-27-4	Bromodichloromethane	ND		1000	1010	101	1000	1040	104	3	75-127/16
75-25-2	Bromoform	ND		1000	824	82	1000	831	83	1	69-141/17
104-51-8	n-Butylbenzene	ND		1000	967	97	1000	985	99	2	72-129/18
135-98-8	sec-Butylbenzene	ND		1000	984	98	1000	1010	101	3	74-128/18
98-06-6	tert-Butylbenzene	ND		1000	1010	101	1000	1010	101	0	73-127/18
108-90-7	Chlorobenzene	ND		1000	1050	105	1000	1080	108	3	77-122/16
75-00-3	Chloroethane	ND		1000	933	93	1000	949	95	2	69-133/18
67-66-3	Chloroform	ND		1000	1040	104	1000	1070	107	3	74-126/17
95-49-8	o-Chlorotoluene	ND		1000	1040	104	1000	1010	101	3	72-127/20
106-43-4	p-Chlorotoluene	ND		1000	982	98	1000	992	99	1	68-127/18
75-15-0	Carbon disulfide	ND		1000	699	70	1000	765	77	9	56-137/19
56-23-5	Carbon tetrachloride	ND		1000	1020	102	1000	1050	105	3	71-133/19
75-34-3	1,1-Dichloroethane	ND		1000	1000	100	1000	1040	104	4	71-125/17
75-35-4	1,1-Dichloroethylene	ND		1000	950	95	1000	989	99	4	66-125/20
563-58-6	1,1-Dichloropropene	ND		1000	1010	101	1000	1040	104	3	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	923	92	1000	922	92	0	65-131/20
106-93-4	1,2-Dibromoethane	ND		1000	1050	105	1000	1080	108	3	75-135/17
107-06-2	1,2-Dichloroethane	ND		1000	1060	106	1000	1090	109	3	71-131/17
78-87-5	1,2-Dichloropropane	ND		1000	1010	101	1000	1050	105	4	78-124/16
142-28-9	1,3-Dichloropropane	ND		1000	1020	102	1000	1040	104	2	78-123/16
108-20-3	Di-Isopropyl ether	ND		1000	984	98	1000	1030	103	5	68-129/17
594-20-7	2,2-Dichloropropane	ND		1000	942	94	1000	959	96	2	70-131/19
124-48-1	Dibromochloromethane	ND		1000	917	92	1000	941	94	3	76-132/16
75-71-8	Dichlorodifluoromethane	ND		1000	702	70	1000	661	66	6	32-168/28
156-59-2	cis-1,2-Dichloroethylene	ND		1000	1020	102	1000	1060	106	4	73-126/17
10061-01-5	cis-1,3-Dichloropropene	ND		1000	975	98	1000	1020	102	5	72-130/16
541-73-1	m-Dichlorobenzene	ND		1000	1020	102	1000	1040	104	2	75-124/16
95-50-1	o-Dichlorobenzene	ND		1000	1030	103	1000	1050	105	2	76-124/16
106-46-7	p-Dichlorobenzene	ND		1000	1020	102	1000	1030	103	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	ND		1000	984	98	1000	1030	103	5	71-126/18
10061-02-6	trans-1,3-Dichloropropene	ND		1000	992	99	1000	1020	102	3	71-126/16
100-41-4	Ethylbenzene	ND		1000	1060	106	1000	1080	108	2	76-126/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35493-2MS	R27878.D	50	08/15/14	RD	n/a	n/a	VR1037
C35493-2MSD	R27879.D	50	08/15/14	RD	n/a	n/a	VR1037
C35493-2	R27875.D	50	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Compound	C35493-2 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		4000	4060	102	4000	4120	103	1	67-150/22
87-68-3	Hexachlorobutadiene	ND		1000	905	91	1000	937	94	3	69-135/20
98-82-8	Isopropylbenzene	ND		1000	1060	106	1000	1080	108	2	61-125/17
99-87-6	p-Isopropyltoluene	ND		1000	1000	100	1000	1010	101	1	68-127/18
108-10-1	4-Methyl-2-pentanone	ND		4000	4050	101	4000	4200	105	4	71-142/21
74-83-9	Methyl bromide	ND		1000	946	95	1000	968	97	2	68-132/18
74-87-3	Methyl chloride	ND		1000	892	89	1000	895	90	0	39-150/28
74-95-3	Methylene bromide	ND		1000	1070	107	1000	1110	111	4	77-127/16
75-09-2	Methylene chloride	ND		1000	991	99	1000	1030	103	4	67-128/18
78-93-3	Methyl ethyl ketone	ND		4000	3830	96	4000	3920	98	2	56-155/23
1634-04-4	Methyl Tert Butyl Ether	240		1000	1260	102	1000	1310	107	4	73-132/17
91-20-3	Naphthalene	ND		1000	1010	101	1000	1050	105	4	70-136/20
103-65-1	n-Propylbenzene	ND		1000	999	100	1000	1010	101	1	71-127/17
100-42-5	Styrene	ND		1000	1080	108	1000	1110	111	3	72-134/16
994-05-8	Tert-Amyl Methyl Ether	ND		1000	1010	101	1000	1060	106	5	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	1060	106	1000	1090	109	3	77-130/16
71-55-6	1,1,1-Trichloroethane	ND		1000	1030	103	1000	1060	106	3	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	991	99	1000	1010	101	2	77-129/17
79-00-5	1,1,2-Trichloroethane	ND		1000	1040	104	1000	1070	107	3	77-125/16
87-61-6	1,2,3-Trichlorobenzene	ND		1000	961	96	1000	1000	100	4	70-133/18
96-18-4	1,2,3-Trichloropropane	ND		1000	919	92	1000	946	95	3	69-126/18
120-82-1	1,2,4-Trichlorobenzene	ND		1000	961	96	1000	994	99	3	68-129/17
95-63-6	1,2,4-Trimethylbenzene	ND		1000	1030	103	1000	1040	104	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	ND		1000	1020	102	1000	1030	103	1	77-129/17
127-18-4	Tetrachloroethylene	ND		1000	1020	102	1000	1040	104	2	69-127/20
108-88-3	Toluene	ND		1000	1050	105	1000	1060	106	1	75-122/17
79-01-6	Trichloroethylene	ND		1000	1060	106	1000	1100	110	4	78-123/17
75-69-4	Trichlorofluoromethane	ND		1000	1030	103	1000	972	97	6	65-136/23
75-01-4	Vinyl chloride	ND		1000	884	88	1000	858	86	3	57-146/22
1330-20-7	Xylene (total)	ND		3000	3180	106	3000	3240	108	2	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C35493-2	Limits
1868-53-7	Dibromofluoromethane	100%	102%	104%	70-130%
2037-26-5	Toluene-D8	101%	100%	101%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35493-2MS	R27878.D	50	08/15/14	RD	n/a	n/a	VR1037
C35493-2MSD	R27879.D	50	08/15/14	RD	n/a	n/a	VR1037
C35493-2	R27875.D	50	08/15/14	RD	n/a	n/a	VR1037

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

C35493-1, C35493-2

CAS No.	Surrogate Recoveries	MS	MSD	C35493-2	Limits
460-00-4	4-Bromofluorobenzene	102%	102%	98%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35442-2MS	R27949.D	1	08/18/14	RD	n/a	n/a	VR1040
C35442-2MSD	R27950.D	1	08/18/14	RD	n/a	n/a	VR1040
C35442-2	R27942.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Compound	C35442-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		80	55.8	70	80	57.4	72	3	38-159/24
71-43-2	Benzene	ND		20	17.1	86	20	16.5	83	4	77-122/16
108-86-1	Bromobenzene	ND		20	17.2	86	20	17.0	85	1	76-126/17
74-97-5	Bromochloromethane	ND		20	16.6	83	20	16.3	82	2	77-130/17
75-27-4	Bromodichloromethane	ND		20	17.6	88	20	16.8	84	5	75-127/16
75-25-2	Bromoform	ND		20	16.5	83	20	15.8	79	4	69-141/17
104-51-8	n-Butylbenzene	ND		20	17.2	86	20	16.9	85	2	72-129/18
135-98-8	sec-Butylbenzene	ND		20	17.6	88	20	17.4	87	1	74-128/18
98-06-6	tert-Butylbenzene	ND		20	16.5	83	20	16.3	82	1	73-127/18
108-90-7	Chlorobenzene	ND		20	17.7	89	20	17.2	86	3	77-122/16
75-00-3	Chloroethane	ND		20	15.0	75	20	15.2	76	1	69-133/18
67-66-3	Chloroform	0.28	J	20	17.2	85	20	16.6	82	4	74-126/17
95-49-8	o-Chlorotoluene	ND		20	17.3	87	20	17.0	85	2	72-127/20
106-43-4	p-Chlorotoluene	ND		20	16.5	83	20	16.2	81	2	68-127/18
75-15-0	Carbon disulfide	ND		20	11.6	58	20	11.2	56	4	56-137/19
56-23-5	Carbon tetrachloride	ND		20	19.2	96	20	18.0	90	6	71-133/19
75-34-3	1,1-Dichloroethane	ND		20	16.2	81	20	15.8	79	2	71-125/17
75-35-4	1,1-Dichloroethylene	ND		20	15.9	80	20	15.6	78	2	66-125/20
563-58-6	1,1-Dichloropropene	ND		20	17.8	89	20	17.1	86	4	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		20	15.3	77	20	15.1	76	1	65-131/20
106-93-4	1,2-Dibromoethane	ND		20	17.3	87	20	16.8	84	3	75-135/17
107-06-2	1,2-Dichloroethane	ND		20	17.9	90	20	16.8	84	6	71-131/17
78-87-5	1,2-Dichloropropane	ND		20	16.5	83	20	16.2	81	2	78-124/16
142-28-9	1,3-Dichloropropane	ND		20	16.7	84	20	16.4	82	2	78-123/16
108-20-3	Di-Isopropyl ether	ND		20	15.2	76	20	15.1	76	1	68-129/17
594-20-7	2,2-Dichloropropane	ND		20	15.9	80	20	15.2	76	5	70-131/19
124-48-1	Dibromochloromethane	ND		20	16.7	84	20	16.3	82	2	76-132/16
75-71-8	Dichlorodifluoromethane	ND		20	11.5	58	20	11.0	55	4	32-168/28
156-59-2	cis-1,2-Dichloroethylene	ND		20	16.3	82	20	16.1	81	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	ND		20	16.8	84	20	16.3	82	3	72-130/16
541-73-1	m-Dichlorobenzene	ND		20	17.2	86	20	17.0	85	1	75-124/16
95-50-1	o-Dichlorobenzene	ND		20	17.4	87	20	17.0	85	2	76-124/16
106-46-7	p-Dichlorobenzene	ND		20	17.0	85	20	16.7	84	2	75-124/16
156-60-5	trans-1,2-Dichloroethylene	ND		20	15.6	78	20	15.4	77	1	71-126/18
10061-02-6	trans-1,3-Dichloropropene	ND		20	16.4	82	20	15.9	80	3	71-126/16
100-41-4	Ethylbenzene	ND		20	17.9	90	20	17.4	87	3	76-126/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35442-2MS	R27949.D	1	08/18/14	RD	n/a	n/a	VR1040
C35442-2MSD	R27950.D	1	08/18/14	RD	n/a	n/a	VR1040
C35442-2	R27942.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Compound	C35442-2 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	64.7	81	80	64.6	81	0	67-150/22
87-68-3	Hexachlorobutadiene	ND		20	17.2	86	20	17.2	86	0	69-135/20
98-82-8	Isopropylbenzene	ND		20	18.5	93	20	17.8	89	4	61-125/17
99-87-6	p-Isopropyltoluene	ND		20	17.0	85	20	16.7	84	2	68-127/18
108-10-1	4-Methyl-2-pentanone	ND		80	64.8	81	80	64.0	80	1	71-142/21
74-83-9	Methyl bromide	ND		20	15.1	76	20	15.1	76	0	68-132/18
74-87-3	Methyl chloride	ND		20	14.3	72	20	14.3	72	0	39-150/28
74-95-3	Methylene bromide	ND		20	17.6	88	20	17.0	85	3	77-127/16
75-09-2	Methylene chloride	ND		20	15.0	75	20	14.9	75	1	67-128/18
78-93-3	Methyl ethyl ketone	ND		80	59.0	74	80	59.8	75	1	56-155/23
1634-04-4	Methyl Tert Butyl Ether	ND		20	15.5	78	20	15.4	77	1	73-132/17
91-20-3	Naphthalene	ND		20	16.1	81	20	16.5	83	2	70-136/20
103-65-1	n-Propylbenzene	ND		20	17.1	86	20	16.9	85	1	71-127/17
100-42-5	Styrene	ND		20	10	50* [a]	20	9.2	46* [a]	8	72-134/16
994-05-8	Tert-Amyl Methyl Ether	ND		20	15.5	78	20	15.5	78	0	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	ND		20	18.1	91	20	17.3	87	5	77-130/16
71-55-6	1,1,1-Trichloroethane	ND		20	17.8	89	20	17.0	85	5	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	16.1	81	20	16.3	82	1	77-129/17
79-00-5	1,1,2-Trichloroethane	ND		20	17.2	86	20	16.7	84	3	77-125/16
87-61-6	1,2,3-Trichlorobenzene	ND		20	16.5	83	20	16.9	85	2	70-133/18
96-18-4	1,2,3-Trichloropropane	ND		20	16.7	84	20	16.5	83	1	69-126/18
120-82-1	1,2,4-Trichlorobenzene	ND		20	16.6	83	20	16.7	84	1	68-129/17
95-63-6	1,2,4-Trimethylbenzene	ND		20	12.8	64* [a]	20	12.3	62* [a]	4	74-129/17
108-67-8	1,3,5-Trimethylbenzene	ND		20	16.1	81	20	15.8	79	2	77-129/17
127-18-4	Tetrachloroethylene	ND		20	18.1	91	20	17.3	87	5	69-127/20
108-88-3	Toluene	ND		20	17.4	87	20	17.0	85	2	75-122/17
79-01-6	Trichloroethylene	ND		20	18.0	90	20	17.4	87	3	78-123/17
75-69-4	Trichlorofluoromethane	ND		20	17.8	89	20	17.3	87	3	65-136/23
75-01-4	Vinyl chloride	ND		20	14.9	75	20	14.8	74	1	57-146/22
1330-20-7	Xylene (total)	ND		60	52.3	87	60	50.4	84	4	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C35442-2	Limits
1868-53-7	Dibromofluoromethane	98%	98%	101%	70-130%
2037-26-5	Toluene-D8	100%	100%	102%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35442-2MS	R27949.D	1	08/18/14	RD	n/a	n/a	VR1040
C35442-2MSD	R27950.D	1	08/18/14	RD	n/a	n/a	VR1040
C35442-2	R27942.D	1	08/18/14	RD	n/a	n/a	VR1040

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

C35493-3, C35493-5

CAS No.	Surrogate Recoveries	MS	MSD	C35442-2	Limits
460-00-4	4-Bromofluorobenzene	102%	100%	97%	70-130%

(a) Outside control limits due to matrix interference. AZ:M2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35415-6MS	R28008.D	100	08/19/14	RD	n/a	n/a	VR1043
C35415-6MSD	R28009.D	100	08/19/14	RD	n/a	n/a	VR1043
C35415-6 [a]	R27998.D	100	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

CAS No.	Compound	C35415-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	2000	U	8000	8450	106	8000	8320	104	2	38-159/24
71-43-2	Benzene	100	U	2000	2110	106	2000	2100	105	0	77-122/16
108-86-1	Bromobenzene	100	U	2000	2150	108	2000	2200	110	2	76-126/17
74-97-5	Bromochloromethane	100	U	2000	2190	110	2000	2220	111	1	77-130/17
75-27-4	Bromodichloromethane	100	U	2000	1920	96	2000	1970	99	3	75-127/16
75-25-2	Bromoform	100	U	2000	1730	87	2000	1860	93	7	69-141/17
104-51-8	n-Butylbenzene	200	U	2000	2030	102	2000	1980	99	2	72-129/18
135-98-8	sec-Butylbenzene	200	U	2000	2200	110	2000	2160	108	2	74-128/18
98-06-6	tert-Butylbenzene	200	U	2000	2290	115	2000	2200	110	4	73-127/18
108-90-7	Chlorobenzene	100	U	2000	2200	110	2000	2190	110	0	77-122/16
75-00-3	Chloroethane	100	U	2000	1920	96	2000	1890	95	2	69-133/18
67-66-3	Chloroform	100	U	2000	2050	103	2000	2070	104	1	74-126/17
95-49-8	o-Chlorotoluene	200	U	2000	2230	112	2000	2200	110	1	72-127/20
106-43-4	p-Chlorotoluene	200	U	2000	2070	104	2000	2050	103	1	68-127/18
75-15-0	Carbon disulfide	100	U	2000	1840	92	2000	1880	94	2	56-137/19
56-23-5	Carbon tetrachloride	100	U	2000	2040	102	2000	2010	101	1	71-133/19
75-34-3	1,1-Dichloroethane	100	U	2000	2010	101	2000	2010	101	0	71-125/17
75-35-4	1,1-Dichloroethylene	100	U	2000	2170	109	2000	2130	107	2	66-125/20
563-58-6	1,1-Dichloropropene	100	U	2000	2170	109	2000	2130	107	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	200	U	2000	1960	98	2000	2040	102	4	65-131/20
106-93-4	1,2-Dibromoethane	100	U	2000	2150	108	2000	2190	110	2	75-135/17
107-06-2	1,2-Dichloroethane	100	U	2000	1940	97	2000	1950	98	1	71-131/17
78-87-5	1,2-Dichloropropane	100	U	2000	2060	103	2000	2060	103	0	78-124/16
142-28-9	1,3-Dichloropropane	100	U	2000	2030	102	2000	2060	103	1	78-123/16
108-20-3	Di-Isopropyl ether	200	U	2000	1910	96	2000	1950	98	2	68-129/17
594-20-7	2,2-Dichloropropane	100	U	2000	1770	89	2000	1760	88	1	70-131/19
124-48-1	Dibromochloromethane	100	U	2000	1840	92	2000	1940	97	5	76-132/16
75-71-8	Dichlorodifluoromethane	100	U	2000	1850	93	2000	1800	90	3	32-168/28
156-59-2	cis-1,2-Dichloroethylene	100	U	2000	2130	107	2000	2160	108	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	100	U	2000	2040	102	2000	2110	106	3	72-130/16
541-73-1	m-Dichlorobenzene	100	U	2000	2190	110	2000	2180	109	0	75-124/16
95-50-1	o-Dichlorobenzene	100	U	2000	2190	110	2000	2200	110	0	76-124/16
106-46-7	p-Dichlorobenzene	100	U	2000	2080	104	2000	2070	104	0	75-124/16
156-60-5	trans-1,2-Dichloroethylene	100	U	2000	2120	106	2000	2110	106	0	71-126/18
10061-02-6	trans-1,3-Dichloropropene	100	U	2000	1880	94	2000	1970	99	5	71-126/16
100-41-4	Ethylbenzene	22.1	J	2000	2150	106	2000	2120	105	1	76-126/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35415-6MS	R28008.D	100	08/19/14	RD	n/a	n/a	VR1043
C35415-6MSD	R28009.D	100	08/19/14	RD	n/a	n/a	VR1043
C35415-6 [a]	R27998.D	100	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

CAS No.	Compound	C35415-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	1000 U		8000	8530	107	8000	8580	107	1	67-150/22
87-68-3	Hexachlorobutadiene	200 U		2000	1990	100	2000	1940	97	3	69-135/20
98-82-8	Isopropylbenzene	100 U		2000	2220	111	2000	2200	110	1	61-125/17
99-87-6	p-Isopropyltoluene	200 U		2000	2140	107	2000	2090	105	2	68-127/18
108-10-1	4-Methyl-2-pentanone	1000 U		8000	8280	104	8000	8350	104	1	71-142/21
74-83-9	Methyl bromide	200 U		2000	2190	110	2000	2160	108	1	68-132/18
74-87-3	Methyl chloride	100 U		2000	2040	102	2000	2010	101	1	39-150/28
74-95-3	Methylene bromide	100 U		2000	2090	105	2000	2110	106	1	77-127/16
75-09-2	Methylene chloride	1000 U		2000	2080	104	2000	2100	105	1	67-128/18
78-93-3	Methyl ethyl ketone	1000 U		8000	8770	110	8000	8660	108	1	56-155/23
1634-04-4	Methyl Tert Butyl Ether	100 U		2000	1990	100	2000	2040	102	2	73-132/17
91-20-3	Naphthalene	346	J	2000	2490	107	2000	2570	111	3	70-136/20
103-65-1	n-Propylbenzene	200 U		2000	2160	108	2000	2110	106	2	71-127/17
100-42-5	Styrene	100 U		2000	2180	109	2000	2200	110	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	200 U		2000	2100	105	2000	2150	108	2	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	100 U		2000	2100	105	2000	2140	107	2	77-130/16
71-55-6	1,1,1-Trichloroethane	100 U		2000	2080	104	2000	2060	103	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	100 U		2000	2170	109	2000	2210	111	2	77-129/17
79-00-5	1,1,2-Trichloroethane	100 U		2000	2110	106	2000	2130	107	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	200 U		2000	2100	105	2000	2140	107	2	70-133/18
96-18-4	1,2,3-Trichloropropane	200 U		2000	1830	92	2000	1950	98	6	69-126/18
120-82-1	1,2,4-Trichlorobenzene	200 U		2000	2070	104	2000	2100	105	1	68-129/17
95-63-6	1,2,4-Trimethylbenzene	166	J	2000	2250	104	2000	2220	103	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	71.4	J	2000	2270	110	2000	2250	109	1	77-129/17
127-18-4	Tetrachloroethylene	100 U		2000	2090	105	2000	2060	103	1	69-127/20
108-88-3	Toluene	100 U		2000	2140	107	2000	2140	107	0	75-122/17
79-01-6	Trichloroethylene	100 U		2000	2150	108	2000	2080	104	3	78-123/17
75-69-4	Trichlorofluoromethane	100 U		2000	1970	99	2000	1950	98	1	65-136/23
75-01-4	Vinyl chloride	100 U		2000	2080	104	2000	2010	101	3	57-146/22
1330-20-7	Xylene (total)	76.8	J	6000	6660	110	6000	6630	109	0	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C35415-6	Limits
1868-53-7	Dibromofluoromethane	99%	100%		70-130%
2037-26-5	Toluene-D8	101%	101%		70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35493
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
C35415-6MS	R28008.D	100	08/19/14	RD	n/a	n/a	VR1043
C35415-6MSD	R28009.D	100	08/19/14	RD	n/a	n/a	VR1043
C35415-6 [a]	R27998.D	100	08/19/14	RD	n/a	n/a	VR1043

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

C35493-4, C35493-6, C35493-7

CAS No.	Surrogate Recoveries	MS	MSD	C35415-6	Limits
460-00-4	4-Bromofluorobenzene	98%	99%		70-130%

(a) Sample used for QC purposes only. Sample reanalyzed with lower dilution.

* = 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: C35493
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/18/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.4		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15		
Calcium	5000	7.1	12		
Chromium	10	.3	.41		
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12	-21	<200
Lead	10	.7	.85		
Lithium	50		2		
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12		
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	13		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2		

Associated samples MP8267: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6

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: C35493
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/18/14

Metal	C35507-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper					
Iron	0.0	13000	12500	104.0	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP8267: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6

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: C35493
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/18/14

Metal	C35507-1 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	0.0	12900	12500	103.2	0.8	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP8267: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6

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: C35493
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/18/14

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	13400	12500	107.2	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP8267: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: C35493
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/18/14

Metal	C35507-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	0.00	0.00	NC	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP8267: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6

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

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: C35493
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	GN14282	5.0	0.0	mg/l	250	248	99.2	75-125%
Chloride	GP6722/GN14284	0.50	0.0	mg/l	5	4.62	92.4	90-110%
Chloride	GP6725/GN14288	0.50	0.0	mg/l	5	4.73	94.6	90-110%
Nitrogen, Nitrate	GP6710/GN14258	0.10	0.0	mg/l	5	4.87	97.4	90-110%
Nitrogen, Nitrate	GP6722/GN14284	0.10	0.0	mg/l	5	4.74	94.8	90-110%
Nitrogen, Nitrate	GP6725/GN14288	0.10	0.0	mg/l	5	5.06	101.2	90-110%
Sulfate	GP6710/GN14258	0.50	0.0	mg/l	5	4.93	98.6	90-110%
Sulfate	GP6722/GN14284	0.50	0.0	mg/l	5	4.91	98.2	90-110%
Sulfate	GP6725/GN14288	0.50	0.0	mg/l	5	5.04	100.8	90-110%
Total Organic Carbon	GP6708/GN14256	1.0	0.45	mg/l	25.0	24.6	98.5	75-125%

Associated Samples:
Batch GP6708: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6710: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6722: C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6725: C35493-1
Batch GN14282: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35493
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	GN14282	mg/l	250	250	0.8	
Chloride	GP6722/GN14284	mg/l	5	4.61	0.2	25%
Chloride	GP6725/GN14288	mg/l	5	4.93	4.1	25%
Nitrogen, Nitrate	GP6710/GN14258	mg/l	5	4.88	0.2	25%
Nitrogen, Nitrate	GP6722/GN14284	mg/l	5	4.86	2.5	25%
Nitrogen, Nitrate	GP6725/GN14288	mg/l	5	5.08	0.4	25%
Sulfate	GP6710/GN14258	mg/l	5	4.91	0.4	25%
Sulfate	GP6722/GN14284	mg/l	5	4.98	1.4	25%
Sulfate	GP6725/GN14288	mg/l	5	5.10	1.2	25%
Total Organic Carbon	GP6708/GN14256	mg/l	25.0	24.5	0.5	

Associated Samples:
Batch GP6708: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6710: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6722: C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6725: C35493-1
Batch GN14282: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35493
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	GN14282	C35493-1	mg/l	218	222	1.8	0-25%

Associated Samples:
Batch GN14282: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
(*) Outside of QC limits

8.3
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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35493
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	GP6722/GN14284	C35468-2	mg/l	49.1	50	95.3	92.4	80-120%
Chloride	GP6725/GN14288	C35585-1	mg/l	193	12.5	203	80.0	80-120%
Nitrogen, Nitrate	GP6710/GN14258	C35483-3	mg/l	5.1	12.5	17.6	100.0	80-120%
Nitrogen, Nitrate	GP6722/GN14284	C35468-2	mg/l	21.3	50	68.3	95.0	80-120%
Nitrogen, Nitrate	GP6722/GN14284	C35468-2	mg/l	20.8	50	68.3	95.0	80-120%
Nitrogen, Nitrate	GP6725/GN14288	C35585-1	mg/l	0.0	12.5	12.1	96.8	80-120%
Sulfate	GP6710/GN14258	C35483-3	mg/l	29.2	12.5	41.6	99.2	80-120%
Sulfate	GP6722/GN14284	C35468-2	mg/l	106	50	153	94.0	80-120%
Sulfate	GP6725/GN14288	C35585-1	mg/l	4.8	12.5	15.8	88.0	80-120%
Total Organic Carbon	GP6708/GN14256	C35458-1	mg/l	4.3	25.0	29.8	101.9	75-125%

Associated Samples:
Batch GP6708: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6710: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6722: C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6725: C35493-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35493
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	GP6722/GN14284	C35468-2	mg/l	49.1	50	95.1	0.2	
Chloride	GP6725/GN14288	C35585-1	mg/l	193	12.5	204	0.5	
Nitrogen, Nitrate	GP6710/GN14258	C35483-3	mg/l	5.1	12.5	17.6	0.0	
Nitrogen, Nitrate	GP6722/GN14284	C35468-2	mg/l	21.3	50	68.4	0.1	
Nitrogen, Nitrate	GP6722/GN14284	C35468-2	mg/l	20.8	50	68.4	0.1	
Nitrogen, Nitrate	GP6725/GN14288	C35585-1	mg/l	0.0	12.5	12.1	0.0	
Sulfate	GP6710/GN14258	C35483-3	mg/l	29.2	12.5	41.5	0.2	
Sulfate	GP6722/GN14284	C35468-2	mg/l	106	50	153	0.0	
Sulfate	GP6725/GN14288	C35585-1	mg/l	4.8	12.5	15.9	0.6	

Associated Samples:
Batch GP6710: C35493-1, C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6722: C35493-2, C35493-3, C35493-4, C35493-5, C35493-6
Batch GP6725: C35493-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
ACCUTEST
LABORATORIES

08/22/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C35507

Sampling Date: 08/14/14

Report to:

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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: Elvin Kumar 408-588-0200

Certifications: OR (CA300006) CA (08258CA) CA (ELAP 2910) AZ (AZ0762) DoD ELAP (L-A-B L2242)

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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C35507

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C35507-1	08/14/14	07:05	GB	08/15/14	AQ	Ground Water	HQUST-533A
C35507-2	08/14/14	07:30	GB	08/15/14	AQ	Ground Water	CEP-519A
C35507-3	08/14/14	08:00	GB	08/15/14	AQ	Ground Water	CEP-527A
C35507-4	08/14/14	08:20	GB	08/15/14	AQ	Ground Water	HQUST-548
C35507-5	08/14/14	08:45	GB	08/15/14	AQ	Ground Water	HQUST-547
C35507-6	08/14/14	09:15	GB	08/15/14	AQ	Ground Water	HQUST-531A
C35507-7	08/14/14	00:00	GB	08/15/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C35507
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	8/22/2014 7:49:15 PM

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/14/2014 and were received at Accutest on 08/15/2014 properly preserved, at 2.5 Deg. C and intact. These Samples received an Accutest job number of C35507. 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:** VR1045

- Sample(s) C35533-3MS, C35533-3MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Chlorobenzene, Isopropylbenzene, o-Dichlorobenzene are above laboratory control limits. The associated blank spike recovery was acceptable.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP8267

- Sample(s) C35507-1MS, C35507-1MSD, C35507-1SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP6711

- Sample(s) C35500-1MS, C35500-1MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP6728

- Sample(s) C35507-1MS, C35507-1MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN14293

- Sample(s) C35507-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP6713

- Sample(s) C35507-1MS 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: C35507
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/14/14

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Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C35507-1	**HQUST-533A**					
Benzene		1.0	1.0		ug/l	SW846 8260B
sec-Butylbenzene		2.0	2.0		ug/l	SW846 8260B
Methyl Tert Butyl Ether		4.3	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		444	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		18.8	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		753	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.7	1.0		mg/l	SM5310 C-00
C35507-2	**CEP-519A**					
Benzene		2.4	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		345	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		0.28	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		628	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		5.1	1.0		mg/l	SM5310 C-00
C35507-3	**CEP-527A**					
Alkalinity, Total as CaCO3		1510	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		120	2.0		mg/l	EPA 300/SW846 9056A
Sulfate		4870	250		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		17.9	1.0		mg/l	SM5310 C-00
C35507-4	**HQUST-548**					
Benzene		1.0	1.0		ug/l	SW846 8260B
Isopropylbenzene [a]		1.0	1.0		ug/l	SW846 8260B
Methyl Tert Butyl Ether		9.0	1.0		ug/l	SW846 8260B
Iron		392	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		400	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		3.1	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		1050	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.1	1.0		mg/l	SM5310 C-00
C35507-5	**HQUST-547**					
Methyl Tert Butyl Ether		2.2	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		267	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.2	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		884	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.4	1.0		mg/l	SM5310 C-00

Summary of Hits

Job Number: C35507
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/14/14

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Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C35507-6	**HQUST-531A**					
Iron		4880	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		285	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		9.1	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		905	25		mg/l	EPA 300/SW846 9056A
C35507-7	**TRIP BLANK**					

No hits reported in this sample.

(a) AZ:M1

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C35507-1	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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	R28042.D	1	08/20/14	RD	n/a	n/a	VR1045
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	1.0	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	2.0	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene [a]	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene [a]	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:	C35507-1	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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 [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	4.3	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%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	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:	HQUST-533A		
Lab Sample ID:	C35507-1	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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
(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:	C35507-1	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C35507-1	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	444	5.0	mg/l	1	08/21/14 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	18.8	0.25	mg/l	2.5	08/15/14 15:09	RL	EPA 300/SW846 9056A
Sulfate	753	25	mg/l	50	08/21/14 18:32	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.7	1.0	mg/l	1	08/18/14 11:14	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C35507-2	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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	R28043.D	1	08/20/14	RD	n/a	n/a	VR1045
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	2.4	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 [a]	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene [a]	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:	C35507-2	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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 [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	
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	94%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	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:	CEP-519A		
Lab Sample ID:	C35507-2	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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
(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-519A		
Lab Sample ID:	C35507-2	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C35507-2	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	345	5.0	mg/l	1	08/21/14 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	0.28	0.25	mg/l	2.5	08/15/14 15:26	RL	EPA 300/SW846 9056A
Sulfate	628	25	mg/l	50	08/21/14 19:24	RL	EPA 300/SW846 9056A
Total Organic Carbon	5.1	1.0	mg/l	1	08/18/14 11:14	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C35507-3	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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	R28044.D	1	08/20/14	RD	n/a	n/a	VR1045
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 [a]	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene [a]	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:	C35507-3	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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 [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	
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%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	96%		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:	CEP-527A		
Lab Sample ID:	C35507-3	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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
(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:	C35507-3	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C35507-3	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	1510	5.0	mg/l	1	08/21/14 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	120	2.0	mg/l	20	08/15/14 18:37	RL	EPA 300/SW846 9056A
Sulfate	4870	250	mg/l	500	08/22/14 10:06	RL	EPA 300/SW846 9056A
Total Organic Carbon	17.9	1.0	mg/l	1	08/18/14 11:14	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C35507-4	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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	R28045.D	1	08/20/14	RD	n/a	n/a	VR1045
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	1.0	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene [a]	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene [a]	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:	C35507-4	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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 [a]	1.0	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	9.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	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:	HQUST-548		
Lab Sample ID:	C35507-4	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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
(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-548		
Lab Sample ID:	C35507-4	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	392	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C35507-4	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	400	5.0	mg/l	1	08/21/14 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	3.1	0.25	mg/l	2.5	08/15/14 16:01	RL	EPA 300/SW846 9056A
Sulfate	1050	50	mg/l	100	08/22/14 10:23	RL	EPA 300/SW846 9056A
Total Organic Carbon	2.1	1.0	mg/l	1	08/18/14 11:14	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C35507-5	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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	R28046.D	1	08/20/14	RD	n/a	n/a	VR1045
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 [a]	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene [a]	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:	C35507-5	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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 [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	2.2	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [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%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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-547		
Lab Sample ID:	C35507-5	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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
(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-547		
Lab Sample ID:	C35507-5	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C35507-5	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	267	5.0	mg/l	1	08/21/14 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	6.2	0.25	mg/l	2.5	08/15/14 16:18	RL	EPA 300/SW846 9056A
Sulfate	884	25	mg/l	50	08/21/14 20:16	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.4	1.0	mg/l	1	08/18/14 11:14	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C35507-6	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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	R28047.D	1	08/20/14	RD	n/a	n/a	VR1045
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 [a]	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene [a]	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:	C35507-6	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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 [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	
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	94%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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-531A		
Lab Sample ID:	C35507-6	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
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
(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:	C35507-6	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	4880	200	ug/l	1	08/18/14	08/18/14	EB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4181
(2) Prep QC Batch: MP8267

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C35507-6	**Date Sampled:**	08/14/14
Matrix:	AQ - Ground Water	**Date Received:**	08/15/14
		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	285	5.0	mg/l	1	08/21/14 17:00	DQ	SM2320 B-97
Nitrogen, Nitrate	9.1	0.25	mg/l	2.5	08/15/14 16:36	RL	EPA 300/SW846 9056A
Sulfate	905	25	mg/l	50	08/21/14 21:09	RL	EPA 300/SW846 9056A
Total Organic Carbon	< 1.0	1.0	mg/l	1	08/18/14 11:14	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C35507-7	**Date Sampled:**	08/14/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/15/14
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	R28048.D	1	08/20/14	RD	n/a	n/a	VR1045
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 [a]	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene [a]	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:	C35507-7	**Date Sampled:**	08/14/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/15/14
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 [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	
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%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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:	C35507-7	**Date Sampled:**	08/14/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/15/14
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
(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: C35507
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.
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 # 7708 3721 3662
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C C35507

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: G. Bejarano

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; A/R; DW- Drinking Water (Perchlorate Only)

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Time	Sampled by	Matrix	# of bottles	HCl	MeOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	Alkalinity-NO3-SO4	Fe (total)	TOC	VOC 8260	LAB USE ONLY
1	HQUST-533A	8/14/14	0705	GB	GW	7									X	X	X	X	
2	CEP-519A	8/14/14	0730	GB	GW	7									X	X	X	X	
3	CEP-527A	8/14/14	0800	GB	GW	7									X	X	X	X	
4	HQUST-548	8/14/14	0820	GB	GW	7									X	X	X	X	
5	HQUST-547	8/14/14	0845	GB	GW	7									X	X	X	X	
6	HQUST-531A	8/14/14	0915	GB	GW	7									X	X	X	X	
7	TRIP BLANK					3												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 G Bejarano	8/14/14	1 FEDEX	2 Fedex	8/15/14 922	2 Marc Quora
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N; Cooler Temp. 2.1-0.3=2.5 °C

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C35507: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C35507 **Client:** CITY OF TUCSON **Project:** HQUST

Date / Time Received: 8/15/2014 **Delivery Method:** FedEx **Airbill #'s:** 770837213662

Cooler Temps (Initial/Adjusted): #1: (2.8/2.5);

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

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

5.2

5

C35507: 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: C35507
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
VR1045-MB	R28038.D	1	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

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: C35507
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
VR1045-MB	R28038.D	1	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

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	0.21	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	95%	70-130%
2037-26-5	Toluene-D8	100%	70-130%

Method Blank Summary

Job Number: C35507
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
VR1045-MB	R28038.D	1	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35507
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
VR1045-BS	R28035.D	1	08/20/14	RD	n/a	n/a	VR1045
VR1045-BSD	R28036.D	1	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	64.8	81	68.2	85	5	38-159/24
71-43-2	Benzene	20	20.8	104	20.9	105	0	77-122/25
108-86-1	Bromobenzene	20	21.3	107	21.5	108	1	76-126/17
74-97-5	Bromochloromethane	20	21.1	106	21.6	108	2	77-130/17
75-27-4	Bromodichloromethane	20	20.6	103	20.8	104	1	75-127/16
75-25-2	Bromoform	20	22.2	111	22.6	113	2	69-141/17
104-51-8	n-Butylbenzene	20	20.0	100	20.1	101	0	72-129/18
135-98-8	sec-Butylbenzene	20	21.4	107	21.5	108	0	74-128/18
98-06-6	tert-Butylbenzene	20	21.3	107	21.3	107	0	73-127/18
108-90-7	Chlorobenzene	20	22.1	111	22.2	111	0	77-122/16
75-00-3	Chloroethane	20	17.8	89	17.9	90	1	69-133/18
67-66-3	Chloroform	20	20.2	101	20.4	102	1	74-126/17
95-49-8	o-Chlorotoluene	20	22.1	111	22.0	110	0	72-127/20
106-43-4	p-Chlorotoluene	20	20.1	101	20.5	103	2	68-127/18
75-15-0	Carbon disulfide	20	18.0	90	18.1	91	1	56-137/19
56-23-5	Carbon tetrachloride	20	20.6	103	20.3	102	1	71-133/19
75-34-3	1,1-Dichloroethane	20	19.4	97	19.6	98	1	71-125/17
75-35-4	1,1-Dichloroethylene	20	20.1	101	20.2	101	0	66-125/20
563-58-6	1,1-Dichloropropene	20	21.3	107	21.2	106	0	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	18.1	91	18.4	92	2	65-131/20
106-93-4	1,2-Dibromoethane	20	21.2	106	21.3	107	0	75-135/17
107-06-2	1,2-Dichloroethane	20	19.8	99	19.8	99	0	71-131/17
78-87-5	1,2-Dichloropropane	20	20.3	102	20.5	103	1	78-124/16
142-28-9	1,3-Dichloropropane	20	20.2	101	20.3	102	0	78-123/16
108-20-3	Di-Isopropyl ether	20	18.4	92	18.8	94	2	68-129/17
594-20-7	2,2-Dichloropropane	20	19.7	99	19.6	98	1	70-131/19
124-48-1	Dibromochloromethane	20	21.4	107	21.3	107	0	76-132/16
75-71-8	Dichlorodifluoromethane	20	17.1	86	16.8	84	2	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	20.7	104	21.0	105	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	21.6	108	21.8	109	1	72-130/16
541-73-1	m-Dichlorobenzene	20	21.8	109	22.0	110	1	75-124/16
95-50-1	o-Dichlorobenzene	20	21.9	110	22.2	111	1	76-124/16
106-46-7	p-Dichlorobenzene	20	20.7	104	21.0	105	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	20.2	101	20.4	102	1	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	20.3	102	20.6	103	1	71-126/16
100-41-4	Ethylbenzene	20	21.1	106	21.2	106	0	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35507
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
VR1045-BS	R28035.D	1	08/20/14	RD	n/a	n/a	VR1045
VR1045-BSD	R28036.D	1	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	76.3	95	77.9	97	2	67-150/22
87-68-3	Hexachlorobutadiene	20	20.3	102	20.5	103	1	69-135/20
98-82-8	Isopropylbenzene	20	22.1	111	22.1	111	0	61-125/17
99-87-6	p-Isopropyltoluene	20	20.8	104	21.0	105	1	68-127/18
108-10-1	4-Methyl-2-pentanone	80	76.0	95	77.7	97	2	71-142/21
74-83-9	Methyl bromide	20	20.9	105	21.0	105	0	68-132/18
74-87-3	Methyl chloride	20	19.3	97	19.6	98	2	39-150/28
74-95-3	Methylene bromide	20	20.9	105	21.1	106	1	77-127/16
75-09-2	Methylene chloride	20	20.2	101	20.3	102	0	67-128/18
78-93-3	Methyl ethyl ketone	80	73.0	91	75.2	94	3	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	19.3	97	19.6	98	2	73-132/17
91-20-3	Naphthalene	20	20.7	104	21.7	109	5	70-136/20
103-65-1	n-Propylbenzene	20	21.0	105	21.0	105	0	71-127/17
100-42-5	Styrene	20	21.9	110	22.1	111	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	20.4	102	20.8	104	2	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	21.7	109	21.8	109	0	77-130/16
71-55-6	1,1,1-Trichloroethane	20	20.2	101	20.0	100	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	20.4	102	20.9	105	2	77-129/17
79-00-5	1,1,2-Trichloroethane	20	20.8	104	21.0	105	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	21.0	105	22.0	110	5	70-133/18
96-18-4	1,2,3-Trichloropropane	20	19.4	97	19.7	99	2	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	20.9	105	21.6	108	3	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	20.6	103	20.9	105	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	21.5	108	21.6	108	0	77-129/17
127-18-4	Tetrachloroethylene	20	21.3	107	21.1	106	1	69-127/20
108-88-3	Toluene	20	21.1	106	21.2	106	0	75-122/17
79-01-6	Trichloroethylene	20	21.0	105	21.0	105	0	78-123/17
75-69-4	Trichlorofluoromethane	20	18.9	95	18.8	94	1	65-136/23
75-01-4	Vinyl chloride	20	18.9	95	19.0	95	1	57-146/22
1330-20-7	Xylene (total)	60	65.9	110	66.2	110	0	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	97%	98%	70-130%
2037-26-5	Toluene-D8	100%	100%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35507
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
VR1045-BS	R28035.D	1	08/20/14	RD	n/a	n/a	VR1045
VR1045-BSD	R28036.D	1	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	99%	99%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35507
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
C35533-3MS	R28058.D	250	08/20/14	RD	n/a	n/a	VR1045
C35533-3MSD	R28059.D	250	08/20/14	RD	n/a	n/a	VR1045
C35533-3 [a]	R28052.D	250	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

CAS No.	Compound	C35533-3 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		20000	17900	90	20000	18700	94	4	38-159/24
71-43-2	Benzene	ND		5000	5900	118	5000	5910	118	0	77-122/16
108-86-1	Bromobenzene	ND		5000	5770	115	5000	6060	121	5	76-126/17
74-97-5	Bromochloromethane	ND		5000	5940	119	5000	6200	124	4	77-130/17
75-27-4	Bromodichloromethane	ND		5000	5790	116	5000	5880	118	2	75-127/16
75-25-2	Bromoform	ND		5000	5720	114	5000	6080	122	6	69-141/17
104-51-8	n-Butylbenzene	ND		5000	5390	108	5000	5540	111	3	72-129/18
135-98-8	sec-Butylbenzene	ND		5000	5810	116	5000	5980	120	3	74-128/18
98-06-6	tert-Butylbenzene	ND		5000	5830	117	5000	5990	120	3	73-127/18
108-90-7	Chlorobenzene	ND		5000	6150	123* [b]	5000	6230	125* [b]	1	77-122/16
75-00-3	Chloroethane	ND		5000	4780	96	5000	4950	99	3	69-133/18
67-66-3	Chloroform	ND		5000	5770	115	5000	5920	118	3	74-126/17
95-49-8	o-Chlorotoluene	ND		5000	5720	114	5000	5960	119	4	72-127/20
106-43-4	p-Chlorotoluene	ND		5000	5390	108	5000	5600	112	4	68-127/18
75-15-0	Carbon disulfide	ND		5000	4820	96	5000	5000	100	4	56-137/19
56-23-5	Carbon tetrachloride	ND		5000	6180	124	5000	5980	120	3	71-133/19
75-34-3	1,1-Dichloroethane	ND		5000	5380	108	5000	5530	111	3	71-125/17
75-35-4	1,1-Dichloroethylene	ND		5000	5520	110	5000	5650	113	2	66-125/20
563-58-6	1,1-Dichloropropene	ND		5000	6060	121	5000	5960	119	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		5000	4890	98	5000	5160	103	5	65-131/20
106-93-4	1,2-Dibromoethane	ND		5000	5870	117	5000	6000	120	2	75-135/17
107-06-2	1,2-Dichloroethane	ND		5000	5960	119	5000	5900	118	1	71-131/17
78-87-5	1,2-Dichloropropane	ND		5000	5570	111	5000	5650	113	1	78-124/16
142-28-9	1,3-Dichloropropane	ND		5000	5590	112	5000	5710	114	2	78-123/16
108-20-3	Di-Isopropyl ether	ND		5000	4940	99	5000	5190	104	5	68-129/17
594-20-7	2,2-Dichloropropane	ND		5000	5270	105	5000	5220	104	1	70-131/19
124-48-1	Dibromochloromethane	ND		5000	5710	114	5000	5970	119	4	76-132/16
75-71-8	Dichlorodifluoromethane	ND		5000	4990	100	5000	4680	94	6	32-168/28
156-59-2	cis-1,2-Dichloroethylene	298		5000	6060	115	5000	6340	121	5	73-126/17
10061-01-5	cis-1,3-Dichloropropene	ND		5000	5770	115	5000	5970	119	3	72-130/16
541-73-1	m-Dichlorobenzene	ND		5000	5960	119	5000	6170	123	3	75-124/16
95-50-1	o-Dichlorobenzene	ND		5000	6030	121	5000	6260	125* [b]	4	76-124/16
106-46-7	p-Dichlorobenzene	ND		5000	5670	113	5000	5890	118	4	75-124/16
156-60-5	trans-1,2-Dichloroethylene	ND		5000	5550	111	5000	5750	115	4	71-126/18
10061-02-6	trans-1,3-Dichloropropene	ND		5000	5470	109	5000	5660	113	3	71-126/16
100-41-4	Ethylbenzene	ND		5000	5950	119	5000	5990	120	1	76-126/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35507
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
C35533-3MS	R28058.D	250	08/20/14	RD	n/a	n/a	VR1045
C35533-3MSD	R28059.D	250	08/20/14	RD	n/a	n/a	VR1045
C35533-3 [a]	R28052.D	250	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

CAS No.	Compound	C35533-3 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		20000	21100	106	20000	21500	108	2	67-150/22
87-68-3	Hexachlorobutadiene	ND		5000	5510	110	5000	5690	114	3	69-135/20
98-82-8	Isopropylbenzene	ND		5000	6290	126* [b]	5000	6270	125	0	61-125/17
99-87-6	p-Isopropyltoluene	ND		5000	5660	113	5000	5830	117	3	68-127/18
108-10-1	4-Methyl-2-pentanone	ND		20000	21200	106	20000	21600	108	2	71-142/21
74-83-9	Methyl bromide	ND		5000	5740	115	5000	5900	118	3	68-132/18
74-87-3	Methyl chloride	ND		5000	5460	109	5000	5570	111	2	39-150/28
74-95-3	Methylene bromide	ND		5000	6100	122	5000	6090	122	0	77-127/16
75-09-2	Methylene chloride	ND		5000	5490	110	5000	5810	116	6	67-128/18
78-93-3	Methyl ethyl ketone	ND		20000	19500	98	20000	20700	104	6	56-155/23
1634-04-4	Methyl Tert Butyl Ether	ND		5000	5280	106	5000	5530	111	5	73-132/17
91-20-3	Naphthalene	ND		5000	5630	113	5000	5990	120	6	70-136/20
103-65-1	n-Propylbenzene	ND		5000	5620	112	5000	5830	117	4	71-127/17
100-42-5	Styrene	ND		5000	6150	123	5000	6220	124	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	ND		5000	5590	112	5000	5840	117	4	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	ND		5000	6190	124	5000	6200	124	0	77-130/16
71-55-6	1,1,1-Trichloroethane	ND		5000	5880	118	5000	5910	118	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		5000	5450	109	5000	5680	114	4	77-129/17
79-00-5	1,1,2-Trichloroethane	ND		5000	5790	116	5000	5910	118	2	77-125/16
87-61-6	1,2,3-Trichlorobenzene	ND		5000	5740	115	5000	6120	122	6	70-133/18
96-18-4	1,2,3-Trichloropropane	ND		5000	5230	105	5000	5390	108	3	69-126/18
120-82-1	1,2,4-Trichlorobenzene	ND		5000	5630	113	5000	5970	119	6	68-129/17
95-63-6	1,2,4-Trimethylbenzene	ND		5000	5630	113	5000	5880	118	4	74-129/17
108-67-8	1,3,5-Trimethylbenzene	ND		5000	5800	116	5000	6050	121	4	77-129/17
127-18-4	Tetrachloroethylene	ND		5000	5970	119	5000	5860	117	2	69-127/20
108-88-3	Toluene	ND		5000	6070	121	5000	6060	121	0	75-122/17
79-01-6	Trichloroethylene	73.9		5000	6050	120	5000	5990	118	1	78-123/17
75-69-4	Trichlorofluoromethane	ND		5000	5590	112	5000	5350	107	4	65-136/23
75-01-4	Vinyl chloride	ND		5000	5360	107	5000	5300	106	1	57-146/22
1330-20-7	Xylene (total)	ND		15000	18700	125	15000	18700	125	0	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C35533-3	Limits
1868-53-7	Dibromofluoromethane	99%	101%		70-130%
2037-26-5	Toluene-D8	98%	99%		70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C35507
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
C35533-3MS	R28058.D	250	08/20/14	RD	n/a	n/a	VR1045
C35533-3MSD	R28059.D	250	08/20/14	RD	n/a	n/a	VR1045
C35533-3 [a]	R28052.D	250	08/20/14	RD	n/a	n/a	VR1045

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

C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6, C35507-7

CAS No.	Surrogate Recoveries	MS	MSD	C35533-3	Limits
460-00-4	4-Bromofluorobenzene	101%	101%		70-130%

(a) Sample used for QC purposes only. Sample reanalyzed at lower dilution.
(b) Outside laboratory control limits. AZ:M1

* = 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: C35507
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/18/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.4		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15		
Calcium	5000	7.1	12		
Chromium	10	.3	.41		
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12	-21	<200
Lead	10	.7	.85		
Lithium	50		2		
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12		
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	13		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2		

Associated samples MP8267: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6

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: C35507
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/18/14

Metal	C35507-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper					
Iron	0.0	13000	12500	104.0	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP8267: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6

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: C35507
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/18/14

Metal	C35507-1 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	0.0	12900	12500	103.2	0.8	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP8267: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6

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: C35507
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/18/14

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	13400	12500	107.2	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP8267: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: C35507
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8267
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 08/18/14

Metal	C35507-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	0.00	0.00	NC	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP8267: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6

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: C35507
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	GN14293	5.0	0.0	mg/l	250	252	100.8	75-125%
Chloride	GP6728/GN14296	0.50	0.0	mg/l	5	4.74	94.8	90-110%
Fluoride	GP6728/GN14296	0.10	0.010	mg/l	5	4.83	96.6	90-110%
Nitrogen, Nitrate	GP6711/GN14260	0.10	0.0	mg/l	5	4.91	98.2	90-110%
Nitrogen, Nitrate	GP6728/GN14296	0.10	0.0	mg/l	5	5.15	103.0	90-110%
Nitrogen, Nitrite	GP6728/GN14296	0.10	0.0	mg/l	5	4.77	95.4	90-110%
Sulfate	GP6711/GN14260	0.50	0.0	mg/l	5	4.97	99.4	90-110%
Sulfate	GP6728/GN14296	0.50	0.0	mg/l	5	5.01	100.2	90-110%
Total Organic Carbon	GP6713/GN14264	1.0	0.0	mg/l	25.0	26.1	104.4	75-125%

Associated Samples:
Batch GP6711: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GP6713: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GP6728: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GN14293: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35507
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	GN14293	mg/l	250	246	2.4	
Chloride	GP6728/GN14296	mg/l	5	4.91	3.5	25%
Fluoride	GP6728/GN14296	mg/l	5	4.81	0.4	25%
Nitrogen, Nitrate	GP6711/GN14260	mg/l	5	4.57	7.2	25%
Nitrogen, Nitrate	GP6728/GN14296	mg/l	5	5.24	1.7	25%
Nitrogen, Nitrite	GP6728/GN14296	mg/l	5	4.79	0.4	25%
Sulfate	GP6711/GN14260	mg/l	5	5.10	2.6	25%
Sulfate	GP6728/GN14296	mg/l	5	5.09	1.6	25%
Total Organic Carbon	GP6713/GN14264	mg/l	25.0	26.9	3.0	

Associated Samples:
Batch GP6711: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GP6713: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GP6728: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GN14293: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35507
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	GN14293	C35507-1	mg/l	444	444	0.0	0-25%

Associated Samples:
Batch GN14293: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
(*) Outside of QC limits

8.3
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35507
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	GP6728/GN14296	C35507-1	mg/l	155	250	402	98.8	80-120%
Chloride	GP6728/GN14296	C35507-1	mg/l	179	250	402	98.8	80-120%
Fluoride	GP6728/GN14296	C35507-1	mg/l	0.12	250	229	91.6	80-120%
Fluoride	GP6728/GN14296	C35507-1	mg/l	0.0	250	229	91.6	80-120%
Nitrogen, Nitrate	GP6711/GN14260	C35500-1	mg/l	0.0	12.5	11.9	95.2	80-120%
Nitrogen, Nitrate	GP6728/GN14296	C35507-1	mg/l	16.9	250	257	96.0	80-120%
Nitrogen, Nitrate	GP6728/GN14296	C35507-1	mg/l	16.9	250	257	96.0	80-120%
Nitrogen, Nitrite	GP6728/GN14296	C35507-1	mg/l	1.9	250	239	94.8	80-120%
Nitrogen, Nitrite	GP6728/GN14296	C35507-1	mg/l	2.0	250	239	94.8	80-120%
Sulfate	GP6711/GN14260	C35500-1	mg/l	0.47	12.5	13.0	100.2	80-120%
Sulfate	GP6728/GN14296	C35507-1	mg/l	753	250	1000	98.8	80-120%
Total Organic Carbon	GP6713/GN14264	C35507-1	mg/l	1.7	25.0	26.4	98.5	75-125%

Associated Samples:
Batch GP6711: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GP6713: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GP6728: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35507
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	GP6728/GN14296	C35507-1	mg/l	155	250	401	0.2	
Chloride	GP6728/GN14296	C35507-1	mg/l	179	250	401	0.2	
Fluoride	GP6728/GN14296	C35507-1	mg/l	0.12	250	230	0.4	
Fluoride	GP6728/GN14296	C35507-1	mg/l	0.0	250	230	0.4	
Nitrogen, Nitrate	GP6711/GN14260	C35500-1	mg/l	0.0	12.5	11.9	0.0	
Nitrogen, Nitrate	GP6728/GN14296	C35507-1	mg/l	16.9	250	257	0.0	
Nitrogen, Nitrate	GP6728/GN14296	C35507-1	mg/l	16.9	250	257	0.0	
Nitrogen, Nitrite	GP6728/GN14296	C35507-1	mg/l	2.0	250	241	0.8	
Nitrogen, Nitrite	GP6728/GN14296	C35507-1	mg/l	1.9	250	241	0.8	
Sulfate	GP6711/GN14260	C35500-1	mg/l	0.47	12.5	13.0	0.0	
Sulfate	GP6728/GN14296	C35507-1	mg/l	753	250	1000	0.0	

Associated Samples:
Batch GP6711: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
Batch GP6728: C35507-1, C35507-2, C35507-3, C35507-4, C35507-5, C35507-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
ACCUTEST
LABORATORIES

11/20/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C37105

Sampling Date: 11/12/14

Report to:

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Total number of pages in report: **84**

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: Elvin Kumar 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: C37105

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C37105-1	11/12/14	08:30	GB	11/13/14	AQ	Ground Water	HQUST-532A
C37105-2	11/12/14	09:00	GB	11/13/14	AQ	Ground Water	HQUST-526A
C37105-3	11/12/14	09:05	GB	11/13/14	AQ	Ground Water	HQUST-526A(DUP)
C37105-4	11/12/14	09:45	GB	11/13/14	AQ	Ground Water	CEP-528A
C37105-5	11/12/14	10:30	GB	11/13/14	AQ	Ground Water	HQUST-525A
C37105-6	11/12/14	11:00	GB	11/13/14	AQ	Ground Water	CEP-520A
C37105-7	11/12/14	00:00	GB	11/13/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C37105
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	11/20/2014 10:47:42 P

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 11/12/2014 and were received at Accutest on 11/13/2014 properly preserved, at 3.4 Deg. C and intact. These Samples received an Accutest job number of C37105. 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:** VR1140

- Sample(s) C37068-8MS, C37068-8MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Bromoform, Dibromochloromethane are outside control limits. Probable cause due to matrix interference. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS/MSD was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.

Matrix: AQ **Batch ID:** VU949

- Sample(s) C37071-3MS, C37071-3MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP8679

- Sample(s) C37091-1MS, C37091-1MSD, C37091-1SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP7068

- Sample(s) C37007-1MS, C37007-1MSD were used as the QC samples for Nitrogen, Nitrate.
- C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6: Sample analysis for Nitrogen, Nitrate performed past 48-hour hold time. AZ:H1

Matrix: AQ **Batch ID:** GP7089

- Sample(s) C37105-6MS, C37105-6MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN14987

- Sample(s) C36992-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Matrix: AQ **Batch ID:** GN14994

- Sample(s) C37122-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP7084

- Sample(s) C37105-1MS 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: C37105
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/12/14

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37105-1	**HQUST-532A**					
Methyl chloride		1.3	1.0		ug/l	SW846 8260B
Iron		1190	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		194	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		6.1	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		787	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.4	1.0		mg/l	SM5310 C-00
C37105-2	**HQUST-526A**					
Iron		468	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		230	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		2.6	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		743	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.2	1.0		mg/l	SM5310 C-00
C37105-3	**HQUST-526A(DUP)**					
Iron		431	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		194	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		2.4	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		610	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.5	1.0		mg/l	SM5310 C-00
C37105-4	**CEP-528A**					
Chloroform		1.5	0.50		ug/l	SW846 8260B
Iron		11600	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		318	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		26.5	0.50		mg/l	EPA 300/SW846 9056A
Sulfate		1060	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.5	1.0		mg/l	SM5310 C-00
C37105-5	**HQUST-525A**					
Alkalinity, Total as CaCO3		252	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate [a]		3.8	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		784	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.2	1.0		mg/l	SM5310 C-00
C37105-6	**CEP-520A**					
Iron		9000	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		290	5.0		mg/l	SM2320 B-97

Summary of Hits

Job Number: C37105
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/12/14

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Nitrogen, Nitrate [a]		1.8	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		419	25		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		8.2	1.0		mg/l	SM5310 C-00

C37105-7 TRIP BLANK

No hits reported in this sample.

(a) Sample analysis performed past 48-hour hold time. AZ:H1

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C37105-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	U23176.D	1	11/17/14	JC	n/a	n/a	VU949
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:	C37105-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	1.3	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	122%		70-130%
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	83%		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-532A		
Lab Sample ID:	C37105-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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:	C37105-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	1190	200	ug/l	1	11/17/14	11/18/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8679

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-532A		
Lab Sample ID:	C37105-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	194	5.0	mg/l	1	11/15/14 14:00	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	6.1	0.25	mg/l	2.5	11/14/14 12:58	RL	EPA 300/SW846 9056A
Sulfate	787	50	mg/l	100	11/18/14 18:36	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.4	1.0	mg/l	1	11/18/14 13:12	RL	SM5310 C-00

(a) Sample analysis performed past 48-hour hold time. AZ:H1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C37105-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	U23177.D	1	11/17/14	JC	n/a	n/a	VU949
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:	C37105-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	117%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	81%		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-526A		
Lab Sample ID:	C37105-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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:	C37105-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	468	200	ug/l	1	11/17/14	11/18/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8679

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A		
Lab Sample ID:	C37105-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	11/15/14 14:00	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	2.6	0.25	mg/l	2.5	11/14/14 14:02	RL	EPA 300/SW846 9056A
Sulfate	743	25	mg/l	50	11/18/14 18:54	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.2	1.0	mg/l	1	11/18/14 13:12	RL	SM5310 C-00

(a) Sample analysis performed past 48-hour hold time. AZ:H1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A(DUP)		
Lab Sample ID:	C37105-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	U23225.D	1	11/18/14	JC	n/a	n/a	VU951
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(DUP)		
Lab Sample ID:	C37105-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	110%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	81%		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-526A(DUP)		
Lab Sample ID:	C37105-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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(DUP)		
Lab Sample ID:	C37105-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	431	200	ug/l	1	11/17/14	11/18/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8679

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-526A(DUP)		
Lab Sample ID:	C37105-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	194	5.0	mg/l	1	11/15/14 14:00	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	2.4	0.25	mg/l	2.5	11/14/14 14:19	RL	EPA 300/SW846 9056A
Sulfate	610	25	mg/l	50	11/18/14 19:11	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.5	1.0	mg/l	1	11/18/14 13:12	RL	SM5310 C-00

(a) Sample analysis performed past 48-hour hold time. AZ:H1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C37105-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	R30407.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	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	1.5	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-528A		
Lab Sample ID:	C37105-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	108%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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:	CEP-528A		
Lab Sample ID:	C37105-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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:M2
(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:	C37105-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	11600	200	ug/l	1	11/17/14	11/18/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8679

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-528A		
Lab Sample ID:	C37105-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	318	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	26.5	0.50	mg/l	5	11/14/14 16:38	RL	EPA 300/SW846 9056A
Sulfate	1060	50	mg/l	100	11/18/14 19:28	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.5	1.0	mg/l	1	11/18/14 13:12	RL	SM5310 C-00

(a) Sample analysis performed past 48-hour hold time. AZ:H1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C37105-5	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	R30408.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-525A		
Lab Sample ID:	C37105-5	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	113%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	96%		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-525A		
Lab Sample ID:	C37105-5	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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:M2
(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-525A		
Lab Sample ID:	C37105-5	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	11/17/14	11/18/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4400
(2) Prep QC Batch: MP8679

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-525A		
Lab Sample ID:	C37105-5	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	252	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	3.8	0.25	mg/l	2.5	11/14/14 14:54	RL	EPA 300/SW846 9056A
Sulfate	784	50	mg/l	100	11/18/14 19:46	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.2	1.0	mg/l	1	11/18/14 13:12	RL	SM5310 C-00

(a) Sample analysis performed past 48-hour hold time. AZ:H1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C37105-6	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	R30409.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-520A		
Lab Sample ID:	C37105-6	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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	111%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	96%		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:	CEP-520A		
Lab Sample ID:	C37105-6	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
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:M2
(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:	C37105-6	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	9000	200	ug/l	1	11/17/14	11/18/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8679

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-520A		
Lab Sample ID:	C37105-6	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/13/14
		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	290	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate [a]	1.8	0.25	mg/l	2.5	11/14/14 15:11	RL	EPA 300/SW846 9056A
Sulfate	419	25	mg/l	50	11/18/14 20:03	RL	EPA 300/SW846 9056A
Total Organic Carbon	8.2	1.0	mg/l	1	11/18/14 13:12	RL	SM5310 C-00

(a) Sample analysis performed past 48-hour hold time. AZ:H1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37105-7	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/13/14
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	R30406.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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:	TRIP BLANK		
Lab Sample ID:	C37105-7	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/13/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [b]	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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:	C37105-7	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/13/14
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:M2
(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: C37105
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
H1	Sample analysis performed past holding time.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
T6	The reported result cannot be used for compliance purposes.

PHOENIX ACCUTEST® LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 8034010352 3 | Bottle Order Control #
Accutest Quote # | Accutest NC Job #: C C37105

Client / Reporting Information

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

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	NaHSO4	MEOH	ENCORE	Alkinity - No3 - So4	Fe (total)	TOC	VOC 8260	LAB USE ONLY
1	HQUST-532A	11/12/14	0830	GB	GW	7									X	X	X	X	
2	HQUST-526A	11/12/14	0900	GB	GW	7									X	X	X	X	
3	HQUST-526A (dup)	11/12/14	0905	GB	GW	7									X	X	X	X	
4	CEP-528A	11/12/14	0945	GB	GW	7									X	X	X	X	
5	HQUST-525A	11/12/14	1030	GB	GW	7									X	X	X	X	
6	CEP-520A	11/12/14	1100	GB	GW	7									X	X	X	X	
7	TRIP BLANK					3												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

34°

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 G Beyarano	11/12/14 1330	1 [signature]	2 [signature]	11/12/14 1800	2 Fedex
Relinquished By: 3 Fedex	Date Time: 11/13/14 0945	Received By: 3 [signature]	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Y	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N; Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N	Cooler Temp. 3.4°C

5.2 5

C37105: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C37105 **Client:** CITY OF TUSCON **Project:** HQUST

Date / Time Received: 11/13/2014 9:56:00 AM **Delivery Method:** FedEx **Airbill #'s:** 803401035231

Cooler Temps (Initial/Adjusted): #1: (3.4/3.4);

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

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

C37105: 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: C37105
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
VR1140-MB	R30402.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

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: C37105
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
VR1140-MB	R30402.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	70-130%
2037-26-5	Toluene-D8	103%	70-130%

Method Blank Summary

Job Number: C37105
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
VR1140-MB	R30402.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	70-130%

Method Blank Summary

Job Number: C37105
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
VU949-MB	U23171.D	1	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	20	ug/l	
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	

Method Blank Summary

Job Number: C37105
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
VU949-MB	U23171.D	1	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	110%	70-130%
2037-26-5	Toluene-D8	99%	70-130%

Method Blank Summary

Job Number: C37105
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
VU949-MB	U23171.D	1	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	85%	70-130%

Method Blank Summary

Job Number: C37105
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
VU951-MB	U23213.D	1	11/18/14	JC	n/a	n/a	VU951

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

C37105-3

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: C37105
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
VU951-MB	U23213.D	1	11/18/14	JC	n/a	n/a	VU951

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

C37105-3

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	112%	70-130%
2037-26-5	Toluene-D8	96%	70-130%

Method Blank Summary

Job Number: C37105
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
VU951-MB	U23213.D	1	11/18/14	JC	n/a	n/a	VU951

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

C37105-3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	85%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VR1140-BS	R30399.D	1	11/16/14	JC	n/a	n/a	VR1140
VR1140-BSD	R30400.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	86.2	108	81.3	102	6	38-159/24
71-43-2	Benzene	20	17.0	85	16.8	84	1	77-122/25
108-86-1	Bromobenzene	20	16.6	83	16.9	85	2	76-126/17
74-97-5	Bromochloromethane	20	17.3	87	16.5	83	5	77-130/17
75-27-4	Bromodichloromethane	20	16.1	81	15.8	79	2	75-127/16
75-25-2	Bromoform	20	15.9	80	15.9	80	0	69-141/17
104-51-8	n-Butylbenzene	20	19.4	97	19.4	97	0	72-129/18
135-98-8	sec-Butylbenzene	20	19.0	95	19.2	96	1	74-128/18
98-06-6	tert-Butylbenzene	20	18.2	91	18.4	92	1	73-127/18
108-90-7	Chlorobenzene	20	16.3	82	16.5	83	1	77-122/16
75-00-3	Chloroethane	20	22.2	111	21.1	106	5	69-133/18
67-66-3	Chloroform	20	17.8	89	17.1	86	4	74-126/17
95-49-8	o-Chlorotoluene	20	18.4	92	18.7	94	2	72-127/20
106-43-4	p-Chlorotoluene	20	18.5	93	18.8	94	2	68-127/18
75-15-0	Carbon disulfide	20	14.4	72	13.4	67	7	56-137/19
56-23-5	Carbon tetrachloride	20	15.9	80	15.1	76	5	71-133/19
75-34-3	1,1-Dichloroethane	20	17.7	89	17.1	86	3	71-125/17
75-35-4	1,1-Dichloroethylene	20	15.8	79	14.9	75	6	66-125/20
563-58-6	1,1-Dichloropropene	20	17.5	88	16.8	84	4	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	18.5	93	18.0	90	3	65-131/20
106-93-4	1,2-Dibromoethane	20	16.3	82	16.5	83	1	75-135/17
107-06-2	1,2-Dichloroethane	20	16.2	81	15.7	79	3	71-131/17
78-87-5	1,2-Dichloropropane	20	17.7	89	17.6	88	1	78-124/16
142-28-9	1,3-Dichloropropane	20	17.3	87	17.3	87	0	78-123/16
108-20-3	Di-Isopropyl ether	20	19.3	97	18.8	94	3	68-129/17
594-20-7	2,2-Dichloropropane	20	18.1	91	17.1	86	6	70-131/19
124-48-1	Dibromochloromethane	20	15.9	80	15.8	79	1	76-132/16
75-71-8	Dichlorodifluoromethane	20	22.0	110	19.7	99	11	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	17.9	90	17.3	87	3	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	17.0	85	17.0	85	0	72-130/16
541-73-1	m-Dichlorobenzene	20	16.9	85	17.1	86	1	75-124/16
95-50-1	o-Dichlorobenzene	20	17.2	86	17.3	87	1	76-124/16
106-46-7	p-Dichlorobenzene	20	16.9	85	17.0	85	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	16.8	84	16.0	80	5	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	16.1	81	16.1	81	0	71-126/16
100-41-4	Ethylbenzene	20	17.4	87	17.6	88	1	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VR1140-BS	R30399.D	1	11/16/14	JC	n/a	n/a	VR1140
VR1140-BSD	R30400.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	89.8	112	88.9	111	1	67-150/22
87-68-3	Hexachlorobutadiene	20	16.1	81	16.1	81	0	69-135/20
98-82-8	Isopropylbenzene	20	17.7	89	17.7	89	0	61-125/17
99-87-6	p-Isopropyltoluene	20	18.8	94	19.1	96	2	68-127/18
108-10-1	4-Methyl-2-pentanone	80	85.7	107	83.7	105	2	71-142/21
74-83-9	Methyl bromide	20	23.1	116	22.0	110	5	68-132/18
74-87-3	Methyl chloride	20	20.9	105	20.0	100	4	39-150/28
74-95-3	Methylene bromide	20	17.0	85	16.8	84	1	77-127/16
75-09-2	Methylene chloride	20	16.8	84	16.1	81	4	67-128/18
78-93-3	Methyl ethyl ketone	80	89.8	112	85.2	107	5	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	18.7	94	18.1	91	3	73-132/17
91-20-3	Naphthalene	20	17.6	88	17.5	88	1	70-136/20
103-65-1	n-Propylbenzene	20	18.6	93	18.7	94	1	71-127/17
100-42-5	Styrene	20	18.1	91	18.2	91	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	19.5	98	19.0	95	3	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	16.3	82	16.4	82	1	77-130/16
71-55-6	1,1,1-Trichloroethane	20	17.5	88	16.4	82	6	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	19.2	96	19.2	96	0	77-129/17
79-00-5	1,1,2-Trichloroethane	20	16.9	85	17.1	86	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	17.2	86	17.5	88	2	70-133/18
96-18-4	1,2,3-Trichloropropane	20	17.0	85	17.0	85	0	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	16.8	84	17.1	86	2	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	18.6	93	18.8	94	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	19.3	97	19.6	98	2	77-129/17
127-18-4	Tetrachloroethylene	20	15.2	76	15.4	77	1	69-127/20
108-88-3	Toluene	20	16.8	84	17.1	86	2	75-122/17
79-01-6	Trichloroethylene	20	16.3	82	16.2	81	1	78-123/17
75-69-4	Trichlorofluoromethane	20	22.6	113	20.9	105	8	65-136/23
75-01-4	Vinyl chloride	20	20.9	105	20.1	101	4	57-146/22
1330-20-7	Xylene (total)	60	52.0	87	52.7	88	1	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	108%	102%	70-130%
2037-26-5	Toluene-D8	101%	102%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VR1140-BS	R30399.D	1	11/16/14	JC	n/a	n/a	VR1140
VR1140-BSD	R30400.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VU949-BS	U23168.D	1	11/17/14	JC	n/a	n/a	VU949
VU949-BSD	U23169.D	1	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	78.0	98	75.2	94	4	38-159/24
71-43-2	Benzene	20	20.8	104	20.0	100	4	77-122/25
108-86-1	Bromobenzene	20	20.8	104	20.3	102	2	76-126/17
74-97-5	Bromochloromethane	20	20.5	103	20.0	100	2	77-130/17
75-27-4	Bromodichloromethane	20	20.9	105	19.9	100	5	75-127/16
75-25-2	Bromoform	20	19.3	97	19.0	95	2	69-141/17
104-51-8	n-Butylbenzene	20	21.2	106	20.3	102	4	72-129/18
135-98-8	sec-Butylbenzene	20	21.5	108	20.6	103	4	74-128/18
98-06-6	tert-Butylbenzene	20	21.1	106	20.0	100	5	73-127/18
108-90-7	Chlorobenzene	20	20.2	101	19.9	100	1	77-122/16
75-00-3	Chloroethane	20	18.3	92	17.7	89	3	69-133/18
67-66-3	Chloroform	20	20.4	102	19.6	98	4	74-126/17
95-49-8	o-Chlorotoluene	20	21.4	107	20.5	103	4	72-127/20
106-43-4	p-Chlorotoluene	20	20.6	103	19.8	99	4	68-127/18
75-15-0	Carbon disulfide	20	18.1	91	17.5	88	3	56-137/19
56-23-5	Carbon tetrachloride	20	22.1	111	21.0	105	5	71-133/19
75-34-3	1,1-Dichloroethane	20	19.9	100	19.3	97	3	71-125/17
75-35-4	1,1-Dichloroethylene	20	18.9	95	18.3	92	3	66-125/20
563-58-6	1,1-Dichloropropene	20	22.0	110	21.2	106	4	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	21.3	107	20.6	103	3	65-131/20
106-93-4	1,2-Dibromoethane	20	20.6	103	20.5	103	0	75-135/17
107-06-2	1,2-Dichloroethane	20	21.3	107	20.5	103	4	71-131/17
78-87-5	1,2-Dichloropropane	20	20.7	104	19.9	100	4	78-124/16
142-28-9	1,3-Dichloropropane	20	20.7	104	20.3	102	2	78-123/16
108-20-3	Di-Isopropyl ether	20	21.3	107	20.6	103	3	68-129/17
594-20-7	2,2-Dichloropropane	20	22.4	112	21.7	109	3	70-131/19
124-48-1	Dibromochloromethane	20	21.4	107	21.1	106	1	76-132/16
75-71-8	Dichlorodifluoromethane	20	23.4	117	23.1	116	1	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	20.1	101	19.4	97	4	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	22.0	110	21.3	107	3	72-130/16
541-73-1	m-Dichlorobenzene	20	20.2	101	19.6	98	3	75-124/16
95-50-1	o-Dichlorobenzene	20	20.2	101	19.7	99	3	76-124/16
106-46-7	p-Dichlorobenzene	20	20.0	100	19.4	97	3	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	19.5	98	18.7	94	4	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	18.2	91	17.9	90	2	71-126/16
100-41-4	Ethylbenzene	20	21.0	105	20.5	103	2	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VU949-BS	U23168.D	1	11/17/14	JC	n/a	n/a	VU949
VU949-BSD	U23169.D	1	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	91.4	114	89.8	112	2	67-150/22
87-68-3	Hexachlorobutadiene	20	20.5	103	20.0	100	2	69-135/20
98-82-8	Isopropylbenzene	20	21.2	106	20.5	103	3	61-125/17
99-87-6	p-Isopropyltoluene	20	21.7	109	20.6	103	5	68-127/18
108-10-1	4-Methyl-2-pentanone	80	90.7	113	87.2	109	4	71-142/21
74-83-9	Methyl bromide	20	19.8	99	19.2	96	3	68-132/18
74-87-3	Methyl chloride	20	21.4	107	20.3	102	5	39-150/28
74-95-3	Methylene bromide	20	21.1	106	20.3	102	4	77-127/16
75-09-2	Methylene chloride	20	19.1	96	18.5	93	3	67-128/18
78-93-3	Methyl ethyl ketone	80	82.4	103	81.2	102	1	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	21.3	107	20.9	105	2	73-132/17
91-20-3	Naphthalene	20	19.8	99	19.3	97	3	70-136/20
103-65-1	n-Propylbenzene	20	21.1	106	20.1	101	5	71-127/17
100-42-5	Styrene	20	18.3	92	18.0	90	2	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	22.0	110	21.4	107	3	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	20.7	104	20.5	103	1	77-130/16
71-55-6	1,1,1-Trichloroethane	20	21.1	106	20.2	101	4	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	21.0	105	20.4	102	3	77-129/17
79-00-5	1,1,2-Trichloroethane	20	19.6	98	19.4	97	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	20.3	102	19.9	100	2	70-133/18
96-18-4	1,2,3-Trichloropropane	20	22.4	112	22.2	111	1	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	20.4	102	20.0	100	2	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	21.2	106	20.3	102	4	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	22.1	111	21.3	107	4	77-129/17
127-18-4	Tetrachloroethylene	20	19.8	99	19.2	96	3	69-127/20
108-88-3	Toluene	20	20.4	102	19.8	99	3	75-122/17
79-01-6	Trichloroethylene	20	20.3	102	19.3	97	5	78-123/17
75-69-4	Trichlorofluoromethane	20	21.8	109	21.3	107	2	65-136/23
75-01-4	Vinyl chloride	20	20.7	104	19.9	100	4	57-146/22
1330-20-7	Xylene (total)	60	59.1	99	57.8	96	2	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	99%	70-130%
2037-26-5	Toluene-D8	100%	102%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VU949-BS	U23168.D	1	11/17/14	JC	n/a	n/a	VU949
VU949-BSD	U23169.D	1	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	99%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VU951-BS	U23210.D	1	11/18/14	JC	n/a	n/a	VU951
VU951-BSD	U23216.D	1	11/18/14	JC	n/a	n/a	VU951

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

C37105-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	76.9	96	81.4	102	6	38-159/24
71-43-2	Benzene	20	20.7	104	20.7	104	0	77-122/25
108-86-1	Bromobenzene	20	20.1	101	20.1	101	0	76-126/17
74-97-5	Bromochloromethane	20	20.0	100	20.8	104	4	77-130/17
75-27-4	Bromodichloromethane	20	20.9	105	20.5	103	2	75-127/16
75-25-2	Bromoform	20	19.2	96	18.6	93	3	69-141/17
104-51-8	n-Butylbenzene	20	20.2	101	19.9	100	1	72-129/18
135-98-8	sec-Butylbenzene	20	20.5	103	20.1	101	2	74-128/18
98-06-6	tert-Butylbenzene	20	20.1	101	19.6	98	3	73-127/18
108-90-7	Chlorobenzene	20	19.9	100	19.8	99	1	77-122/16
75-00-3	Chloroethane	20	18.0	90	18.4	92	2	69-133/18
67-66-3	Chloroform	20	20.3	102	20.7	104	2	74-126/17
95-49-8	o-Chlorotoluene	20	20.8	104	20.6	103	1	72-127/20
106-43-4	p-Chlorotoluene	20	19.8	99	19.7	99	1	68-127/18
75-15-0	Carbon disulfide	20	17.5	88	17.3	87	1	56-137/19
56-23-5	Carbon tetrachloride	20	22.1	111	21.4	107	3	71-133/19
75-34-3	1,1-Dichloroethane	20	19.9	100	20.2	101	1	71-125/17
75-35-4	1,1-Dichloroethylene	20	18.3	92	18.2	91	1	66-125/20
563-58-6	1,1-Dichloropropene	20	22.0	110	21.6	108	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	20.7	104	20.3	102	2	65-131/20
106-93-4	1,2-Dibromoethane	20	20.7	104	20.5	103	1	75-135/17
107-06-2	1,2-Dichloroethane	20	21.4	107	21.5	108	0	71-131/17
78-87-5	1,2-Dichloropropane	20	20.9	105	20.9	105	0	78-124/16
142-28-9	1,3-Dichloropropane	20	20.7	104	20.6	103	0	78-123/16
108-20-3	Di-Isopropyl ether	20	21.5	108	21.5	108	0	68-129/17
594-20-7	2,2-Dichloropropane	20	22.0	110	22.2	111	1	70-131/19
124-48-1	Dibromochloromethane	20	21.5	108	20.7	104	4	76-132/16
75-71-8	Dichlorodifluoromethane	20	21.3	107	22.9	115	7	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	19.7	99	20.0	100	2	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	22.0	110	21.7	109	1	72-130/16
541-73-1	m-Dichlorobenzene	20	19.4	97	19.3	97	1	75-124/16
95-50-1	o-Dichlorobenzene	20	19.1	96	19.2	96	1	76-124/16
106-46-7	p-Dichlorobenzene	20	19.1	96	19.3	97	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	19.1	96	19.3	97	1	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	18.4	92	17.9	90	3	71-126/16
100-41-4	Ethylbenzene	20	20.8	104	20.5	103	1	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VU951-BS	U23210.D	1	11/18/14	JC	n/a	n/a	VU951
VU951-BSD	U23216.D	1	11/18/14	JC	n/a	n/a	VU951

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

C37105-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	92.7	116	91.0	114	2	67-150/22
87-68-3	Hexachlorobutadiene	20	19.8	99	19.4	97	2	69-135/20
98-82-8	Isopropylbenzene	20	20.8	104	20.4	102	2	61-125/17
99-87-6	p-Isopropyltoluene	20	20.5	103	20.5	103	0	68-127/18
108-10-1	4-Methyl-2-pentanone	80	92.9	116	92.2	115	1	71-142/21
74-83-9	Methyl bromide	20	19.2	96	19.7	99	3	68-132/18
74-87-3	Methyl chloride	20	21.0	105	21.9	110	4	39-150/28
74-95-3	Methylene bromide	20	21.1	106	21.4	107	1	77-127/16
75-09-2	Methylene chloride	20	18.8	94	20.9	105	11	67-128/18
78-93-3	Methyl ethyl ketone	80	80.8	101	83.4	104	3	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	21.3	107	20.8	104	2	73-132/17
91-20-3	Naphthalene	20	18.9	95	18.6	93	2	70-136/20
103-65-1	n-Propylbenzene	20	20.3	102	19.8	99	2	71-127/17
100-42-5	Styrene	20	17.9	90	17.8	89	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	21.8	109	21.9	110	0	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	20.4	102	20.2	101	1	77-130/16
71-55-6	1,1,1-Trichloroethane	20	20.9	105	20.6	103	1	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	19.8	99	19.6	98	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	19.5	98	19.1	96	2	70-133/18
96-18-4	1,2,3-Trichloropropane	20	22.8	114	22.0	110	4	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	19.4	97	19.5	98	1	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	20.3	102	20.1	101	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	21.3	107	21.0	105	1	77-129/17
127-18-4	Tetrachloroethylene	20	19.6	98	18.8	94	4	69-127/20
108-88-3	Toluene	20	20.3	102	19.8	99	2	75-122/17
79-01-6	Trichloroethylene	20	20.1	101	19.8	99	2	78-123/17
75-69-4	Trichlorofluoromethane	20	21.7	109	22.4	112	3	65-136/23
75-01-4	Vinyl chloride	20	19.0	95	21.0	105	10	57-146/22
1330-20-7	Xylene (total)	60	57.8	96	57.2	95	1	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	107%	70-130%
2037-26-5	Toluene-D8	100%	98%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37105
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
VU951-BS	U23210.D	1	11/18/14	JC	n/a	n/a	VU951
VU951-BSD	U23216.D	1	11/18/14	JC	n/a	n/a	VU951

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

C37105-3

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	70-130%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C37105
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
VU949-LCS	U23170.D	1	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C37105
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
VU951-LCS	U23212.D	1	11/18/14	JC	n/a	n/a	VU951

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

C37105-3

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	108%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37105
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
C37068-8MS	R30422.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8MSD	R30423.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8	R30419.D	5	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Compound	C37068-8 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	484	121	400	473	118	2	38-159/24
71-43-2	Benzene	1.1	J	100	88.5	87	100	89.4	88	1	77-122/16
108-86-1	Bromobenzene	ND		100	87.0	87	100	89.7	90	3	76-126/17
74-97-5	Bromochloromethane	ND		100	91.4	91	100	91.0	91	0	77-130/17
75-27-4	Bromodichloromethane	ND		100	77.8	78	100	77.3	77	1	75-127/16
75-25-2	Bromoform	ND		100	58.4	58* [a]	100	60.9	61* [a]	4	69-141/17
104-51-8	n-Butylbenzene	ND		100	93.4	93	100	98.3	98	5	72-129/18
135-98-8	sec-Butylbenzene	ND		100	95.1	95	100	100	100	5	74-128/18
98-06-6	tert-Butylbenzene	ND		100	91.6	92	100	96.2	96	5	73-127/18
108-90-7	Chlorobenzene	ND		100	84.1	84	100	87.0	87	3	77-122/16
75-00-3	Chloroethane	ND		100	114	114	100	115	115	1	69-133/18
67-66-3	Chloroform	ND		100	92.4	92	100	91.6	92	1	74-126/17
95-49-8	o-Chlorotoluene	ND		100	92.9	93	100	96.6	97	4	72-127/20
106-43-4	p-Chlorotoluene	ND		100	96.9	97	100	99.1	99	2	68-127/18
75-15-0	Carbon disulfide	ND		100	56.1	56	100	57.2	57	2	56-137/19
56-23-5	Carbon tetrachloride	ND		100	78.0	78	100	79.2	79	2	71-133/19
75-34-3	1,1-Dichloroethane	ND		100	92.8	93	100	92.6	93	0	71-125/17
75-35-4	1,1-Dichloroethylene	ND		100	82.5	83	100	83.4	83	1	66-125/20
563-58-6	1,1-Dichloropropene	ND		100	88.5	89	100	90.0	90	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	90.7	91	100	90.9	91	0	65-131/20
106-93-4	1,2-Dibromoethane	ND		100	85.6	86	100	87.1	87	2	75-135/17
107-06-2	1,2-Dichloroethane	ND		100	82.2	82	100	81.8	82	0	71-131/17
78-87-5	1,2-Dichloropropane	ND		100	91.8	92	100	92.9	93	1	78-124/16
142-28-9	1,3-Dichloropropane	ND		100	89.4	89	100	91.3	91	2	78-123/16
108-20-3	Di-Isopropyl ether	ND		100	101	101	100	101	101	0	68-129/17
594-20-7	2,2-Dichloropropane	ND		100	77.2	77	100	76.6	77	1	70-131/19
124-48-1	Dibromochloromethane	ND		100	67.9	68* [a]	100	70.6	71* [a]	4	76-132/16
75-71-8	Dichlorodifluoromethane	ND		100	110	110	100	105	105	5	32-168/28
156-59-2	cis-1,2-Dichloroethylene	ND		100	93.3	93	100	93.5	94	0	73-126/17
10061-01-5	cis-1,3-Dichloropropene	ND		100	76.5	77	100	77.9	78	2	72-130/16
541-73-1	m-Dichlorobenzene	ND		100	86.7	87	100	89.9	90	4	75-124/16
95-50-1	o-Dichlorobenzene	ND		100	88.2	88	100	90.9	91	3	76-124/16
106-46-7	p-Dichlorobenzene	ND		100	86.5	87	100	90.0	90	4	75-124/16
156-60-5	trans-1,2-Dichloroethylene	ND		100	87.5	88	100	88.6	89	1	71-126/18
10061-02-6	trans-1,3-Dichloropropene	ND		100	71.0	71	100	74.3	74	5	71-126/16
100-41-4	Ethylbenzene	ND		100	89.6	90	100	92.4	92	3	76-126/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37105
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
C37068-8MS	R30422.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8MSD	R30423.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8	R30419.D	5	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Compound	C37068-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		400	468	117	400	476	119	2	67-150/22
87-68-3	Hexachlorobutadiene	ND		100	69.8	70	100	77.6	78	11	69-135/20
98-82-8	Isopropylbenzene	ND		100	89.1	89	100	92.9	93	4	61-125/17
99-87-6	p-Isopropyltoluene	ND		100	94.2	94	100	98.4	98	4	68-127/18
108-10-1	4-Methyl-2-pentanone	ND		400	441	110	400	441	110	0	71-142/21
74-83-9	Methyl bromide	ND		100	121	121	100	118	118	3	68-132/18
74-87-3	Methyl chloride	ND		100	111	111	100	114	114	3	39-150/28
74-95-3	Methylene bromide	ND		100	88.2	88	100	87.7	88	1	77-127/16
75-09-2	Methylene chloride	ND		100	88.1	88	100	86.9	87	1	67-128/18
78-93-3	Methyl ethyl ketone	ND		400	479	120	400	467	117	3	56-155/23
1634-04-4	Methyl Tert Butyl Ether	128		100	223	95	100	220	92	1	73-132/17
91-20-3	Naphthalene	ND		100	85.5	86	100	90.5	91	6	70-136/20
103-65-1	n-Propylbenzene	ND		100	94.1	94	100	98.6	99	5	71-127/17
100-42-5	Styrene	ND		100	91.1	91	100	94.3	94	3	72-134/16
994-05-8	Tert-Amyl Methyl Ether	ND		100	101	101	100	101	101	0	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	84.1	84	100	85.5	86	2	77-130/16
71-55-6	1,1,1-Trichloroethane	ND		100	89.5	90	100	89.0	89	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	102	102	100	104	104	2	77-129/17
79-00-5	1,1,2-Trichloroethane	ND		100	88.6	89	100	90.7	91	2	77-125/16
87-61-6	1,2,3-Trichlorobenzene	ND		100	80.7	81	100	86.9	87	7	70-133/18
96-18-4	1,2,3-Trichloropropane	ND		100	73.4	73	100	76.0	76	3	69-126/18
120-82-1	1,2,4-Trichlorobenzene	ND		100	79.9	80	100	84.8	85	6	68-129/17
95-63-6	1,2,4-Trimethylbenzene	ND		100	94.3	94	100	98.0	98	4	74-129/17
108-67-8	1,3,5-Trimethylbenzene	ND		100	97.9	98	100	102	102	4	77-129/17
127-18-4	Tetrachloroethylene	ND		100	75.3	75	100	79.9	80	6	69-127/20
108-88-3	Toluene	ND		100	87.3	87	100	90.7	91	4	75-122/17
79-01-6	Trichloroethylene	ND		100	85.3	85	100	87.4	87	2	78-123/17
75-69-4	Trichlorofluoromethane	ND		100	114	114	100	112	112	2	65-136/23
75-01-4	Vinyl chloride	ND		100	107	107	100	107	107	0	57-146/22
1330-20-7	Xylene (total)	ND		300	267	89	300	277	92	4	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C37068-8	Limits
1868-53-7	Dibromofluoromethane	110%	105%	111%	70-130%
2037-26-5	Toluene-D8	100%	103%	102%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37105
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
C37068-8MS	R30422.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8MSD	R30423.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8	R30419.D	5	11/16/14	JC	n/a	n/a	VR1140

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

C37105-4, C37105-5, C37105-6, C37105-7

CAS No.	Surrogate Recoveries	MS	MSD	C37068-8	Limits
460-00-4	4-Bromofluorobenzene	100%	101%	94%	70-130%

(a) Outside control limits due to matrix interference. AZ:M2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37105
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
C37071-3MS	U23190.D	50	11/17/14	JC	n/a	n/a	VU949
C37071-3MSD	U23191.D	50	11/17/14	JC	n/a	n/a	VU949
C37071-3	U23182.D	50	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Compound	C37071-3 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	4200	105	4000	4040	101	4	38-159/24
71-43-2	Benzene	ND		1000	1050	105	1000	1060	106	1	77-122/16
108-86-1	Bromobenzene	ND		1000	1030	103	1000	1000	100	3	76-126/17
74-97-5	Bromochloromethane	ND		1000	1090	109	1000	1020	102	7	77-130/17
75-27-4	Bromodichloromethane	ND		1000	1020	102	1000	1000	100	2	75-127/16
75-25-2	Bromoform	ND		1000	811	81	1000	816	82	1	69-141/17
104-51-8	n-Butylbenzene	ND		1000	945	95	1000	1000	100	6	72-129/18
135-98-8	sec-Butylbenzene	ND		1000	965	97	1000	1040	104	7	74-128/18
98-06-6	tert-Butylbenzene	ND		1000	968	97	1000	1020	102	5	73-127/18
108-90-7	Chlorobenzene	ND		1000	987	99	1000	1010	101	2	77-122/16
75-00-3	Chloroethane	ND		1000	966	97	1000	937	94	3	69-133/18
67-66-3	Chloroform	ND		1000	1090	109	1000	1030	103	6	74-126/17
95-49-8	o-Chlorotoluene	ND		1000	971	97	1000	1040	104	7	72-127/20
106-43-4	p-Chlorotoluene	ND		1000	991	99	1000	990	99	0	68-127/18
75-15-0	Carbon disulfide	ND		1000	720	72	1000	743	74	3	56-137/19
56-23-5	Carbon tetrachloride	ND		1000	1050	105	1000	1140	114	8	71-133/19
75-34-3	1,1-Dichloroethane	26.9	J	1000	1090	106	1000	1040	101	5	71-125/17
75-35-4	1,1-Dichloroethylene	138		1000	1080	94	1000	1110	97	3	66-125/20
563-58-6	1,1-Dichloropropene	ND		1000	1060	106	1000	1150	115	8	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		1000	1010	101	1000	1000	100	1	65-131/20
106-93-4	1,2-Dibromoethane	ND		1000	1010	101	1000	1040	104	3	75-135/17
107-06-2	1,2-Dichloroethane	ND		1000	1100	110	1000	1090	109	1	71-131/17
78-87-5	1,2-Dichloropropane	ND		1000	1060	106	1000	1060	106	0	78-124/16
142-28-9	1,3-Dichloropropane	ND		1000	1030	103	1000	1040	104	1	78-123/16
108-20-3	Di-Isopropyl ether	ND		1000	1140	114	1000	1080	108	5	68-129/17
594-20-7	2,2-Dichloropropane	ND		1000	1070	107	1000	1060	106	1	70-131/19
124-48-1	Dibromochloromethane	ND		1000	955	96	1000	973	97	2	76-132/16
75-71-8	Dichlorodifluoromethane	ND		1000	1200	120	1000	1210	121	1	32-168/28
156-59-2	cis-1,2-Dichloroethylene	3380		1000	4260	88	1000	4290	91	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	ND		1000	1070	107	1000	1060	106	1	72-130/16
541-73-1	m-Dichlorobenzene	ND		1000	983	98	1000	974	97	1	75-124/16
95-50-1	o-Dichlorobenzene	25.9	J	1000	1010	98	1000	998	97	1	76-124/16
106-46-7	p-Dichlorobenzene	ND		1000	973	97	1000	961	96	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	ND		1000	1000	100	1000	981	98	2	71-126/18
10061-02-6	trans-1,3-Dichloropropene	ND		1000	871	87	1000	883	88	1	71-126/16
100-41-4	Ethylbenzene	ND		1000	1010	101	1000	1050	105	4	76-126/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37105
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
C37071-3MS	U23190.D	50	11/17/14	JC	n/a	n/a	VU949
C37071-3MSD	U23191.D	50	11/17/14	JC	n/a	n/a	VU949
C37071-3	U23182.D	50	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Compound	C37071-3 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	4480	112	4000	4610	115	3	67-150/22
87-68-3	Hexachlorobutadiene	ND		1000	910	91	1000	945	95	4	69-135/20
98-82-8	Isopropylbenzene	ND		1000	994	99	1000	1060	106	6	61-125/17
99-87-6	p-Isopropyltoluene	ND		1000	978	98	1000	1040	104	6	68-127/18
108-10-1	4-Methyl-2-pentanone	ND		4000	4520	113	4000	4590	115	2	71-142/21
74-83-9	Methyl bromide	ND		1000	1030	103	1000	988	99	4	68-132/18
74-87-3	Methyl chloride	ND		1000	1150	115	1000	1090	109	5	39-150/28
74-95-3	Methylene bromide	ND		1000	1070	107	1000	1060	106	1	77-127/16
75-09-2	Methylene chloride	ND		1000	1010	101	1000	954	95	6	67-128/18
78-93-3	Methyl ethyl ketone	ND		4000	4370	109	4000	4160	104	5	56-155/23
1634-04-4	Methyl Tert Butyl Ether	ND		1000	1120	112	1000	1080	108	4	73-132/17
91-20-3	Naphthalene	ND		1000	953	95	1000	959	96	1	70-136/20
103-65-1	n-Propylbenzene	ND		1000	976	98	1000	1020	102	4	71-127/17
100-42-5	Styrene	ND		1000	878	88	1000	902	90	3	72-134/16
994-05-8	Tert-Amyl Methyl Ether	ND		1000	1160	116	1000	1100	110	5	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	1010	101	1000	1030	103	2	77-130/16
71-55-6	1,1,1-Trichloroethane	ND		1000	1060	106	1000	1080	108	2	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	1040	104	1000	1030	103	1	77-129/17
79-00-5	1,1,2-Trichloroethane	ND		1000	984	98	1000	1000	100	2	77-125/16
87-61-6	1,2,3-Trichlorobenzene	ND		1000	973	97	1000	964	96	1	70-133/18
96-18-4	1,2,3-Trichloropropane	ND		1000	1040	104	1000	1050	105	1	69-126/18
120-82-1	1,2,4-Trichlorobenzene	ND		1000	969	97	1000	960	96	1	68-129/17
95-63-6	1,2,4-Trimethylbenzene	ND		1000	1010	101	1000	1020	102	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	ND		1000	1040	104	1000	1070	107	3	77-129/17
127-18-4	Tetrachloroethylene	711		1000	1570	86	1000	1700	99	8	69-127/20
108-88-3	Toluene	ND		1000	981	98	1000	1020	102	4	75-122/17
79-01-6	Trichloroethylene	1290		1000	2180	89	1000	2300	101	5	78-123/17
75-69-4	Trichlorofluoromethane	ND		1000	1110	111	1000	1120	112	1	65-136/23
75-01-4	Vinyl chloride	ND		1000	1110	111	1000	1090	109	2	57-146/22
1330-20-7	Xylene (total)	ND		3000	2830	94	3000	2960	99	4	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C37071-3	Limits
1868-53-7	Dibromofluoromethane	109%	102%	113%	70-130%
2037-26-5	Toluene-D8	97%	101%	95%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37105
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
C37071-3MS	U23190.D	50	11/17/14	JC	n/a	n/a	VU949
C37071-3MSD	U23191.D	50	11/17/14	JC	n/a	n/a	VU949
C37071-3	U23182.D	50	11/17/14	JC	n/a	n/a	VU949

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

C37105-1, C37105-2

CAS No.	Surrogate Recoveries	MS	MSD	C37071-3	Limits
460-00-4	4-Bromofluorobenzene	98%	99%	78%	70-130%

* = 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: C37105
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8679
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/17/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.4		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15		
Calcium	5000	7.1	12		
Chromium	10	.3	.41		
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12	2.6	<200
Lead	10	.7	.85		
Lithium	50		2		
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12		
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	13		
Strontium	10	.2	.24		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2		

Associated samples MP8679: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6

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: C37105
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8679 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/17/14

Metal	C37091-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum					
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron					
Cadmium	anr				
Calcium	anr				
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	361	14400	12500	112.3	75-125
Lead	anr				
Lithium					
Magnesium	anr				
Manganese					
Molybdenum	anr				
Nickel	anr				
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	anr				

Associated samples MP8679: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6

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: C37105
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8679 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/17/14

Metal	C37091-1 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	361	14700	12500	114.7	2.1	20
Lead	anr					
Lithium						
Magnesium	anr					
Manganese						
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP8679: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6

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: C37105
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8679
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/17/14

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	14100	12500	112.8	80-120
Lead	anr			
Lithium				
Magnesium	anr			
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP8679: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: C37105
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8679
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/17/14

Metal	C37091-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	361	355	1.7	0-10
Lead	anr			
Lithium				
Magnesium	anr			
Manganese				
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP8679: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6

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

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: C37105
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	GN14987	5.0	0.0	mg/l	250	242	96.8	75-125%
Alkalinity, Total as CaCO3	GN14994	5.0	0.0	mg/l	250	246	98.4	75-125%
Chloride	GP7068/GN14985	0.50	0.0	mg/l	5	4.90	98.0	90-110%
Chloride	GP7089/GN15018	0.50	0.0	mg/l	5	4.88	97.6	90-110%
Fluoride	GP7089/GN15018	0.10	0.0	mg/l	5	4.86	97.2	90-110%
Nitrogen, Nitrate	GP7068/GN14985	0.10	0.0	mg/l	5	5.02	100.4	90-110%
Nitrogen, Nitrate	GP7089/GN15018	0.10	0.0	mg/l	5	4.85	97.0	90-110%
Nitrogen, Nitrite	GP7089/GN15018	0.10	0.0	mg/l	5	4.86	97.2	90-110%
Sulfate	GP7068/GN14985	0.50	0.0	mg/l	5	5.37	107.4	90-110%
Sulfate	GP7089/GN15018	0.50	0.0	mg/l	5	4.92	98.4	90-110%
Total Organic Carbon	GP7084/GN15009	1.0	0.0	mg/l	25	24.6	98.3	75-125%

Associated Samples:
Batch GP7068: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GP7084: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GP7089: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GN14987: C37105-1, C37105-2, C37105-3
Batch GN14994: C37105-4, C37105-5, C37105-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37105
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	GN14987	mg/l	250	248	2.4	
Alkalinity, Total as CaCO3	GN14994	mg/l	250	248	0.8	
Chloride	GP7068/GN14985	mg/l	5	4.95	1.0	25%
Chloride	GP7089/GN15018	mg/l	5	4.76	2.5	25%
Fluoride	GP7089/GN15018	mg/l	5	4.87	0.2	25%
Nitrogen, Nitrate	GP7068/GN14985	mg/l	5	5.03	0.2	25%
Nitrogen, Nitrate	GP7089/GN15018	mg/l	5	4.84	0.2	25%
Nitrogen, Nitrite	GP7089/GN15018	mg/l	5	4.89	0.6	25%
Sulfate	GP7068/GN14985	mg/l	5	5.25	2.3	25%
Sulfate	GP7089/GN15018	mg/l	5	4.92	0.0	25%
Total Organic Carbon	GP7084/GN15009	mg/l	25	23.8	3.2	

Associated Samples:
Batch GP7068: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GP7084: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GP7089: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GN14987: C37105-1, C37105-2, C37105-3
Batch GN14994: C37105-4, C37105-5, C37105-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37105
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	GN14987	C36992-1	mg/l	162	164	1.2	0-25%
Alkalinity, Total as CaCO3	GN14994	C37122-1	mg/l	404	373	8.0	0-25%

Associated Samples:
Batch GN14987: C37105-1, C37105-2, C37105-3
Batch GN14994: C37105-4, C37105-5, C37105-6
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37105
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	GP7068/GN14985	C37007-1	mg/l	19.0	12.5	32.4	107.2	80-120%
Chloride	GP7089/GN15018	C37105-6	mg/l	134	250	371	94.8	80-120%
Fluoride	GP7089/GN15018	C37105-6	mg/l	0.0	250	232	92.8	80-120%
Nitrogen, Nitrate	GP7068/GN14985	C37007-1	mg/l	0.25	12.5	11.8	92.4	80-120%
Nitrogen, Nitrate	GP7089/GN15018	C37105-6	mg/l	1.9	250	238	94.4	80-120%
Nitrogen, Nitrite	GP7089/GN15018	C37105-6	mg/l	0.0	250	236	94.4	80-120%
Sulfate	GP7068/GN14985	C37007-1	mg/l	15.9	12.5	28.2	98.4	80-120%
Sulfate	GP7089/GN15018	C37105-6	mg/l	419	250	655	94.4	80-120%
Total Organic Carbon	GP7084/GN15009	C37105-1	mg/l	1.4	25	24.6	92.6	75-125%

Associated Samples:
Batch GP7068: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GP7084: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GP7089: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37105
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	GP7068/GN14985	C37007-1	mg/l	19.0	12.5	32.8	1.2	
Chloride	GP7089/GN15018	C37105-6	mg/l	134	250	369	0.5	
Fluoride	GP7089/GN15018	C37105-6	mg/l	0.0	250	233	0.4	
Nitrogen, Nitrate	GP7068/GN14985	C37007-1	mg/l	0.25	12.5	11.9	0.8	
Nitrogen, Nitrate	GP7089/GN15018	C37105-6	mg/l	1.9	250	237	0.4	
Nitrogen, Nitrite	GP7089/GN15018	C37105-6	mg/l	0.0	250	237	0.4	
Sulfate	GP7068/GN14985	C37007-1	mg/l	15.9	12.5	28.4	0.7	
Sulfate	GP7089/GN15018	C37105-6	mg/l	419	250	655	0.0	

Associated Samples:
Batch GP7068: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
Batch GP7089: C37105-1, C37105-2, C37105-3, C37105-4, C37105-5, C37105-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
ACCUTEST
LABORATORIES

11/21/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C37122

Sampling Date: 11/13/14

Report to:

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

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: Elvin Kumar 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: C37122

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C37122-1	11/13/14	08:00	GB	11/14/14	AQ	Ground Water	HQUST-533A
C37122-2	11/13/14	08:30	GB	11/14/14	AQ	Ground Water	HQUST-531A
C37122-3	11/13/14	09:05	GB	11/14/14	AQ	Ground Water	CEP-527A
C37122-4	11/13/14	09:35	GB	11/14/14	AQ	Ground Water	HQUST-547
C37122-5	11/13/14	09:55	GB	11/14/14	AQ	Ground Water	HQUST-548
C37122-6	11/13/14	10:20	GB	11/14/14	AQ	Ground Water	CEP-519A
C37122-7	11/13/14	00:00	GB	11/14/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C37122
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	11/21/2014 11:19:21 P

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 11/13/2014 and were received at Accutest on 11/14/2014 properly preserved, at 3.6 Deg. C and intact. These Samples received an Accutest job number of C37122. 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:** VR1140

- Sample(s) C37068-8MS, C37068-8MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Bromoform, Dibromochloromethane 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.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP8686

- Sample(s) C37122-1MS, C37122-1MSD, C37122-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Iron are outside control limits for sample MP8686-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method EPA 300/SW846 9056A

Matrix: AQ **Batch ID:** GP7069

- Sample(s) C37122-2MS, C37122-2MSD were used as the QC samples for Nitrogen, Nitrate.

Matrix: AQ **Batch ID:** GP7089

- Sample(s) C37105-6MS, C37105-6MSD were used as the QC samples for Sulfate.

Wet Chemistry By Method SM2320 B-97

Matrix: AQ **Batch ID:** GN14994

- Sample(s) C37122-1DUP were used as the QC samples for Alkalinity, Total as CaCO3.

Wet Chemistry By Method SM5310 C-00

Matrix: AQ **Batch ID:** GP7099

- Sample(s) C37122-1MS 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: C37122
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/13/14

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37122-1	**HQUST-533A**					
Methyl Tert Butyl Ether		2.5	1.0		ug/l	SW846 8260B
Alkalinity, Total as CaCO3		404	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		26.6	0.50		mg/l	EPA 300/SW846 9056A
Sulfate		707	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.1	1.0		mg/l	SM5310 C-00
C37122-2	**HQUST-531A**					
Iron		2140	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		100	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		2.4	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		56.2	2.5		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		4.7	1.0		mg/l	SM5310 C-00
C37122-3	**CEP-527A**					
Iron		6550	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		172	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		4.8	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		135	5.0		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		7.8	1.0		mg/l	SM5310 C-00
C37122-4	**HQUST-547**					
Methyl Tert Butyl Ether		2.2	1.0		ug/l	SW846 8260B
Iron		4460	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		276	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		6.4	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		827	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		1.3	1.0		mg/l	SM5310 C-00
C37122-5	**HQUST-548**					
Benzene		4.7	1.0		ug/l	SW846 8260B
sec-Butylbenzene		3.9	2.0		ug/l	SW846 8260B
Isopropylbenzene		10.1	1.0		ug/l	SW846 8260B
Methyl Tert Butyl Ether		28.3	1.0		ug/l	SW846 8260B
Naphthalene		5.9	5.0		ug/l	SW846 8260B
Iron		1700	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		388	5.0		mg/l	SM2320 B-97
Nitrogen, Nitrate		2.2	0.25		mg/l	EPA 300/SW846 9056A
Sulfate		995	50		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		2.6	1.0		mg/l	SM5310 C-00

Summary of Hits

Job Number: C37122
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/13/14

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37122-6	**CEP-519A**					
Benzene		2.9	1.0		ug/l	SW846 8260B
n-Butylbenzene		3.7	2.0		ug/l	SW846 8260B
Ethylbenzene		1.0	1.0		ug/l	SW846 8260B
1,2,4-Trimethylbenzene		2.7	2.0		ug/l	SW846 8260B
Toluene		1.7	1.0		ug/l	SW846 8260B
Xylene (total)		6.8	2.0		ug/l	SW846 8260B
Iron		1080	200		ug/l	SW846 6010B
Alkalinity, Total as CaCO3		472	5.0		mg/l	SM2320 B-97
Sulfate		339	13		mg/l	EPA 300/SW846 9056A
Total Organic Carbon		13.4	1.0		mg/l	SM5310 C-00
C37122-7	**TRIP BLANK**					

No hits reported in this sample.

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C37122-1	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	R30410.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-533A		
Lab Sample ID:	C37122-1	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.5	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	113%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	96%		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-533A		
Lab Sample ID:	C37122-1	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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:M2
(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:	C37122-1	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	11/18/14	11/19/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8686

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-533A		
Lab Sample ID:	C37122-1	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	404	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate	26.6	0.50	mg/l	5	11/15/14 11:06	RL	EPA 300/SW846 9056A
Sulfate	707	50	mg/l	100	11/18/14 13:34	RL	EPA 300/SW846 9056A
Total Organic Carbon	2.1	1.0	mg/l	1	11/21/14 10:22	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C37122-2	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	R30411.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-531A		
Lab Sample ID:	C37122-2	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	98%		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-531A		
Lab Sample ID:	C37122-2	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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:M2
(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:	C37122-2	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	2140	200	ug/l	1	11/18/14	11/19/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8686

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-531A		
Lab Sample ID:	C37122-2	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	100	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate	2.4	0.25	mg/l	2.5	11/15/14 01:35	RL	EPA 300/SW846 9056A
Sulfate	56.2	2.5	mg/l	5	11/18/14 13:52	RL	EPA 300/SW846 9056A
Total Organic Carbon	4.7	1.0	mg/l	1	11/21/14 10:22	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C37122-3	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	R30412.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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:	C37122-3	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	111%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	96%		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:	CEP-527A		
Lab Sample ID:	C37122-3	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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:M2
(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:	C37122-3	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	6550	200	ug/l	1	11/18/14	11/19/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8686

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-527A		
Lab Sample ID:	C37122-3	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		Percent Solids:	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as CaCO3	172	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate	4.8	0.25	mg/l	2.5	11/15/14 01:53	RL	EPA 300/SW846 9056A
Sulfate	135	5.0	mg/l	10	11/18/14 14:09	RL	EPA 300/SW846 9056A
Total Organic Carbon	7.8	1.0	mg/l	1	11/21/14 10:22	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C37122-4	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	R30413.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-547		
Lab Sample ID:	C37122-4	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 8260 Special List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.2	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether [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%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	95%		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-547		
Lab Sample ID:	C37122-4	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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:M2
(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-547		
Lab Sample ID:	C37122-4	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	4460	200	ug/l	1	11/18/14	11/19/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8686

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-547		
Lab Sample ID:	C37122-4	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	276	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate	6.4	0.25	mg/l	2.5	11/15/14 02:10	RL	EPA 300/SW846 9056A
Sulfate	827	50	mg/l	100	11/18/14 14:26	RL	EPA 300/SW846 9056A
Total Organic Carbon	1.3	1.0	mg/l	1	11/21/14 10:22	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C37122-5	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	R30414.D	1	11/16/14	JC	n/a	n/a	VR1140
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	4.7	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	3.9	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-548		
Lab Sample ID:	C37122-5	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	10.1	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	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	28.3	1.0	ug/l	
91-20-3	Naphthalene	5.9	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%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
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

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C37122-5	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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:M2
(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-548		
Lab Sample ID:	C37122-5	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	1700	200	ug/l	1	11/18/14	11/19/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8686

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-548		
Lab Sample ID:	C37122-5	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	388	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate	2.2	0.25	mg/l	2.5	11/15/14 02:28	RL	EPA 300/SW846 9056A
Sulfate	995	50	mg/l	100	11/18/14 14:44	RL	EPA 300/SW846 9056A
Total Organic Carbon	2.6	1.0	mg/l	1	11/21/14 10:22	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C37122-6	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	R30415.D	1	11/16/14	JC	n/a	n/a	VR1140
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	2.9	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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	3.7	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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-519A		
Lab Sample ID:	C37122-6	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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	1.0	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	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	2.7	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	1.7	1.0	ug/l	
79-01-6	Trichloroethylene	ND	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	0.50	ug/l	
75-01-4	Vinyl chloride	ND	0.50	ug/l	
1330-20-7	Xylene (total)	6.8	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
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:	CEP-519A		
Lab Sample ID:	C37122-6	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
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:M2
(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-519A		
Lab Sample ID:	C37122-6	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	1080	200	ug/l	1	11/18/14	11/19/14	RS	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA4406
(2) Prep QC Batch: MP8686

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CEP-519A		
Lab Sample ID:	C37122-6	**Date Sampled:**	11/13/14
Matrix:	AQ - Ground Water	**Date Received:**	11/14/14
		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	472	5.0	mg/l	1	11/16/14 14:30	DQ	SM2320 B-97
Nitrogen, Nitrate	< 0.25	0.25	mg/l	2.5	11/15/14 02:45	RL	EPA 300/SW846 9056A
Sulfate	339	13	mg/l	25	11/18/14 15:01	RL	EPA 300/SW846 9056A
Total Organic Carbon	13.4	1.0	mg/l	1	11/21/14 10:22	RL	SM5310 C-00

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37122-7	**Date Sampled:**	11/13/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/14/14
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	R30404.D	1	11/16/14	JC	n/a	n/a	VR1140
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 [a]	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
75-15-0	Carbon disulfide	ND	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [b]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane [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:	TRIP BLANK		
Lab Sample ID:	C37122-7	**Date Sampled:**	11/13/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/14/14
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	104%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	94%		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:	C37122-7	**Date Sampled:**	11/13/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/14/14
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:M2
(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: C37122
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

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

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

PHOENIX ACCUTEST LABORATORIES

CHAIN OF CUSTODY

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

FED-EX Tracking # 803401031306
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C37122

Client / Reporting Information

Company Name: City of Tucson
Address: P.O. BOX 27210
City: Tucson State: AZ Zip: 85726
Project Contact: R. Byrd
Phone #: 520.791.3175
Samplers's Name: G. Bejarano

Project Information

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

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	Alkinity - NO3 - SO4	Fe (total)	TOC	VOC 8260
1	HQUST-533A	11/13/14	0800	OB	GW	7									X	X	X	X
2	HQUST-531A	11/13/14	0830	OB	GW	7									X	X	X	X
3	CEP-527A	11/13/14	0905	OB	GW	7									X	X	X	X
4	HQUST-547	11/13/14	0935	OB	GW	7									X	X	X	X
5	HQUST-548	11/13/14	0955	OB	GW	7									X	X	X	X
6	CEP-519A	11/13/14	1020	OB	GW	7									X	X	X	X
7	TRIP BLANK					3												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)

LAB USE ONLY

Turnaround Time (Business days)

Approved By:/ Date:
- [ ] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

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

Comments / Remarks

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

	Relinquished by:	Date Time:	Received By:
1	G. Bejarano	11/13/14 1257	Yuko Sato
2	Yuko Sato	11/13/14 1700	Fedex
3	FedEx	11/14 1000	[illegible]
4			
5			

Custody Seal # Y

Appropriate Bottle / Pres. Y / N Headspace Y / N On Ice (Y) N Cooler Temp. 3.6 °C

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

5.2 5

C37122: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C37122 **Client:** CITY OF TUCSON **Project:** HQUST

Date / Time Received: 11/14/2014 10:00:00 AM **Delivery Method:** FedEx **Airbill #'s:** 803401031306

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

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

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

C37122: 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: C37122
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
VR1140-MB	R30402.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

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: C37122
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
VR1140-MB	R30402.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Compound	Result	RL	Units	Q
591-78-6	2-Hexanone	ND	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	ug/l	
74-87-3	Methyl chloride	ND	1.0	ug/l	
74-95-3	Methylene bromide	ND	1.0	ug/l	
75-09-2	Methylene chloride	ND	10	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	ug/l	
100-42-5	Styrene	ND	1.0	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
79-01-6	Trichloroethylene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	70-130%
2037-26-5	Toluene-D8	103%	70-130%

Method Blank Summary

Job Number: C37122
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
VR1140-MB	R30402.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37122
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
VR1140-BS	R30399.D	1	11/16/14	JC	n/a	n/a	VR1140
VR1140-BSD	R30400.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	80	86.2	108	81.3	102	6	38-159/24
71-43-2	Benzene	20	17.0	85	16.8	84	1	77-122/25
108-86-1	Bromobenzene	20	16.6	83	16.9	85	2	76-126/17
74-97-5	Bromochloromethane	20	17.3	87	16.5	83	5	77-130/17
75-27-4	Bromodichloromethane	20	16.1	81	15.8	79	2	75-127/16
75-25-2	Bromoform	20	15.9	80	15.9	80	0	69-141/17
104-51-8	n-Butylbenzene	20	19.4	97	19.4	97	0	72-129/18
135-98-8	sec-Butylbenzene	20	19.0	95	19.2	96	1	74-128/18
98-06-6	tert-Butylbenzene	20	18.2	91	18.4	92	1	73-127/18
108-90-7	Chlorobenzene	20	16.3	82	16.5	83	1	77-122/16
75-00-3	Chloroethane	20	22.2	111	21.1	106	5	69-133/18
67-66-3	Chloroform	20	17.8	89	17.1	86	4	74-126/17
95-49-8	o-Chlorotoluene	20	18.4	92	18.7	94	2	72-127/20
106-43-4	p-Chlorotoluene	20	18.5	93	18.8	94	2	68-127/18
75-15-0	Carbon disulfide	20	14.4	72	13.4	67	7	56-137/19
56-23-5	Carbon tetrachloride	20	15.9	80	15.1	76	5	71-133/19
75-34-3	1,1-Dichloroethane	20	17.7	89	17.1	86	3	71-125/17
75-35-4	1,1-Dichloroethylene	20	15.8	79	14.9	75	6	66-125/20
563-58-6	1,1-Dichloropropene	20	17.5	88	16.8	84	4	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	18.5	93	18.0	90	3	65-131/20
106-93-4	1,2-Dibromoethane	20	16.3	82	16.5	83	1	75-135/17
107-06-2	1,2-Dichloroethane	20	16.2	81	15.7	79	3	71-131/17
78-87-5	1,2-Dichloropropane	20	17.7	89	17.6	88	1	78-124/16
142-28-9	1,3-Dichloropropane	20	17.3	87	17.3	87	0	78-123/16
108-20-3	Di-Isopropyl ether	20	19.3	97	18.8	94	3	68-129/17
594-20-7	2,2-Dichloropropane	20	18.1	91	17.1	86	6	70-131/19
124-48-1	Dibromochloromethane	20	15.9	80	15.8	79	1	76-132/16
75-71-8	Dichlorodifluoromethane	20	22.0	110	19.7	99	11	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	17.9	90	17.3	87	3	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	17.0	85	17.0	85	0	72-130/16
541-73-1	m-Dichlorobenzene	20	16.9	85	17.1	86	1	75-124/16
95-50-1	o-Dichlorobenzene	20	17.2	86	17.3	87	1	76-124/16
106-46-7	p-Dichlorobenzene	20	16.9	85	17.0	85	1	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	16.8	84	16.0	80	5	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	16.1	81	16.1	81	0	71-126/16
100-41-4	Ethylbenzene	20	17.4	87	17.6	88	1	76-126/17

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37122
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
VR1140-BS	R30399.D	1	11/16/14	JC	n/a	n/a	VR1140
VR1140-BSD	R30400.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	80	89.8	112	88.9	111	1	67-150/22
87-68-3	Hexachlorobutadiene	20	16.1	81	16.1	81	0	69-135/20
98-82-8	Isopropylbenzene	20	17.7	89	17.7	89	0	61-125/17
99-87-6	p-Isopropyltoluene	20	18.8	94	19.1	96	2	68-127/18
108-10-1	4-Methyl-2-pentanone	80	85.7	107	83.7	105	2	71-142/21
74-83-9	Methyl bromide	20	23.1	116	22.0	110	5	68-132/18
74-87-3	Methyl chloride	20	20.9	105	20.0	100	4	39-150/28
74-95-3	Methylene bromide	20	17.0	85	16.8	84	1	77-127/16
75-09-2	Methylene chloride	20	16.8	84	16.1	81	4	67-128/18
78-93-3	Methyl ethyl ketone	80	89.8	112	85.2	107	5	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	18.7	94	18.1	91	3	73-132/17
91-20-3	Naphthalene	20	17.6	88	17.5	88	1	70-136/20
103-65-1	n-Propylbenzene	20	18.6	93	18.7	94	1	71-127/17
100-42-5	Styrene	20	18.1	91	18.2	91	1	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	19.5	98	19.0	95	3	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	20	16.3	82	16.4	82	1	77-130/16
71-55-6	1,1,1-Trichloroethane	20	17.5	88	16.4	82	6	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	19.2	96	19.2	96	0	77-129/17
79-00-5	1,1,2-Trichloroethane	20	16.9	85	17.1	86	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	17.2	86	17.5	88	2	70-133/18
96-18-4	1,2,3-Trichloropropane	20	17.0	85	17.0	85	0	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	16.8	84	17.1	86	2	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	18.6	93	18.8	94	1	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	19.3	97	19.6	98	2	77-129/17
127-18-4	Tetrachloroethylene	20	15.2	76	15.4	77	1	69-127/20
108-88-3	Toluene	20	16.8	84	17.1	86	2	75-122/17
79-01-6	Trichloroethylene	20	16.3	82	16.2	81	1	78-123/17
75-69-4	Trichlorofluoromethane	20	22.6	113	20.9	105	8	65-136/23
75-01-4	Vinyl chloride	20	20.9	105	20.1	101	4	57-146/22
1330-20-7	Xylene (total)	60	52.0	87	52.7	88	1	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	108%	102%	70-130%
2037-26-5	Toluene-D8	101%	102%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37122
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
VR1140-BS	R30399.D	1	11/16/14	JC	n/a	n/a	VR1140
VR1140-BSD	R30400.D	1	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37122
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
C37068-8MS	R30422.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8MSD	R30423.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8	R30419.D	5	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Compound	C37068-8 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	484	121	400	473	118	2	38-159/24
71-43-2	Benzene	1.1	J	100	88.5	87	100	89.4	88	1	77-122/16
108-86-1	Bromobenzene	ND		100	87.0	87	100	89.7	90	3	76-126/17
74-97-5	Bromochloromethane	ND		100	91.4	91	100	91.0	91	0	77-130/17
75-27-4	Bromodichloromethane	ND		100	77.8	78	100	77.3	77	1	75-127/16
75-25-2	Bromoform	ND		100	58.4	58* [a]	100	60.9	61* [a]	4	69-141/17
104-51-8	n-Butylbenzene	ND		100	93.4	93	100	98.3	98	5	72-129/18
135-98-8	sec-Butylbenzene	ND		100	95.1	95	100	100	100	5	74-128/18
98-06-6	tert-Butylbenzene	ND		100	91.6	92	100	96.2	96	5	73-127/18
108-90-7	Chlorobenzene	ND		100	84.1	84	100	87.0	87	3	77-122/16
75-00-3	Chloroethane	ND		100	114	114	100	115	115	1	69-133/18
67-66-3	Chloroform	ND		100	92.4	92	100	91.6	92	1	74-126/17
95-49-8	o-Chlorotoluene	ND		100	92.9	93	100	96.6	97	4	72-127/20
106-43-4	p-Chlorotoluene	ND		100	96.9	97	100	99.1	99	2	68-127/18
75-15-0	Carbon disulfide	ND		100	56.1	56	100	57.2	57	2	56-137/19
56-23-5	Carbon tetrachloride	ND		100	78.0	78	100	79.2	79	2	71-133/19
75-34-3	1,1-Dichloroethane	ND		100	92.8	93	100	92.6	93	0	71-125/17
75-35-4	1,1-Dichloroethylene	ND		100	82.5	83	100	83.4	83	1	66-125/20
563-58-6	1,1-Dichloropropene	ND		100	88.5	89	100	90.0	90	2	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	ND		100	90.7	91	100	90.9	91	0	65-131/20
106-93-4	1,2-Dibromoethane	ND		100	85.6	86	100	87.1	87	2	75-135/17
107-06-2	1,2-Dichloroethane	ND		100	82.2	82	100	81.8	82	0	71-131/17
78-87-5	1,2-Dichloropropane	ND		100	91.8	92	100	92.9	93	1	78-124/16
142-28-9	1,3-Dichloropropane	ND		100	89.4	89	100	91.3	91	2	78-123/16
108-20-3	Di-Isopropyl ether	ND		100	101	101	100	101	101	0	68-129/17
594-20-7	2,2-Dichloropropane	ND		100	77.2	77	100	76.6	77	1	70-131/19
124-48-1	Dibromochloromethane	ND		100	67.9	68* [a]	100	70.6	71* [a]	4	76-132/16
75-71-8	Dichlorodifluoromethane	ND		100	110	110	100	105	105	5	32-168/28
156-59-2	cis-1,2-Dichloroethylene	ND		100	93.3	93	100	93.5	94	0	73-126/17
10061-01-5	cis-1,3-Dichloropropene	ND		100	76.5	77	100	77.9	78	2	72-130/16
541-73-1	m-Dichlorobenzene	ND		100	86.7	87	100	89.9	90	4	75-124/16
95-50-1	o-Dichlorobenzene	ND		100	88.2	88	100	90.9	91	3	76-124/16
106-46-7	p-Dichlorobenzene	ND		100	86.5	87	100	90.0	90	4	75-124/16
156-60-5	trans-1,2-Dichloroethylene	ND		100	87.5	88	100	88.6	89	1	71-126/18
10061-02-6	trans-1,3-Dichloropropene	ND		100	71.0	71	100	74.3	74	5	71-126/16
100-41-4	Ethylbenzene	ND		100	89.6	90	100	92.4	92	3	76-126/17

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37122
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
C37068-8MS	R30422.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8MSD	R30423.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8	R30419.D	5	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Compound	C37068-8 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		400	468	117	400	476	119	2	67-150/22
87-68-3	Hexachlorobutadiene	ND		100	69.8	70	100	77.6	78	11	69-135/20
98-82-8	Isopropylbenzene	ND		100	89.1	89	100	92.9	93	4	61-125/17
99-87-6	p-Isopropyltoluene	ND		100	94.2	94	100	98.4	98	4	68-127/18
108-10-1	4-Methyl-2-pentanone	ND		400	441	110	400	441	110	0	71-142/21
74-83-9	Methyl bromide	ND		100	121	121	100	118	118	3	68-132/18
74-87-3	Methyl chloride	ND		100	111	111	100	114	114	3	39-150/28
74-95-3	Methylene bromide	ND		100	88.2	88	100	87.7	88	1	77-127/16
75-09-2	Methylene chloride	ND		100	88.1	88	100	86.9	87	1	67-128/18
78-93-3	Methyl ethyl ketone	ND		400	479	120	400	467	117	3	56-155/23
1634-04-4	Methyl Tert Butyl Ether	128		100	223	95	100	220	92	1	73-132/17
91-20-3	Naphthalene	ND		100	85.5	86	100	90.5	91	6	70-136/20
103-65-1	n-Propylbenzene	ND		100	94.1	94	100	98.6	99	5	71-127/17
100-42-5	Styrene	ND		100	91.1	91	100	94.3	94	3	72-134/16
994-05-8	Tert-Amyl Methyl Ether	ND		100	101	101	100	101	101	0	73-133/17
630-20-6	1,1,1,2-Tetrachloroethane	ND		100	84.1	84	100	85.5	86	2	77-130/16
71-55-6	1,1,1-Trichloroethane	ND		100	89.5	90	100	89.0	89	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	ND		100	102	102	100	104	104	2	77-129/17
79-00-5	1,1,2-Trichloroethane	ND		100	88.6	89	100	90.7	91	2	77-125/16
87-61-6	1,2,3-Trichlorobenzene	ND		100	80.7	81	100	86.9	87	7	70-133/18
96-18-4	1,2,3-Trichloropropane	ND		100	73.4	73	100	76.0	76	3	69-126/18
120-82-1	1,2,4-Trichlorobenzene	ND		100	79.9	80	100	84.8	85	6	68-129/17
95-63-6	1,2,4-Trimethylbenzene	ND		100	94.3	94	100	98.0	98	4	74-129/17
108-67-8	1,3,5-Trimethylbenzene	ND		100	97.9	98	100	102	102	4	77-129/17
127-18-4	Tetrachloroethylene	ND		100	75.3	75	100	79.9	80	6	69-127/20
108-88-3	Toluene	ND		100	87.3	87	100	90.7	91	4	75-122/17
79-01-6	Trichloroethylene	ND		100	85.3	85	100	87.4	87	2	78-123/17
75-69-4	Trichlorofluoromethane	ND		100	114	114	100	112	112	2	65-136/23
75-01-4	Vinyl chloride	ND		100	107	107	100	107	107	0	57-146/22
1330-20-7	Xylene (total)	ND		300	267	89	300	277	92	4	77-125/17

CAS No.	Surrogate Recoveries	MS	MSD	C37068-8	Limits
1868-53-7	Dibromofluoromethane	110%	105%	111%	70-130%
2037-26-5	Toluene-D8	100%	103%	102%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C37122
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
C37068-8MS	R30422.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8MSD	R30423.D	5	11/16/14	JC	n/a	n/a	VR1140
C37068-8	R30419.D	5	11/16/14	JC	n/a	n/a	VR1140

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

C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6, C37122-7

CAS No.	Surrogate Recoveries	MS	MSD	C37068-8	Limits
460-00-4	4-Bromofluorobenzene	100%	101%	94%	70-130%

(a) Outside control limits due to matrix interference. AZ:M2

* = 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: C37122
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8686
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/18/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	.4	.35		
Beryllium	5.0	.2	.4		
Boron	100	.9	.64		
Cadmium	2.0	.2	.15		
Calcium	5000	7.1	12		
Chromium	10	.3	.41		
Cobalt	5.0	.2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12	0.50	<200
Lead	10	.7	.85		
Lithium	50		2		
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	.2	.22		
Nickel	5.0	.2	.12		
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	13		
Thallium	10	.5	.54		
Tin	50	.2	.7		
Titanium	10	.4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2		

Associated samples MP8686: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6

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: C37122
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8686
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/18/14

Metal	C37122-1 Original	MS	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron	anr				
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	8.4	12800	12500	102.3	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese	anr				
Molybdenum	anr				
Nickel	anr				
Potassium					
Selenium	anr				
Silicon	anr				
Silver	anr				
Sodium					
Thallium	anr				
Tin	anr				
Titanium					
Vanadium	anr				
Zinc	anr				

Associated samples MP8686: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6

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: C37122
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8686 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/18/14

Metal	C37122-1 Original	MSD	Spikelot MPIR5	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	8.4	12300	12500	98.3	4.0	20
Lead	anr					
Lithium						
Magnesium						
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Potassium						
Selenium	anr					
Silicon	anr					
Silver	anr					
Sodium						
Thallium	anr					
Tin	anr					
Titanium						
Vanadium	anr					
Zinc	anr					

Associated samples MP8686: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6

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: C37122
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8686
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/18/14

Metal	BSP Result	Spikelot MPIR5	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	12600	12500	100.8	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon	anr			
Silver	anr			
Sodium				
Thallium	anr			
Tin	anr			
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP8686: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6

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

SERIAL DILUTION RESULTS SUMMARY

Login Number: C37122
Account: CTESAZT - City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

QC Batch ID: MP8686 Methods: SW846 6010B
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 11/18/14

Metal	C37122-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	8.40	0.00	100.0(a)	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium				
Selenium	anr			
Silicon	anr			
Silver	anr			
Sodium				
Thallium	anr			
Tin	anr			
Titanium				
Vanadium	anr			
Zinc	anr			

Associated samples MP8686: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

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: C37122
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	GN14994	5.0	0.0	mg/l	250	246	98.4	75-125%
Chloride	GP7089/GN15018	0.50	0.0	mg/l	5	4.88	97.6	90-110%
Fluoride	GP7089/GN15018	0.10	0.0	mg/l	5	4.86	97.2	90-110%
Nitrogen, Nitrate	GP7069/GN14986	0.10	0.0	mg/l	5	5.33	106.6	90-110%
Nitrogen, Nitrate	GP7089/GN15018	0.10	0.0	mg/l	5	4.85	97.0	90-110%
Nitrogen, Nitrite	GP7069/GN14986	0.10	0.0	mg/l	5	5.09	101.8	90-110%
Nitrogen, Nitrite	GP7089/GN15018	0.10	0.0	mg/l	5	4.86	97.2	90-110%
Sulfate	GP7069/GN14986	0.50	0.0	mg/l	5	5.20	104.0	90-110%
Sulfate	GP7089/GN15018	0.50	0.0	mg/l	5	4.92	98.4	90-110%
Total Organic Carbon	GP7099/GN15037	1.0	0.0	mg/l	25	24.4	97.6	75-125%

Associated Samples:
Batch GP7069: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GP7089: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GP7099: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GN14994: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37122
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	GN14994	mg/l	250	248	0.8	
Chloride	GP7089/GN15018	mg/l	5	4.76	2.5	25%
Fluoride	GP7089/GN15018	mg/l	5	4.87	0.2	25%
Nitrogen, Nitrate	GP7069/GN14986	mg/l	5	5.32	0.2	25%
Nitrogen, Nitrate	GP7089/GN15018	mg/l	5	4.84	0.2	25%
Nitrogen, Nitrite	GP7069/GN14986	mg/l	5	5.11	0.4	25%
Nitrogen, Nitrite	GP7089/GN15018	mg/l	5	4.89	0.6	25%
Sulfate	GP7069/GN14986	mg/l	5	5.21	0.2	25%
Sulfate	GP7089/GN15018	mg/l	5	4.92	0.0	25%
Total Organic Carbon	GP7099/GN15037	mg/l	25	24.9	2.2	

Associated Samples:
Batch GP7069: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GP7089: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GP7099: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GN14994: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37122
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	GN14994	C37122-1	mg/l	404	373	8.0	0-25%

Associated Samples:
Batch GN14994: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37122
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	GP7089/GN15018	C37105-6	mg/l	134	250	371	94.8	80-120%
Fluoride	GP7089/GN15018	C37105-6	mg/l	0.0	250	232	92.8	80-120%
Nitrogen, Nitrate	GP7069/GN14986	C37122-2	mg/l	2.4	12.5	14.5	96.8	80-120%
Nitrogen, Nitrate	GP7089/GN15018	C37105-6	mg/l	1.9	250	238	94.4	80-120%
Nitrogen, Nitrite	GP7069/GN14986	C37122-2	mg/l	0.0	12.5	12.4	99.2	80-120%
Nitrogen, Nitrite	GP7089/GN15018	C37105-6	mg/l	0.0	250	236	94.4	80-120%
Sulfate	GP7069/GN14986	C37122-2	mg/l	57.6	12.5	66.8	73.6(a)	80-120%
Sulfate	GP7089/GN15018	C37105-6	mg/l	419	250	655	94.4	80-120%
Total Organic Carbon	GP7099/GN15037	C37122-1	mg/l	2.1	25	25.6	93.8	75-125%

Associated Samples:
Batch GP7069: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GP7089: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GP7099: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
(*) 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: C37122
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	GP7089/GN15018	C37105-6	mg/l	134	250	369	0.5	
Fluoride	GP7089/GN15018	C37105-6	mg/l	0.0	250	233	0.4	
Nitrogen, Nitrate	GP7069/GN14986	C37122-2	mg/l	2.4	12.5	15.1	4.1	
Nitrogen, Nitrate	GP7089/GN15018	C37105-6	mg/l	1.9	250	237	0.4	
Nitrogen, Nitrite	GP7069/GN14986	C37122-2	mg/l	0.0	12.5	12.5	0.8	
Nitrogen, Nitrite	GP7089/GN15018	C37105-6	mg/l	0.0	250	237	0.4	
Sulfate	GP7069/GN14986	C37122-2	mg/l	57.6	12.5	69.7	4.2	
Sulfate	GP7089/GN15018	C37105-6	mg/l	419	250	655	0.0	

Associated Samples:
Batch GP7069: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
Batch GP7089: C37122-1, C37122-2, C37122-3, C37122-4, C37122-5, C37122-6
(*) 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 12, 2014

Client:	Richard Byrd	Work Order #:	14F010
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	6/5/2014

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 12, 2014

Client:	Richard Byrd	Work Order #:	14F010
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	6/5/2014

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
14F010-01	HQUST-AIR-EFF	8260B AZ Vapor	6/5/2014	1135
		8015 GRO		
14F010-02	HQUST-AIR-INF	8260B AZ Vapor	6/5/2014	1140
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: June 12, 2014

Client:	Richard Byrd	Work Order #:	14F010
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	6/5/2014

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:	14F010	Collection:	6/5/2014
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	6/6/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	6/6/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	6/6/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/6/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/6/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/6/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/6/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/6/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	6/6/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	6/6/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	6/6/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	6/6/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	6/6/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	6/6/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	6/6/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	6/6/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	6/6/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	6/6/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	6/6/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	6/6/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	6/6/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	6/6/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	6/6/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	6/6/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	6/6/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	6/6/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	6/6/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	6/6/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.4	106	%REC, 70-130%
Surr: Toluene-d8	24.9	100	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.4	93.7	%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:	14F010	Collection:	6/5/2014
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	6/6/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.1	112	%REC, 70-130%
Surr: Toluene-d8	26.2	105	%REC, 70-130%
Surr: 4-Bromofluorobenzene	21.7	86.9	%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:	14F010	Collection:	6/5/2014
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	< 5.0	5.0	< 0.92	0.92	5	6/6/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	< 0.73	0.73	5	6/6/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 5.0	5.0	< 0.92	0.92	5	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 5.0	5.0	< 1.23	1.23	5	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 5.0	5.0	< 1.26	1.26	5	6/6/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 5.0	5.0	< 0.65	0.65	5	6/6/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 5.0	5.0	< 0.83	0.83	5	6/6/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 5.0	5.0	< 1.23	1.23	5	6/6/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 5.0	5.0	< 1.08	1.08	5	6/6/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**33**	**5.0**	**6.61**	**1.02**	5	6/6/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 5.0	5.0	< 0.83	0.83	5	6/6/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**15**	**5.0**	**3.12**	**1.02**	5	6/6/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 5.0	5.0	< 0.83	0.83	5	6/6/2014	8260B AZ Vapor	
Benzene	**12**	**5.0**	**3.84**	**1.57**	5	6/6/2014	8260B AZ Vapor	
Bromodichloromethane	< 25	25	< 3.73	3.73	5	6/6/2014	8260B AZ Vapor	
Bromoform	< 25	25	< 2.42	2.42	5	6/6/2014	8260B AZ Vapor	
Bromomethane	< 25	25	< 6.44	6.44	5	6/6/2014	8260B AZ Vapor	
Carbon tetrachloride	< 5.0	5.0	< 0.79	0.79	5	6/6/2014	8260B AZ Vapor	
Chlorobenzene	< 5.0	5.0	< 1.09	1.09	5	6/6/2014	8260B AZ Vapor	
Chloroethane	< 5.0	5.0	< 1.89	1.89	5	6/6/2014	8260B AZ Vapor	
Chloroform	< 25	25	< 5.12	5.12	5	6/6/2014	8260B AZ Vapor	
Chloromethane	< 25	25	< 12.1	12.1	5	6/6/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 5.0	5.0	< 1.26	1.26	5	6/6/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 5.0	5.0	< 1.10	1.10	5	6/6/2014	8260B AZ Vapor	
Dibromochloromethane	< 5.0	5.0	< 0.59	0.59	5	6/6/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 5.0	5.0	< 1.01	1.01	5	6/6/2014	8260B AZ Vapor	
Ethylbenzene	**18**	**5.0**	**4.12**	**1.15**	5	6/6/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 10	10	< 2.77	2.77	5	6/6/2014	8260B AZ Vapor	
Methylene chloride	< 25	25	< 7.20	7.20	5	6/6/2014	8260B AZ Vapor	
Naphthalene	< 25	25	< 4.77	4.77	5	6/6/2014	8260B AZ Vapor	
Tetrachloroethene	< 5.0	5.0	< 0.74	0.74	5	6/6/2014	8260B AZ Vapor	
Toluene	**17**	**5.0**	**4.56**	**1.33**	5	6/6/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 5.0	5.0	< 1.26	1.26	5	6/6/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 5.0	5.0	< 1.10	1.10	5	6/6/2014	8260B AZ Vapor	
Trichloroethene	< 5.0	5.0	< 0.93	0.93	5	6/6/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 5.0	5.0	< 0.89	0.89	5	6/6/2014	8260B AZ Vapor	
Vinyl chloride	< 5.0	5.0	< 1.95	1.95	5	6/6/2014	8260B AZ Vapor	
Xylenes, Total	**65**	**15**	**14.9**	**3.46**	5	6/6/2014	8260B AZ Vapor	
Surrogate	ug/l	%REC.	LIMIT					
Surr: Dibromofluoromethane	25.7	103	%REC, 70-130%					
Surr: Toluene-d8	25.6	102	%REC, 70-130%					
Surr: 4-Bromofluorobenzene	22.6	90.4	%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:	14F010	Collection:	6/5/2014
Lab ID:	02	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}	4,900	500	1,140	116	T3	5	6/6/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.3	109	%REC, 70-130%
Surr: Toluene-d8	26.9	108	%REC, 70-130%
Surr: 4-Bromofluorobenzene	20.0	80.0	%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:	14F010	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020606

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	6/6/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	6/6/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	6/6/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/6/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/6/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/6/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	6/6/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	6/6/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	6/6/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	6/6/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	6/6/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	6/6/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	6/6/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	6/6/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	6/6/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	6/6/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	6/6/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	6/6/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	6/6/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	6/6/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	6/6/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	6/6/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	6/6/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	6/6/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	6/6/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	6/6/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	6/6/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	6/6/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	6/6/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	6/6/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.2	101	%REC, 70-130%
Surr: Toluene-d8	24.6	98.2	%REC, 70-130%
Surr: 4-Bromofluorobenzene	22.2	88.7	%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:	N/A
Project:	HQUST	Project Number:	P01152
Lab Order:	14F010	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 6/6/2014 Batch: MS020606 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)	15.7	62.8	14.6	58.4	25.0	7.4				16.8-166.9
Chloromethane	21.4	85.4	20.3	81.0	25.0	5.3				46.7-120.2
Vinyl Chloride	21.9	87.6	20.2	80.6	25.0	8.3				65.1-126.4
Bromomethane	18.8	75.1	18.3	73.0	25.0	2.8				26.2-207.1
Chloroethane	24.0	96.0	21.5	85.9	25.0	11.2				59.1-135.3
Trichlorofluoromethane (F-11)	21.0	84.0	20.0	80.0	25.0	4.8				67.1-135.7
1,1-Dichloroethene	20.9	83.4	23.9	95.7	25.0	13.8				70 - 130
Methylene Chloride	27.4	110	26.7	107	25.0	2.6				70 - 130
trans-1,2-Dichloroethene	28.8	115	27.1	108	25.0	6.2				70 - 130
Methyl tert-butyl ether (MTBE)	25.0	100	24.2	96.6	25.0	3.5				70 - 130
1,1-Dichloroethane	26.3	105	25.4	102	25.0	3.6				70 - 130
cis-1,2-Dichloroethene	27.4	110	26.9	108	25.0	1.8				70 - 130
Chloroform	23.9	95.6	24.0	95.8	25.0	0.3				70 - 130
1,1,1-Trichloroethane	23.6	94.4	21.9	87.8	25.0	7.3				70 - 130
Carbon tetrachloride	21.8	87.0	21.4	85.4	25.0	1.9				70 - 130
Benzene	26.1	104	25.3	101	25.0	3.0				70 - 130
1,2-Dichloroethane	21.3	85.1	20.9	83.6	25.0	1.8				70 - 130
Trichloroethene	24.5	97.9	22.9	91.6	25.0	6.7				70 - 130
1,2-Dichloropropane	25.4	102	23.3	93.4	25.0	8.5				70 - 130
Bromodichloromethane	22.5	90.0	21.0	84.2	25.0	6.7				70 - 130
cis-1,3-Dichloropropene	24.7	99.0	22.8	91.1	25.0	8.2				70 - 130
Toluene	25.3	101	23.6	94.3	25.0	7.1				70 - 130
trans-1,3-Dichloropropene	23.5	94.1	22.7	90.6	25.0	3.7				70 - 130
1,1,2-Trichloroethane	24.0	96.0	24.1	96.4	25.0	0.4				70 - 130
Tetrachloroethene	23.0	92.1	21.5	85.8	25.0	7.1				70 - 130
Dibromochloromethane	23.0	91.8	21.5	86.0	25.0	6.5				70 - 130
1,2-Dibromoethane	24.0	95.9	23.1	92.6	25.0	3.6				70 - 130
Chlorobenzene	25.7	103	25.1	100	25.0	2.6				70 - 130
Ethylbenzene	25.7	103	24.5	97.9	25.0	4.9				70 - 130
Xylene, total	77.6	103	75.9	101	75.0	2.1				70 - 130
Bromoform	22.9	91.6	23.0	92.0	25.0	0.5				70 - 130
1,1,2,2-Tetrachloroethane	25.9	104	26.2	105	25.0	0.8				70 - 130
1,3,5-Trimethylbenzene	27.0	108	25.1	100	25.0	7.3				70 - 130
1,2,4-Trimethylbenzene	26.0	104	24.5	98.0	25.0	6.1				70 - 130
1,3-Dichlorobenzene	26.0	104	24.4	97.5	25.0	6.5				70 - 130
1,4-Dichlorobenzene	26.7	107	26.7	107	25.0	0.0				70 - 130
1,2-Dichlorobenzene	25.3	101	25.0	100	25.0	1.2				70 - 130
Naphthalene	23.0	92.2	23.4	93.4	25.0	1.3				15.2-182.4

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.3	101	25.2	101	70 -130 %
Surr: Toluene-d8	24.7	99.0	23.4	93.5	70 -130 %
Surr: 4-Bromofluorobenzene	22.9	91.6	23.0	92.0	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:	14F010	Collection:	NA
Lab ID:	Sample Dup	Matrix: Air in bag	

Method QC Data

Batch: MS020606

Source Sample: 14F010-02 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	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	33	39	5	18.1	6/6/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	15	19	5	20.7	6/6/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Benzene	12	13	5	7.5	6/6/2014	8260B AZ Vapor	
Bromodichloromethane	< 25	< 25	5	0.0	6/6/2014	8260B AZ Vapor	
Bromoform	< 25	< 25	5	0.0	6/6/2014	8260B AZ Vapor	
Bromomethane	< 25	< 25	5	0.0	6/6/2014	8260B AZ Vapor	
Carbon tetrachloride	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Chlorobenzene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Chloroethane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Chloroform	< 25	< 25	5	0.0	6/6/2014	8260B AZ Vapor	
Chloromethane	< 25	< 25	5	0.0	6/6/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Dibromochloromethane	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Ethylbenzene	18	20	5	9.1	6/6/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 10	< 10	5	0.0	6/6/2014	8260B AZ Vapor	
Methylene chloride	< 25	< 25	5	0.0	6/6/2014	8260B AZ Vapor	
Naphthalene	< 25	< 25	5	0.0	6/6/2014	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Toluene	17	18	5	5.9	6/6/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Trichloroethene	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Vinyl chloride	< 5.0	< 5.0	5	0.0	6/6/2014	8260B AZ Vapor	
Xylenes, Total	65	74	5	14.0	6/6/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.7	103	25.0	100	70-130%
Surr: Toluene-d8	25.6	102	23.6	94.6	70-130%
Surr: 4-Bromofluorobenzene	22.6	90.4	22.3	89.2	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:	14F010	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020606

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	6/6/2014	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.8	107	%REC, 70-130%
Surr: Toluene-d8	25.8	103	%REC, 70-130%
Surr: 4-Bromofluorobenzene	20.5	82.0	%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:	14F010	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 6/6/2014 Batch: MS020606 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}	554	111	548	110	500	1.1				6/6/2014	50 - 150
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	28.2	113	27.0	108	25.0	70 -130 %					
Surr: Toluene-d8	25.7	103	24.9	99.5	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	20.6	82.5	18.7	74.8	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:	14F010	Collection:	NA
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020606

Method: 8015 by GC/MS **Source Sample: 14F010-02**

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}	4,900	5,380	5	9.3	6/6/2014	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.3	109	26.6	107	70-130%
Surr: Toluene-d8	26.9	108	24.9	99.4	70-130%
Surr: 4-Bromofluorobenzene	20.0	80.0	21.3	85.1	70-130%
		% REC		% REC	

Airtech Environmental Laboratories (AEL) — Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer :	City of Tucson Environmental Services	Page____ of ____	AEL Lab #
Address:	4004 S. Park ave	Sampler: Norman Boston Phone:	14F010
		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	6/5/14	1135	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	6/5/14	1140	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:
6/5/14	~~1340~~ 1440 NB	Norman Boston	James Jones - Airtech

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: September 3, 2014

Client:	Richard Byrd	Work Order #:	14H036
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	8/28/2014

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 3, 2014

Client:	Richard Byrd	Work Order #:	14H036
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	8/28/2014

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
14H036-01	HQUST-AIR-EFF	8260B AZ Vapor	8/28/2014	0830
		8015 GRO		
14H036-02	HQUST-AIR-INF	8260B AZ Vapor	8/28/2014	0835
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: September 3, 2014

Client:	Richard Byrd	Work Order #:	14H036
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	8/28/2014

Case Narrative

All samples and QC associated with your samples met the quality control objectives. Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

T3: Method not promulgated either by EPA or ADHS.

L5: The associated blank spike recovery was above the laboratory/method acceptance limits. The analyte was not detected in the sample.

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:	14H036	Collection:	8/28/2014
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	8/29/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	8/29/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	8/29/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/29/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/29/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	8/29/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	8/29/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	8/29/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	8/29/2014	8260B AZ Vapor	L5
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	8/29/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	8/29/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	8/29/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	8/29/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	8/29/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	8/29/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	8/29/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	8/29/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	8/29/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	8/29/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	8/29/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	8/29/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	8/29/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	8/29/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	8/29/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	8/29/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.9	112	%REC, 70-130%
Surr: Toluene-d8	26.6	107	%REC, 70-130%
Surr: 4-Bromofluorobenzene	26.8	107	%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:	14H036	Collection:	8/28/2014
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	8/29/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.0	100	%REC, 70-130%
Surr: Toluene-d8	25.0	100	%REC, 70-130%
Surr: 4-Bromofluorobenzene	22.2	88.8	%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:	14H036	Collection:	8/28/2014
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	8/29/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	8/29/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	8/29/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**35**	**1.0**	**7.17**	**0.20**	1	8/29/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**15**	**1.0**	**3.03**	**0.20**	1	8/29/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
Benzene	**6.9**	**1.0**	**2.18**	**0.31**	1	8/29/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	8/29/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	8/29/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	8/29/2014	8260B AZ Vapor	L5
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	8/29/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	8/29/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	8/29/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	8/29/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	8/29/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	8/29/2014	8260B AZ Vapor	
Ethylbenzene	**13**	**1.0**	**2.93**	**0.23**	1	8/29/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	8/29/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	8/29/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	8/29/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	8/29/2014	8260B AZ Vapor	
Toluene	**12**	**1.0**	**3.21**	**0.27**	1	8/29/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	8/29/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	8/29/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	8/29/2014	8260B AZ Vapor	
Xylenes, Total	**74**	**3.0**	**17.0**	**0.69**	1	8/29/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.3	101	%REC, 70-130%
Surr: Toluene-d8	25.7	103	%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-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	14H036	Collection:	8/28/2014
Lab ID:	02	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}	3,070	100	714	23.3	T3	1	8/29/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.2	92.8	%REC, 70-130%
Surr: Toluene-d8	24.4	97.5	%REC, 70-130%
Surr: 4-Bromofluorobenzene	21.3	85.2	%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:	14H036	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020829

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	8/29/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	8/29/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	8/29/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/29/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	8/29/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	8/29/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	8/29/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	8/29/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	8/29/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	8/29/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	8/29/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	8/29/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	8/29/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	8/29/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	8/29/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	8/29/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	8/29/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	8/29/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	8/29/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	8/29/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	8/29/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	8/29/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	8/29/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	8/29/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	8/29/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	8/29/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	8/29/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	8/29/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.5	110	%REC, 70-130%
Surr: Toluene-d8	27.8	111	%REC, 70-130%
Surr: 4-Bromofluorobenzene	28.1	112	%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:	14H036	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 8/29/2014 Batch: MS020829 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)	24.8	99.0	24.3	97.0	25.0	2.0				16.8-166.9
Chloromethane	23.5	93.8	23.3	93.0	25.0	0.8				46.7-120.2
Vinyl Chloride	24.2	96.7	24.2	96.8	25.0	0.0				65.1-126.4
Bromomethane	53.0	212	53.9	216	25.0	1.8	L5	L5		26.2-207.1
Chloroethane	28.6	114	28.5	114	25.0	0.4				59.1-135.3
Trichlorofluoromethane (F-11)	26.6	107	26.2	105	25.0	1.7				67.1-135.7
1,1-Dichloroethene	26.7	107	26.9	107	25.0	0.8				70 - 130
Methylene Chloride	25.2	101	25.2	101	25.0	0.3				70 - 130
trans-1,2-Dichloroethene	26.6	106	26.0	104	25.0	2.3				70 - 130
Methyl tert-butyl ether (MTBE)	23.5	94.2	23.5	94.0	25.0	0.2				70 - 130
1,1-Dichloroethane	25.4	102	25.0	100	25.0	1.5				70 - 130
cis-1,2-Dichloroethene	25.1	101	24.7	98.6	25.0	2.0				70 - 130
Chloroform	24.6	98.5	24.5	98.1	25.0	0.4				70 - 130
1,1,1-Trichloroethane	25.1	100	24.9	99.7	25.0	0.8				70 - 130
Carbon tetrachloride	27.0	108	25.4	102	25.0	6.2				70 - 130
Benzene	24.8	99.2	24.6	98.6	25.0	0.7				70 - 130
1,2-Dichloroethane	24.6	98.3	24.6	98.6	25.0	0.3				70 - 130
Trichloroethene	26.3	105	25.3	101	25.0	3.8				70 - 130
1,2-Dichloropropane	25.1	100	24.0	96.0	25.0	4.4				70 - 130
Bromodichloromethane	26.3	105	24.6	98.2	25.0	6.8				70 - 130
cis-1,3-Dichloropropene	26.3	105	24.6	98.2	25.0	7.0				70 - 130
Toluene	25.2	101	24.2	96.9	25.0	4.0				70 - 130
trans-1,3-Dichloropropene	25.2	101	23.6	94.2	25.0	6.8				70 - 130
1,1,2-Trichloroethane	23.6	94.3	23.6	94.3	25.0	0.0				70 - 130
Tetrachloroethene	25.6	102	24.4	97.5	25.0	4.9				70 - 130
Dibromochloromethane	26.5	106	25.2	101	25.0	5.0				70 - 130
1,2-Dibromoethane	24.3	97.3	24.6	98.3	25.0	1.0				70 - 130
Chlorobenzene	24.6	98.2	24.1	96.4	25.0	1.8				70 - 130
Ethylbenzene	25.3	101	24.6	98.3	25.0	3.0				70 - 130
Xylene, total	76.0	101	73.1	97.4	75.0	3.9				70 - 130
Bromoform	24.5	98.2	24.5	98.0	25.0	0.2				70 - 130
1,1,2,2-Tetrachloroethane	24.6	98.3	24.0	96.1	25.0	2.3				70 - 130
1,3,5-Trimethylbenzene	26.1	104	24.8	99.2	25.0	5.2				70 - 130
1,2,4-Trimethylbenzene	25.9	104	25.1	100	25.0	3.0				70 - 130
1,3-Dichlorobenzene	25.2	101	24.0	96.0	25.0	4.9				70 - 130
1,4-Dichlorobenzene	25.0	100	24.3	97.2	25.0	2.9				70 - 130
1,2-Dichlorobenzene	24.7	98.6	24.2	97.0	25.0	1.7				70 - 130
Naphthalene	24.2	97.0	24.0	96.2	25.0	0.8				15.2-182.4

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.0	108	27.0	108	70 -130 %
Surr: Toluene-d8	26.8	107	25.9	104	70 -130 %
Surr: 4-Bromofluorobenzene	25.9	103	25.3	101	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:	14H036	Collection:	NA
Lab ID:	Sample Dup	Matrix: Air in bag	

Method QC Data

Batch: MS020829

Source Sample: 14H036-02 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	8/29/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	35	35	1	0.9	8/29/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	15	15	1	0.2	8/29/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Benzene	6.9	7.1	1	2.0	8/29/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	8/29/2014	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	8/29/2014	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	8/29/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	8/29/2014	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	8/29/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Ethylbenzene	13	13	1	0.3	8/29/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	< 2.0	1	0.0	8/29/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	8/29/2014	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	8/29/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Toluene	12	12	1	1.6	8/29/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	8/29/2014	8260B AZ Vapor	
Xylenes, Total	74	74	1	0.8	8/29/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.3	101	25.7	103	70-130%
Surr: Toluene-d8	25.7	103	26.4	106	70-130%
Surr: 4-Bromofluorobenzene	25.2	101	26.1	104	70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	14H036	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020829

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	8/29/2014	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.1	101	%REC, 70-130%
Surr: Toluene-d8	26.1	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.0	91.9	%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:	14H036	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 8/29/2014 Batch: MS020829 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}	494	98.8	477	95.4	500	3.5				8/29/2014	50 - 150
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	23.4	93.6	24.2	96.8	25.0	70 -130 %					
Surr: Toluene-d8	24.9	99.4	24.5	97.9	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	21.4	85.4	21.8	87.0	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:	14H036	Collection:	NA
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020829

Method: 8015 by GC/MS **Source Sample: 14H036-02**

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}	3,070	3,100	1	1.0	8/29/2014	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.2	92.8	23.7	94.6	70-130%
Surr: Toluene-d8	24.4	97.5	25.4	101	70-130%
Surr: 4-Bromofluorobenzene	21.3	85.2	21.3	85.1	70-130%
		% REC		% REC	

Airtech Environmental Laboratories (AEL) — Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer :	City of Tucson Environmental Services	Page____ of ____	AEL Lab #
Address:	4004 S. Park ave	Sampler: Norman Burton Phone:	1411036
		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
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	8-28-14	0830 ~~1326~~ NB	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	8-28-14	0835 ~~1334~~ NB	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:
8/28/14	1342	[signature]	James Jones - Airtech

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: September 15, 2014

Client:	Richard Byrd	Work Order #:	14I018
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	9/10/2014

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 15, 2014

Client:	Richard Byrd	Work Order #:	14I018
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	9/10/2014

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
14I018-01	HQUST-AIR-EFF	8260B AZ Vapor 8015 GRO	9/10/2014	0835
14I018-02	HQUST-AIR-INF	8260B AZ Vapor 8015 GRO	9/10/2014	0840

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: September 15, 2014

Client:	Richard Byrd	Work Order #:	14I018
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	9/10/2014

Case Narrative

All samples and QC associated with your samples met the quality control objectives. Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

T3: Method not promulgated either by EPA or ADHS.

L5: The associated blank spike recovery was above the laboratory/method acceptance limits. The analyte was not detected in the sample.

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:	14I018	Collection:	9/10/2014
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	9/11/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	9/11/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	9/11/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/11/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/11/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	9/11/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	9/11/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	9/11/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	9/11/2014	8260B AZ Vapor	L5
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	9/11/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	9/11/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	9/11/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	9/11/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	9/11/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	9/11/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	9/11/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	9/11/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	9/11/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	9/11/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	9/11/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	9/11/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	9/11/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	9/11/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	9/11/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	9/11/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.0	112	%REC, 70-130%
Surr: Toluene-d8	27.6	110	%REC, 70-130%
Surr: 4-Bromofluorobenzene	28.2	113	%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:	14I018	Collection:	9/10/2014
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	9/11/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.7	103	%REC, 70-130%
Surr: Toluene-d8	26.0	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	19.5	78.1	%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:	14I018	Collection:	9/10/2014
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	9/11/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	9/11/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	9/11/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**64**	**1.0**	**13.1**	**0.20**	1	9/11/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**26**	**1.0**	**5.38**	**0.20**	1	9/11/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
Benzene	**8.0**	**1.0**	**2.51**	**0.31**	1	9/11/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	9/11/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	9/11/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	9/11/2014	8260B AZ Vapor	L5
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	9/11/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	9/11/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	9/11/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	9/11/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	9/11/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	9/11/2014	8260B AZ Vapor	
Ethylbenzene	**18**	**1.0**	**4.07**	**0.23**	1	9/11/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	9/11/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	9/11/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	9/11/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	9/11/2014	8260B AZ Vapor	
Toluene	**14**	**1.0**	**3.80**	**0.27**	1	9/11/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	9/11/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	9/11/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	9/11/2014	8260B AZ Vapor	
Xylenes, Total	**104**	**3.0**	**24.0**	**0.69**	1	9/11/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	31.6	127	%REC, 70-130%
Surr: Toluene-d8	29.2	117	%REC, 70-130%
Surr: 4-Bromofluorobenzene	31.3	125	%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:	14I018	Collection:	9/10/2014
Lab ID:	02	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}	4,430	100	1,030	23.3	T3	1	9/11/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.6	114	%REC, 70-130%
Surr: Toluene-d8	27.8	111	%REC, 70-130%
Surr: 4-Bromofluorobenzene	21.4	85.6	%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:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	14I018	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020911

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	9/11/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	9/11/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	9/11/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/11/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	9/11/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	9/11/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	9/11/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	9/11/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	9/11/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	9/11/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	9/11/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	9/11/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	9/11/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	9/11/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	9/11/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	9/11/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	9/11/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	9/11/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	9/11/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	9/11/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	9/11/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	9/11/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	9/11/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	9/11/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	9/11/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	9/11/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	9/11/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	9/11/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	27.8	111	%REC, 70-130%
Surr: Toluene-d8	27.6	110	%REC, 70-130%
Surr: 4-Bromofluorobenzene	27.6	111	%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:	14I018	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 9/11/2014 Batch: MS020911 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)	27.1	109	25.4	102	25.0	6.5				16.8-166.9
Chloromethane	27.0	108	25.2	101	25.0	6.9				46.7-120.2
Vinyl Chloride	29.2	117	28.4	114	25.0	2.8				65.1-126.4
Bromomethane	59.5	238	60.1	240	25.0	1.1	L5	L5		26.2-207.1
Chloroethane	32.7	131	32.6	131	25.0	0.1				59.1-135.3
Trichlorofluoromethane (F-11)	31.9	128	31.8	127	25.0	0.4				67.1-135.7
1,1-Dichloroethene	21.2	84.8	20.8	83.3	25.0	1.8				70 - 130
Methylene Chloride	27.6	110	25.9	104	25.0	6.2				70 - 130
trans-1,2-Dichloroethene	28.3	113	27.2	109	25.0	3.8				70 - 130
Methyl tert-butyl ether (MTBE)	27.0	108	26.1	105	25.0	3.3				70 - 130
1,1-Dichloroethane	30.3	121	29.6	118	25.0	2.2				70 - 130
cis-1,2-Dichloroethene	27.5	110	25.9	104	25.0	5.8				70 - 130
Chloroform	30.1	120	28.5	114	25.0	5.3				70 - 130
1,1,1-Trichloroethane	31.0	124	29.6	118	25.0	4.6				70 - 130
Carbon tetrachloride	31.5	126	31.0	124	25.0	1.4				70 - 130
Benzene	28.6	114	27.3	109	25.0	4.6				70 - 130
1,2-Dichloroethane	32.6	130	30.9	124	25.0	5.3				70 - 130
Trichloroethene	27.2	109	27.5	110	25.0	1.1				70 - 130
1,2-Dichloropropane	28.0	112	27.1	108	25.0	3.3				70 - 130
Bromodichloromethane	28.7	115	28.0	112	25.0	2.4				70 - 130
cis-1,3-Dichloropropene	27.8	111	27.7	111	25.0	0.5				70 - 130
Toluene	25.9	104	25.2	101	25.0	2.9				70 - 130
trans-1,3-Dichloropropene	27.8	111	26.8	107	25.0	3.6				70 - 130
1,1,2-Trichloroethane	24.9	99.4	23.9	95.5	25.0	4.0				70 - 130
Tetrachloroethene	24.0	96.0	23.2	92.9	25.0	3.3				70 - 130
Dibromochloromethane	25.8	103	24.0	96.1	25.0	7.1				70 - 130
1,2-Dibromoethane	24.2	96.6	23.7	94.8	25.0	1.9				70 - 130
Chlorobenzene	24.3	97.1	24.5	97.8	25.0	0.7				70 - 130
Ethylbenzene	27.2	109	27.5	110	25.0	1.1				70 - 130
Xylene, total	77.0	103	76.1	101	75.0	1.1				70 - 130
Bromoform	22.3	89.2	24.4	97.8	25.0	9.2				70 - 130
1,1,2,2-Tetrachloroethane	25.7	103	26.0	104	25.0	0.9				70 - 130
1,3,5-Trimethylbenzene	28.9	115	28.5	114	25.0	1.2				70 - 130
1,2,4-Trimethylbenzene	29.1	116	28.4	114	25.0	2.3				70 - 130
1,3-Dichlorobenzene	24.7	98.8	24.3	97.1	25.0	1.7				70 - 130
1,4-Dichlorobenzene	24.3	97.1	23.5	94.2	25.0	3.1				70 - 130
1,2-Dichlorobenzene	24.4	97.6	24.0	96.2	25.0	1.4				70 - 130
Naphthalene	23.8	95.3	24.0	95.9	25.0	0.6				15.2-182.4

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.7	115	27.4	109	70 -130 %
Surr: Toluene-d8	27.6	110	26.6	106	70 -130 %
Surr: 4-Bromofluorobenzene	27.4	110	27.6	110	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:	14I018	Collection:	NA
Lab ID:	Sample Dup	Matrix: Air in bag	

Method QC Data

Batch: MS020911

Source Sample: 14I020-02 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	9/11/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	2.1	2.1	1	1.0	9/11/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	2.6	2.2	1	15.4	9/11/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Benzene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	9/11/2014	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	9/11/2014	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	9/11/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	9/11/2014	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	9/11/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Methyl tert-butyl ether	2.3	2.2	1	4.1	9/11/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	9/11/2014	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	9/11/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Toluene	1.0	0.8	1	26	9/11/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	9/11/2014	8260B AZ Vapor	
Xylenes, Total	10	10	1	1.6	9/11/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	28.8	115	30.1	120	70-130%
Surr: Toluene-d8	27.1	108	28.3	113	70-130%
Surr: 4-Bromofluorobenzene	27.5	110	28.9	115	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:	14I018	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS020911

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	9/11/2014	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.3	101	%REC, 70-130%
Surr: Toluene-d8	25.9	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	19.3	77.0	%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:	14I018	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 9/11/2014 Batch: MS020911 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}	581	116	596	119	500	2.5				9/11/2014	50 - 150
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	25.5	102	25.1	101	25.0	70 -130 %					
Surr: Toluene-d8	25.0	99.9	24.9	99.6	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	19.0	76.2	19.0	75.8	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:	14I018	Collection:	NA
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS020911

Method: 8015 by GC/MS **Source Sample: 14I020-02**

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}	425	413	1	2.7	9/11/2014	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.4	106	27.7	111	70-130%
Surr: Toluene-d8	25.5	102	26.7	107	70-130%
Surr: 4-Bromofluorobenzene	19.5	78.2	19.7	78.6	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: Norman Buxton	Phone:	14I018
	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	9/10/14	0835	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	9/10/14	0840	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:
9/10/14	1455	[signature]	James Toms - Airtech

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: October 2, 2014

Client:	Richard Byrd	Work Order #:	14J010
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	10/2/2014

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, 2014

Client:	Richard Byrd	Work Order #:	14J010
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	10/2/2014

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
14J010-01	HQUST-AIR-EFF	8260B AZ Vapor	10/2/2014	1222
		8015 GRO		
14J010-02	HQUST-AIR-INF	8260B AZ Vapor	10/2/2014	1225
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: October 2, 2014

Client:	Richard Byrd	Work Order #:	14J010
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	10/2/2014

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:	14J010	Collection:	10/2/2014
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	10/2/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	10/2/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	10/2/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/2/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/2/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	10/2/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	10/2/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	10/2/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	10/2/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	10/2/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	10/2/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	10/2/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	10/2/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	10/2/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	10/2/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	10/2/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	10/2/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	10/2/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	10/2/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	10/2/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	10/2/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	10/2/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	10/2/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	10/2/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	10/2/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.4	97.7	%REC, 70-130%
Surr: Toluene-d8	26.1	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.8	99.3	%REC, 70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	HQUST-AIR-EFF
Project:	HQUST	Project Number:	P01152
Lab Order:	14J010	Collection:	10/2/2014
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	10/2/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.7	98.6	%REC, 70-130%
Surr: Toluene-d8	26.9	108	%REC, 70-130%
Surr: 4-Bromofluorobenzene	32.6	130	%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:	14J010	Collection:	10/2/2014
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	10/2/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	10/2/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	10/2/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**11**	**1.0**	**2.32**	**0.20**	1	10/2/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**5.6**	**1.0**	**1.13**	**0.20**	1	10/2/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
Benzene	**3.7**	**1.0**	**1.17**	**0.31**	1	10/2/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	10/2/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	10/2/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	10/2/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	10/2/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	10/2/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	10/2/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	10/2/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	10/2/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	10/2/2014	8260B AZ Vapor	
Ethylbenzene	**6.0**	**1.0**	**1.38**	**0.23**	1	10/2/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	10/2/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	10/2/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	10/2/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	10/2/2014	8260B AZ Vapor	
Toluene	**7.7**	**1.0**	**2.04**	**0.27**	1	10/2/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	10/2/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	10/2/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	10/2/2014	8260B AZ Vapor	
Xylenes, Total	**39**	**3.0**	**9.00**	**0.69**	1	10/2/2014	8260B AZ Vapor	
Surrogate	ug/l	%REC.	LIMIT					
Surr: Dibromofluoromethane	23.1	92.4	%REC, 70-130%					
Surr: Toluene-d8	26.0	104	%REC, 70-130%					
Surr: 4-Bromofluorobenzene	24.5	98.0	%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:	14J010	Collection:	10/2/2014
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}	1,960	100	456	23.3	T3	1	10/2/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.3	93	%REC, 70-130%
Surr: Toluene-d8	27.0	108	%REC, 70-130%
Surr: 4-Bromofluorobenzene	31.2	125	%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:	14J010	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021002

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	10/2/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	10/2/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	10/2/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/2/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	10/2/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	10/2/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	10/2/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	10/2/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	10/2/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	10/2/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	10/2/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	10/2/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	10/2/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	10/2/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	10/2/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	10/2/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	10/2/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	10/2/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	10/2/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	10/2/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	10/2/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	10/2/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	10/2/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	10/2/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	10/2/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	10/2/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	10/2/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	10/2/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.0	91.9	%REC, 70-130%
Surr: Toluene-d8	25.2	101	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.7	94.8	%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:	14J010	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 10/2/2014 Batch: MS021002 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)	16.9	67.4	16.0	63.8	25.0	5.5				16.8-166.9
Chloromethane	18.8	75.1	18.8	75.2	25.0	0.2				46.7-120.2
Vinyl Chloride	18.5	73.9	17.8	71.2	25.0	3.7				65.1-126.4
Bromomethane	28.8	115	26.7	107	25.0	7.5				26.2-207.1
Chloroethane	20.8	83.3	19.9	79.5	25.0	4.6				59.1-135.3
Trichlorofluoromethane (F-11)	20.9	83.7	20.0	80.0	25.0	4.6				67.1-135.7
1,1-Dichloroethene	19.1	76.2	18.8	75.3	25.0	1.2				70 - 130
Methylene Chloride	19.9	79.6	20.6	82.2	25.0	3.3				70 - 130
trans-1,2-Dichloroethene	23.0	92.2	22.0	88.0	25.0	4.6				70 - 130
Methyl tert-butyl ether (MTBE)	18.4	73.6	18.5	74.1	25.0	0.7				70 - 130
1,1-Dichloroethane	19.4	77.6	19.3	77.2	25.0	0.5				70 - 130
cis-1,2-Dichloroethene	22.1	88.4	22.5	90.0	25.0	1.7				70 - 130
Chloroform	20.4	81.6	20.3	81.0	25.0	0.8				70 - 130
1,1,1-Trichloroethane	21.8	87.2	21.0	84.2	25.0	3.6				70 - 130
Carbon tetrachloride	23.6	94.4	22.6	90.3	25.0	4.5				70 - 130
Benzene	20.1	80.2	19.9	79.7	25.0	0.6				70 - 130
1,2-Dichloroethane	19.5	130	19.5	78.1	25.0	0.2				70 - 130
Trichloroethene	24.4	97.8	23.3	93.3	25.0	4.7				70 - 130
1,2-Dichloropropane	21.8	87.2	21.4	85.4	25.0	2.1				70 - 130
Bromodichloromethane	23.0	92.1	22.6	90.3	25.0	2.0				70 - 130
cis-1,3-Dichloropropene	21.9	87.6	22.4	89.5	25.0	2.2				70 - 130
Toluene	24.9	99.6	24.6	98.3	25.0	1.4				70 - 130
trans-1,3-Dichloropropene	20.8	83.0	21.3	85.4	25.0	2.8				70 - 130
1,1,2-Trichloroethane	22.2	88.9	22.1	88.3	25.0	0.7				70 - 130
Tetrachloroethene	31.0	124	29.8	119	25.0	4.1				70 - 130
Dibromochloromethane	25.3	101	26.2	105	25.0	3.5				70 - 130
1,2-Dibromoethane	24.5	97.9	24.2	96.9	25.0	1.1				70 - 130
Chlorobenzene	26.0	104	25.6	103	25.0	1.2				70 - 130
Ethylbenzene	24.6	98.5	23.8	95.2	25.0	3.4				70 - 130
Xylene, total	77.3	103	76.1	101	75.0	1.6				70 - 130
Bromoform	26.1	104	25.7	103	25.0	1.5				70 - 130
1,1,2,2-Tetrachloroethane	20.4	81.6	21.7	86.8	25.0	6.2				70 - 130
1,3,5-Trimethylbenzene	23.4	93.7	23.9	95.5	25.0	1.9				70 - 130
1,2,4-Trimethylbenzene	23.4	93.5	23.7	94.6	25.0	1.2				70 - 130
1,3-Dichlorobenzene	25.8	103	25.7	103	25.0	0.4				70 - 130
1,4-Dichlorobenzene	25.7	103	24.2	96.9	25.0	5.9				70 - 130
1,2-Dichlorobenzene	24.3	97.3	23.4	93.6	25.0	3.9				70 - 130
Naphthalene	18.9	75.6	22.5	89.9	25.0	17.2				15.2-182.4

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.3	97.0	24.3	97.3	70 -130 %
Surr: Toluene-d8	26.4	106	25.9	104	70 -130 %
Surr: 4-Bromofluorobenzene	24.3	97.2	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:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	14J010	Collection:	NA
Lab ID:	Sample Dup	Matrix: Air in bag	

Method QC Data

Batch: MS021002

Source Sample: 14J008-02 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	10/2/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	12	12	1	1.6	10/2/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	8.5	8.2	1	3.2	10/2/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Benzene	25	24	1	4.0	10/2/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	< 5.0	1	0.0	10/2/2014	8260B AZ Vapor	
Bromoform	< 5.0	< 5.0	1	0.0	10/2/2014	8260B AZ Vapor	
Bromomethane	< 5.0	< 5.0	1	0.0	10/2/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Chloroethane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Chloroform	< 5.0	< 5.0	1	0.0	10/2/2014	8260B AZ Vapor	
Chloromethane	< 5.0	< 5.0	1	0.0	10/2/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Ethylbenzene	14	13	1	2.4	10/2/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	< 5.0	1	0.0	10/2/2014	8260B AZ Vapor	
Naphthalene	< 5.0	< 5.0	1	0.0	10/2/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Toluene	83	81	1	2.7	10/2/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	< 1.0	1	0.0	10/2/2014	8260B AZ Vapor	
Xylenes, Total	118	116	1	1.4	10/2/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.4	93.6	23.3	93.1	70-130%
Surr: Toluene-d8	25.4	101	26.3	105	70-130%
Surr: 4-Bromofluorobenzene	24.4	97.6	25.4	102	70-130%

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	14J010	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021002

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	10/2/2014	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.3	105	%REC, 70-130%
Surr: Toluene-d8	28.2	113	%REC, 70-130%
Surr: 4-Bromofluorobenzene	32.5	130	%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:	14J010	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 10/2/2014 Batch: MS021002 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}	452	90.4	465	93.0	500	2.8				10/2/2014	50 - 150
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	26.1	104	24.7	98.7	25.0	70 -130 %					
Surr: Toluene-d8	26.8	107	26.8	107	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	32.0	128	30.4	122	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:	14J010	Collection:	NA
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS021002

Method: 8015 by GC/MS **Source Sample: 14J008-02**

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}	5,430	5,330	1	1.9	10/2/2014	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	23.6	94.4	23.5	94	70-130%
Surr: Toluene-d8	26.1	105	27.2	109	70-130%
Surr: 4-Bromofluorobenzene	31.2	125	32.3	129	70-130%
		% REC		% REC	

Airtech Environmental Laboratories (AEL) — Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer :	City of Tucson Environmental Services	Page_____ of _____	AEL Lab #
Address:	4004 S. Park ave	Sampler: Norman Buxton Phone:	14J010
		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	10/2/14	1222	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	10/2/14	1225	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:
10-2-14	1555	[signature]	Tami Jones Airtech

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: November 20, 2014

Client:	Richard Byrd	Work Order #:	14K017
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	11/12/2014

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: November 20, 2014

Client:	Richard Byrd	Work Order #:	14K017
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	11/12/2014

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
14K017-01	HQUST-AIR-EFF	8260B AZ Vapor	11/12/2014	1238
		8015 GRO		
14K017-02	HQUST-AIR-INF	8260B AZ Vapor	11/12/2014	1240
		8015 GRO		

Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: November 20, 2014

Client:	Richard Byrd	Work Order #:	14K017
Company:	Environmental Service, COT	Project Name:	HQUST
Address:	4004 S. Park Ave	Project Number:	P01152
	Tucson, AZ 85714	Received Date:	11/12/2014

Case Narrative

All samples and QC associated with your samples met the quality control objectives. Data qualifiers in this report are in accordance with ADEQ Data Qualifiers.

T3: Method not promulgated either by EPA or ADHS.

L5: The associated blank spike recovery was above the laboratory/method acceptance limits. The analyte was not detected in the sample.

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:	14K017	Collection:	11/12/2014
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	11/12/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	11/12/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	11/12/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	11/12/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	11/12/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	11/12/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	11/12/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	11/12/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	11/12/2014	8260B AZ Vapor	L5
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	11/12/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	11/12/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	11/12/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	11/12/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	11/12/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	11/12/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	11/12/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	11/12/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	11/12/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	11/12/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	11/12/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	11/12/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	11/12/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	11/12/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	11/12/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	11/12/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.5	102	%REC, 70-130%
Surr: Toluene-d8	24.1	96.6	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.9	95.6	%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:	14K017	Collection:	11/12/2014
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	11/12/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.3	105	%REC, 70-130%
Surr: Toluene-d8	25.9	104	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.2	101	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

L5

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:	14K017	Collection:	11/12/2014
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	11/12/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	11/12/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	11/12/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	**15**	**1.0**	**3.13**	**0.20**	1	11/12/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	**7.0**	**1.0**	**1.42**	**0.20**	1	11/12/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
Benzene	**3.2**	**1.0**	**1.01**	**0.31**	1	11/12/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	11/12/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	11/12/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	11/12/2014	8260B AZ Vapor	L5
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	11/12/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	11/12/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	11/12/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	11/12/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	11/12/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	11/12/2014	8260B AZ Vapor	
Ethylbenzene	**5.4**	**1.0**	**1.25**	**0.23**	1	11/12/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	11/12/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	11/12/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	11/12/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	11/12/2014	8260B AZ Vapor	
Toluene	**5.5**	**1.0**	**1.46**	**0.27**	1	11/12/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	11/12/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	11/12/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	11/12/2014	8260B AZ Vapor	
Xylenes, Total	**33**	**3.0**	**7.62**	**0.69**	1	11/12/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.2	101	%REC, 70-130%
Surr: Toluene-d8	23.8	95.3	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.7	94.6	%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-INF
Project:	HQUST	Project Number:	P01152
Lab Order:	14K017	Collection:	11/12/2014
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}	1,750	100	407	23.3	T3	1	11/12/2014

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.1	104	%REC, 70-130%
Surr: Toluene-d8	25.7	103	%REC, 70-130%
Surr: 4-Bromofluorobenzene	24.5	97.9	%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:	14K017	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021112

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	11/12/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 1.0	1.0	< 0.15	0.15	1	11/12/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 1.0	1.0	< 0.18	0.18	1	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 1.0	1.0	< 0.13	0.13	1	11/12/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	11/12/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	< 1.0	1.0	< 0.20	0.20	1	11/12/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 1.0	1.0	< 0.17	0.17	1	11/12/2014	8260B AZ Vapor	
Benzene	< 1.0	1.0	< 0.31	0.31	1	11/12/2014	8260B AZ Vapor	
Bromodichloromethane	< 5.0	5.0	< 0.75	0.75	1	11/12/2014	8260B AZ Vapor	
Bromoform	< 5.0	5.0	< 0.48	0.48	1	11/12/2014	8260B AZ Vapor	
Bromomethane	< 5.0	5.0	< 1.29	1.29	1	11/12/2014	8260B AZ Vapor	
Carbon tetrachloride	< 1.0	1.0	< 0.16	0.16	1	11/12/2014	8260B AZ Vapor	
Chlorobenzene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Chloroethane	< 1.0	1.0	< 0.38	0.38	1	11/12/2014	8260B AZ Vapor	
Chloroform	< 5.0	5.0	< 1.02	1.02	1	11/12/2014	8260B AZ Vapor	
Chloromethane	< 5.0	5.0	< 2.42	2.42	1	11/12/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Dibromochloromethane	< 1.0	1.0	< 0.12	0.12	1	11/12/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 0.20	0.20	1	11/12/2014	8260B AZ Vapor	
Ethylbenzene	< 1.0	1.0	< 0.23	0.23	1	11/12/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 2.0	2.0	< 0.55	0.55	1	11/12/2014	8260B AZ Vapor	
Methylene chloride	< 5.0	5.0	< 1.44	1.44	1	11/12/2014	8260B AZ Vapor	
Naphthalene	< 5.0	5.0	< 0.95	0.95	1	11/12/2014	8260B AZ Vapor	
Tetrachloroethene	< 1.0	1.0	< 0.15	0.15	1	11/12/2014	8260B AZ Vapor	
Toluene	< 1.0	1.0	< 0.27	0.27	1	11/12/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 1.0	1.0	< 0.25	0.25	1	11/12/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 1.0	1.0	< 0.22	0.22	1	11/12/2014	8260B AZ Vapor	
Trichloroethene	< 1.0	1.0	< 0.19	0.19	1	11/12/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 0.18	0.18	1	11/12/2014	8260B AZ Vapor	
Vinyl chloride	< 1.0	1.0	< 0.39	0.39	1	11/12/2014	8260B AZ Vapor	
Xylenes, Total	< 3.0	3.0	< 0.69	0.69	1	11/12/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.0	100	%REC, 70-130%
Surr: Toluene-d8	23.8	95.3	%REC, 70-130%
Surr: 4-Bromofluorobenzene	23.4	93.6	%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:	14K017	Collection:	N/A
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 11/12/2014 Batch: MS021112 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)	26.7	107	23.9	95.4	25.0	11.1				16.8-166.9
Chloromethane	20.7	82.8	20.6	82.6	25.0	0.3				46.7-120.2
Vinyl Chloride	27.3	109	26.6	106	25.0	2.6				65.1-126.4
Bromomethane	51.9	208	50.9	204	25.0	2.0	L5			26.2-207.1
Chloroethane	27.7	111	27.2	109	25.0	1.9				59.1-135.3
Trichlorofluoromethane (F-11)	28.6	114	27.3	109	25.0	4.5				67.1-135.7
1,1-Dichloroethene	25.9	103	25.2	101	25.0	2.7				70 - 130
Methylene Chloride	25.8	103	25.6	102	25.0	0.9				70 - 130
trans-1,2-Dichloroethene	25.9	104	25.2	101	25.0	2.9				70 - 130
Methyl tert-butyl ether (MTBE)	26.3	105	26.7	107	25.0	1.4				70 - 130
1,1-Dichloroethane	26.0	104	25.6	102	25.0	1.4				70 - 130
cis-1,2-Dichloroethene	25.7	103	25.9	103	25.0	0.5				70 - 130
Chloroform	25.6	103	25.6	102	25.0	0.2				70 - 130
1,1,1-Trichloroethane	26.2	105	25.8	103	25.0	1.3				70 - 130
Carbon tetrachloride	27.0	108	26.7	107	25.0	1.2				70 - 130
Benzene	25.1	100	25.1	101	25.0	0.1				70 - 130
1,2-Dichloroethane	27.8	111	27.9	111	25.0	0.2				70 - 130
Trichloroethene	25.4	101	25.2	101	25.0	0.6				70 - 130
1,2-Dichloropropane	25.3	101	25.0	100	25.0	1.3				70 - 130
Bromodichloromethane	25.9	104	25.4	102	25.0	1.8				70 - 130
cis-1,3-Dichloropropene	26.0	104	25.5	102	25.0	1.6				70 - 130
Toluene	24.6	98.4	24.5	98.0	25.0	0.3				70 - 130
trans-1,3-Dichloropropene	25.7	103	25.9	104	25.0	0.7				70 - 130
1,1,2-Trichloroethane	25.3	101	25.9	103	25.0	2.4				70 - 130
Tetrachloroethene	24.6	98.4	24.1	96.2	25.0	2.3				70 - 130
Dibromochloromethane	25.9	104	26.2	105	25.0	0.8				70 - 130
1,2-Dibromoethane	26.3	105	26.3	105	25.0	0.0				70 - 130
Chlorobenzene	24.7	99.0	24.4	97.4	25.0	1.5				70 - 130
Ethylbenzene	24.9	100	24.8	99.0	25.0	0.6				70 - 130
Xylene, total	73.6	98.2	73.4	97.8	75.0	0.4				70 - 130
Bromoform	26.2	105	26.8	107	25.0	2.2				70 - 130
1,1,2,2-Tetrachloroethane	25.1	100	25.8	103	25.0	2.6				70 - 130
1,3,5-Trimethylbenzene	24.4	97.6	24.3	97.0	25.0	0.6				70 - 130
1,2,4-Trimethylbenzene	24.7	98.7	24.3	97.0	25.0	1.7				70 - 130
1,3-Dichlorobenzene	24.4	97.6	24.3	97.3	25.0	0.3				70 - 130
1,4-Dichlorobenzene	24.4	97.4	24.5	98.0	25.0	0.6				70 - 130
1,2-Dichlorobenzene	24.6	98.4	24.8	99.2	25.0	0.8				70 - 130
Naphthalene	24.8	99.0	25.5	102	25.0	3.1				15.2-182.4

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	24.6	98.4	25.2	101	70 -130 %
Surr: Toluene-d8	23.6	94.6	24.4	97.5	70 -130 %
Surr: 4-Bromofluorobenzene	23.3	93.0	24.3	97.0	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:	14K017	Collection:	NA
Lab ID:	Sample Dup	Matrix: Air in bag	

Method QC Data

Batch: MS021112

Source Sample: 14K014-02 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	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,1,2,2-Tetrachloroethane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,1,2-Trichloroethane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,1-Dichloroethene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,2-Dibromoethane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,2-Dichlorobenzene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,2-Dichloroethane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,2-Dichloropropane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,2,4-Trimethylbenzene	8.5	8.9	2	3.7	11/12/2014	8260B AZ Vapor	
1,3-Dichlorobenzene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
1,3,5-Trimethylbenzene	4.3	4.4	2	2.3	11/12/2014	8260B AZ Vapor	
1,4-Dichlorobenzene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Benzene	15	15	2	1.9	11/12/2014	8260B AZ Vapor	
Bromodichloromethane	< 10	< 10	2	0.0	11/12/2014	8260B AZ Vapor	
Bromoform	< 10	< 10	2	0.0	11/12/2014	8260B AZ Vapor	
Bromomethane	< 10	< 10	2	0.0	11/12/2014	8260B AZ Vapor	
Carbon tetrachloride	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Chlorobenzene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Chloroethane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Chloroform	< 10	< 10	2	0.0	11/12/2014	8260B AZ Vapor	
Chloromethane	< 10	< 10	2	0.0	11/12/2014	8260B AZ Vapor	
cis-1,2-Dichloroethene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
cis-1,3-Dichloropropene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Dibromochloromethane	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Dichlorodifluoromethane(F-12)	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Ethylbenzene	29	29	2	1.7	11/12/2014	8260B AZ Vapor	
Methyl tert-butyl ether	< 4.0	< 4.0	2	0.0	11/12/2014	8260B AZ Vapor	
Methylene chloride	< 10	< 10	2	0.0	11/12/2014	8260B AZ Vapor	
Naphthalene	< 10	< 10	2	0.0	11/12/2014	8260B AZ Vapor	
Tetrachloroethene	< 5.0	< 5.0	2	0.0	11/12/2014	8260B AZ Vapor	
Toluene	94	95	2	0.9	11/12/2014	8260B AZ Vapor	
trans-1,2-Dichloroethene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
trans-1,3-Dichloropropene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Trichloroethene	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Trichlorofluoromethane(F-11)	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Vinyl chloride	< 2.0	< 2.0	2	0.0	11/12/2014	8260B AZ Vapor	
Xylenes, Total	131	133	2	1.3	11/12/2014	8260B AZ Vapor	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.4	102	25.3	101	70-130%
Surr: Toluene-d8	23.6	94.3	24.1	96.2	70-130%
Surr: 4-Bromofluorobenzene	24.1	96.3	24.3	97.0	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:	14K017	Collection:	NA
Lab ID:	Blank		

Method QC Data

Batch: MS021112

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	11/12/2014	8015 by GC/MS	

Surrogate	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	25.8	103	%REC, 70-130%
Surr: Toluene-d8	25.6	102	%REC, 70-130%
Surr: 4-Bromofluorobenzene	25.1	100	%REC, 70-130%

* 105 is used as estimated molecular weight of gasoline based on EPA website .

Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Client:	Environmental Service, COT	Client Sample ID:	NA
Project:	HQUST	Project Number:	P01152
Lab Order:	14K017	Collection:	NA
Lab ID:	LCS/LCSD		

Method QC Data

Date Analyzed: 11/12/2014 Batch: MS021112 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}	495	98.9	480	96.0	500	3.0				11/12/2014	50 - 150
Surrogate	ug/l	%REC.	ug/l	%REC.	ug/l	LIMIT					
Surr: Dibromofluoromethane	26.3	105	26.3	105	25.0	70 -130 %					
Surr: Toluene-d8	26.1	104	25.6	102	25.0	70 -130 %					
Surr: 4-Bromofluorobenzene	26.0	104	24.9	99.6	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:	14K017	Collection:	NA
Lab ID:	Sample Dup	Matrix:	Air in bag

Method QC Data

Batch: MS021112

Method: 8015 by GC/MS **Source Sample: 14K014-02**

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}	3,300	3,320	2	0.6	11/12/2014	

Surrogate	ug/l	%REC.	ug/l	%REC.	LIMIT
Surr: Dibromofluoromethane	26.3	105	26.2	105	70-130%
Surr: Toluene-d8	25.3	101	26.2	105	70-130%
Surr: 4-Bromofluorobenzene	25.3	101	25.1	100	70-130%
		% REC		% REC	

Airtech Environmental Laboratories (AEL) Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

Customer : City of Tucson Environmental Services	Page_____ of _____		AEL Lab #
Address: 4004 S. Park ave	Sampler: Norman Butler	Phone:	14K017
	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	11.12.14	1239	1	S				X		X				
02			6, 1, bag	HQUST-AIR-INF	11.12.14	1240	1	S				X		X				
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															
			6, 1, bag															

Analyses Requested

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
11.12.14	1425	[signature]	James Jones - Airtech

APPENDIX E

OWS COMPLIANCE SAMPLES LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Northern California
ACCUTEST
LABORATORIES

09/08/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C35732

Sampling Date: 08/28/14

Report to:

City of Tucson - Env.Services
4400 S. Park Ave., Bldg 1 P.O. Box 27210
Tucson, AZ 85726
richard.byrd@tucsonaz.gov; lori.ehman@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: Elvin Kumar 408-588-0200

Certifications: OR (CA300006) CA (08258CA) CA (ELAP 2910) AZ (AZ0762) DoD ELAP (L-A-B L2242)

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Accutest Laboratories

Sample Summary

City of Tucson Environmental Services

Job No: C35732

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C35732-1	08/28/14	09:00	NB	08/29/14	AQ	Ground Water	HQUST-GW-EFF
C35732-2	08/28/14	09:05	NB	08/29/14	AQ	Ground Water	HQUST-GW-CV1
C35732-3	08/28/14	09:10	NB	08/29/14	AQ	Ground Water	HQUST-GW-INF
C35732-4	08/28/14	00:00	NB	08/29/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C35732
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	9/8/2014 10:20:23 PM

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/28/2014 and were received at Accutest on 08/29/2014 properly preserved, at 3.8 Deg. C and intact. These Samples received an Accutest job number of C35732. 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:** VR1061

- All method blanks and blank spikes for this batch meet method specific criteria.
- Sample(s) C35732-2, C35732-3, C35732-4 have for Dichlorodifluoromethane a CCV outside of control limits (biased high); not detected in samples.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP6769

- All method blanks and blank spikes for this batch meet method specific criteria.
- Insufficient sample volume available for MS/MSD.

Wet Chemistry By Method HACH 8000

Matrix: AQ **Batch ID:** GP6771

- All method blanks and blank spikes for this batch meet method specific criteria.
- Sample(s) C35732-1MSD, C35732-1MS were used as the QC samples for Chemical Oxygen Demand.

Wet Chemistry By Method SM2540 D-07

Matrix: AQ **Batch ID:** GN14386

- All method blanks for this batch meet method specific criteria.
- Sample(s) C35754-1DUP 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: C35732
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 08/28/14

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C35732-1	**HQUST-GW-EFF**					
Chemical Oxygen Demand		16.6	10		mg/l	HACH 8000
C35732-2	**HQUST-GW-CV1**					
No hits reported in this sample.						
C35732-3	**HQUST-GW-INF**					
Benzene		3.2	1.0		ug/l	EPA 624
Ethylbenzene		5.7	1.0		ug/l	EPA 624
Methyl Tert Butyl Ether		2.5	1.0		ug/l	EPA 624
Naphthalene		53.5	5.0		ug/l	EPA 624
1,2,4-Trimethylbenzene		110	4.0		ug/l	EPA 624
1,3,5-Trimethylbenzene		37.8	2.0		ug/l	EPA 624
Toluene		1.3	1.0		ug/l	EPA 624
m,p-Xylene		83.8	1.0		ug/l	EPA 624
o-Xylene		39.2	1.0		ug/l	EPA 624
Chemical Oxygen Demand		19.0	10		mg/l	HACH 8000
C35732-4	**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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	R28454.D	1	09/02/14	TN	n/a	n/a	VR1061
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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	85%		70-130%
2037-26-5	Toluene-D8	93%		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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	87%		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:	C35732-1	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
		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	16.6	10	mg/l	1	09/04/14 12:55	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	09/03/14 14:50	RL	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	09/03/14 09:55	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C35732-2	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	R28421.D	1	08/31/14	TN	n/a	n/a	VR1061
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 [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
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:	C35732-2	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	91%		70-130%
2037-26-5	Toluene-D8	93%		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:	C35732-2	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	87%		70-130%

(a) 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-GW-INF		
Lab Sample ID:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	R28419.D	1	08/31/14	TN	n/a	n/a	VR1061
Run #2	R28455.D	2	09/02/14	TN	n/a	n/a	VR1061

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

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	3.2	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 [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
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:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	5.7	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	2.5	1.0	ug/l	
91-20-3	Naphthalene	53.5	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	110 [b]	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	37.8	2.0	ug/l	
127-18-4	Tetrachloroethylene	ND	0.50	ug/l	
108-88-3	Toluene	1.3	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	83.8	1.0	ug/l	
95-47-6	o-Xylene	39.2	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	86%	108%	70-130%
2037-26-5	Toluene-D8	94%	87%	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:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
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	92%	92%	70-130%

(a) CCV outside of control limits (biased high); not detected in sample. AZ:V1
(b) Result is from Run# 2

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-INF		
Lab Sample ID:	C35732-3	**Date Sampled:**	08/28/14
Matrix:	AQ - Ground Water	**Date Received:**	08/29/14
		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	19.0	10	mg/l	1	09/04/14 12:55	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	09/03/14 14:50	RL	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	09/03/14 09:55	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C35732-4	**Date Sampled:**	08/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/29/14
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	R28418.D	1	08/31/14	TN	n/a	n/a	VR1061
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 [a]	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
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:	C35732-4	**Date Sampled:**	08/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/29/14
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	89%		70-130%
2037-26-5	Toluene-D8	93%		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:	C35732-4	**Date Sampled:**	08/28/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/29/14
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	86%		70-130%

(a) 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: C35732
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
V1	CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

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 # 7704 8464 3182
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C 635732

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: Norman Buxton

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	Na2SO4	MeOH	NONE	COD	VOC 624	O&G 1664	TSS	LAB USE ONLY
1	HQUST-GW-EFF	08/28/14	0900	NB	GW	8	3			4				1	X	X	X	X	
2	HQUST-GW-CV1	08/28/14	0905	NB	GW	3	3									X			
3	HQUST-GW-INF	08/28/14	0910	NB	GW	8	3			4				1	X	X	X	X	
4	Trip Blank						3									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	8/28/14 1350	1	2	8/28/14 1700	2 fed-Ex
Relinquished by: 3 Fedex	Date Time: 8-29-14 0933	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # Y	Appropriate Bottle / Pres. Y / N; Labels match Coc? Y / N	Headspace Y / N; Separate Receiving Check List used: Y / N; On Ice Y / N; Cooler Temp. 4.1-0.3=3.8 oC

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C35732: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C35732 **Client:** CITY OF TUCSON **Project:** HQUST P01152

Date / Time Received: 8/29/2014 **Delivery Method:** FedEx **Airbill #'s:** 770984643182

Cooler Temps (Initial/Adjusted): #1: (4.1/3.8);

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. Cooler temp verification:	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

5.2

5

C35732: 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: C35732
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
VR1061-MB	R28394.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

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: C35732
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
VR1061-MB	R28394.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

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	86%	70-130%

Method Blank Summary

Job Number: C35732
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
VR1061-MB	R28394.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	87%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35732
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
VR1061-BS	R28391.D	1	08/31/14	TN	n/a	n/a	VR1061
VR1061-BSD	R28392.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	20.4	102	20.3	102	0	77-122/25
108-86-1	Bromobenzene	20	20.4	102	20.4	102	0	76-126/17
74-97-5	Bromochloromethane	20	19.8	99	19.6	98	1	77-130/17
75-27-4	Bromodichloromethane	20	20.7	104	20.4	102	1	75-127/16
75-25-2	Bromoform	20	19.6	98	19.5	98	1	69-141/17
104-51-8	n-Butylbenzene	20	21.4	107	21.3	107	0	72-129/18
135-98-8	sec-Butylbenzene	20	23.0	115	23.2	116	1	74-128/18
98-06-6	tert-Butylbenzene	20	22.7	114	22.8	114	0	73-127/18
108-90-7	Chlorobenzene	20	21.3	107	21.1	106	1	77-122/16
75-00-3	Chloroethane	20	18.8	94	18.8	94	0	69-133/18
67-66-3	Chloroform	20	19.7	99	19.3	97	2	74-126/17
95-49-8	o-Chlorotoluene	20	21.4	107	21.8	109	2	72-127/20
106-43-4	p-Chlorotoluene	20	21.6	108	21.1	106	2	68-127/18
56-23-5	Carbon tetrachloride	20	23.6	118	23.1	116	2	71-133/19
75-34-3	1,1-Dichloroethane	20	18.9	95	18.8	94	1	71-125/17
75-35-4	1,1-Dichloroethylene	20	21.5	108	21.2	106	1	66-125/20
563-58-6	1,1-Dichloropropene	20	23.2	116	22.9	115	1	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	21.5	108	21.0	105	2	65-131/20
106-93-4	1,2-Dibromoethane	20	21.1	106	20.9	105	1	75-135/17
107-06-2	1,2-Dichloroethane	20	20.2	101	19.7	99	3	71-131/17
78-87-5	1,2-Dichloropropane	20	20.4	102	20.3	102	0	78-124/16
142-28-9	1,3-Dichloropropane	20	20.4	102	20.2	101	1	78-123/16
108-20-3	Di-Isopropyl ether	20	18.5	93	18.4	92	1	68-129/17
594-20-7	2,2-Dichloropropane	20	21.0	105	20.5	103	2	70-131/19
124-48-1	Dibromochloromethane	20	21.2	106	21.1	106	0	76-132/16
75-71-8	Dichlorodifluoromethane	20	24.9	125	23.5	118	6	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	19.7	99	19.6	98	1	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	21.9	110	21.9	110	0	72-130/16
541-73-1	m-Dichlorobenzene	20	21.2	106	21.2	106	0	75-124/16
95-50-1	o-Dichlorobenzene	20	21.0	105	21.1	106	0	76-124/16
106-46-7	p-Dichlorobenzene	20	20.0	100	20.1	101	0	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	19.5	98	19.4	97	1	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	20.9	105	20.8	104	0	71-126/16
100-41-4	Ethylbenzene	20	21.3	107	21.1	106	1	76-126/17
637-92-3	Ethyl Tert Butyl Ether	20	20.3	102	20.2	101	0	75-134/17
591-78-6	2-Hexanone	80	91.1	114	89.6	112	2	67-150/22

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35732
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
VR1061-BS	R28391.D	1	08/31/14	TN	n/a	n/a	VR1061
VR1061-BSD	R28392.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	20	21.4	107	21.3	107	0	69-135/20
98-82-8	Isopropylbenzene	20	22.6	113	22.5	113	0	61-125/17
99-87-6	p-Isopropyltoluene	20	21.3	107	21.4	107	0	68-127/18
108-10-1	4-Methyl-2-pentanone	80	87.1	109	85.8	107	2	71-142/21
74-83-9	Methyl bromide	20	22.0	110	21.8	109	1	68-132/18
74-87-3	Methyl chloride	20	19.8	99	20.0	100	1	39-150/28
74-95-3	Methylene bromide	20	20.9	105	20.6	103	1	77-127/16
75-09-2	Methylene chloride	20	17.6	88	17.5	88	1	67-128/18
78-93-3	Methyl ethyl ketone	80	84.1	105	82.9	104	1	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	18.7	94	18.7	94	0	73-132/17
91-20-3	Naphthalene	20	21.0	105	21.0	105	0	70-136/20
103-65-1	n-Propylbenzene	20	22.0	110	22.1	111	0	71-127/17
100-42-5	Styrene	20	19.5	98	19.5	98	0	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	20.2	101	20.1	101	0	73-133/17
75-65-0	Tert-Butyl Alcohol	100	106	106	100	100	6	60-149/26
630-20-6	1,1,1,2-Tetrachloroethane	20	21.4	107	21.3	107	0	77-130/16
71-55-6	1,1,1-Trichloroethane	20	21.4	107	21.0	105	2	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	20.9	105	20.9	105	0	77-129/17
79-00-5	1,1,2-Trichloroethane	20	20.2	101	20.0	100	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	20.4	102	20.4	102	0	70-133/18
96-18-4	1,2,3-Trichloropropane	20	20.9	105	20.6	103	1	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	20.3	102	20.3	102	0	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	21.4	107	21.3	107	0	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	22.4	112	22.3	112	0	77-129/17
127-18-4	Tetrachloroethylene	20	20.6	103	20.8	104	1	69-127/20
108-88-3	Toluene	20	20.8	104	20.7	104	0	75-122/17
79-01-6	Trichloroethylene	20	21.0	105	20.8	104	1	78-123/17
75-69-4	Trichlorofluoromethane	20	22.3	112	21.9	110	2	65-136/23
75-01-4	Vinyl chloride	20	22.4	112	21.8	109	3	57-146/22
	m,p-Xylene	40	43.2	108	43.1	108	0	76-125/17
95-47-6	o-Xylene	20	22.3	112	22.2	111	0	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	87%	86%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C35732
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
VR1061-BS	R28391.D	1	08/31/14	TN	n/a	n/a	VR1061
VR1061-BSD	R28392.D	1	08/31/14	TN	n/a	n/a	VR1061

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

C35732-1, C35732-2, C35732-3, C35732-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
2037-26-5	Toluene-D8	93%	92%	70-130%
460-00-4	4-Bromofluorobenzene	93%	93%	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: C35732
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	GP6771/GN14402	10	7.3	mg/l	50	49.4	98.8	90-110%
HEM Oil and Grease	GP6769/GN14397	5.0	0.0	mg/l	40	35.1	87.8	78-114%
Solids, Total Suspended	GN14386	5.0	0.0	mg/l				

Associated Samples:
Batch GP6769: C35732-1, C35732-3
Batch GP6771: C35732-1, C35732-3
Batch GN14386: C35732-1, C35732-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GP6771/GN14402	mg/l	50	49.4	0.0	25%
HEM Oil and Grease	GP6769/GN14397	mg/l	40	34.7	1.1	18%

Associated Samples:
Batch GP6769: C35732-1, C35732-3
Batch GP6771: C35732-1, C35732-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GN14386	C35754-1	mg/l	19.0	19.0	0.0	0-25%

Associated Samples:
Batch GN14386: C35732-1, C35732-3
(*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GP6771/GN14402	C35732-1	mg/l	16.6	50	56.4	79.6(a)	90-110%

Associated Samples:
Batch GP6771: C35732-1, C35732-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Within 75-125% criteria for method COD HACH 8000.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C35732
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	GP6771/GN14402	C35732-1	mg/l	16.6	50	58.8	4.1	25%

Associated Samples:
Batch GP6771: C35732-1, C35732-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Northern California
ACCUTEST
LABORATORIES

11/25/14

Technical Report for

City of Tucson Environmental Services

HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

P01152

Accutest Job Number: C37154

Sampling Date: 11/12/14

Report to:

City of Tucson - Env.Services
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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: Elvin Kumar 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: C37154

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

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C37154-1	11/12/14	12:15	NB	11/15/14	AQ	Ground Water	HQUST-GW-EFF
C37154-2	11/12/14	12:20	NB	11/15/14	AQ	Ground Water	HQUST-GW-CV1
C37154-3	11/12/14	12:25	NB	11/15/14	AQ	Ground Water	HQUST-GW-INF
C37154-4	11/12/14	00:00	NB	11/15/14	AQ	Trip Blank Water	TRIP BLANK

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	City of Tucson Environmental Services	**Job No**	C37154
Site:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ	**Report Date**	11/25/2014 2:56:22 A

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 11/12/2014 and were received at Accutest on 11/15/2014 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of C37154. 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.

Wet Chemistry By Method EPA 1664A

Matrix: AQ **Batch ID:** GP7091

- Sample(s) C37091-1MS were used as the QC samples for HEM Oil and Grease. Insufficient sample volume available for MSD.
- Matrix Spike Recovery(s) for HEM Oil and Grease are outside control limits. Spike recovery outside of acceptable QC criteria due to matrix interference. The associated blank spike recoveries were acceptable. Additionally, the sample spiked for the MS was not one of the samples from this SDG/work order; therefore, there are no data quality issues that affect this sample set.

Wet Chemistry By Method HACH 8000

Matrix: AQ **Batch ID:** GP7078

- Sample(s) C37154-1MS, C37154-1MSD were used as the QC samples for Chemical Oxygen Demand.

Wet Chemistry By Method SM2540 D-07

Matrix: AQ **Batch ID:** GN15012

- Sample(s) C37154-1DUP 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: C37154
Account: City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ
Collected: 11/12/14

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C37154-1	**HQUST-GW-EFF**					
Solids, Total Suspended		13.0	5.0		mg/l	SM2540 D-07
C37154-2	**HQUST-GW-CV1**					
No hits reported in this sample.						
C37154-3	**HQUST-GW-INF**					
Benzene		14.6	2.0		ug/l	EPA 624
Ethylbenzene		37.4	2.0		ug/l	EPA 624
Isopropylbenzene		2.8	2.0		ug/l	EPA 624
Naphthalene		49.5	10		ug/l	EPA 624
n-Propylbenzene		5.2	4.0		ug/l	EPA 624
1,2,4-Trimethylbenzene		47.6	4.0		ug/l	EPA 624
1,3,5-Trimethylbenzene		21.7	4.0		ug/l	EPA 624
Toluene		2.5	2.0		ug/l	EPA 624
m,p-Xylene		38.9	2.0		ug/l	EPA 624
o-Xylene		40.6	2.0		ug/l	EPA 624
Chemical Oxygen Demand		32.3	10		mg/l	HACH 8000
C37154-4	**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:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	W49413.D	1	11/17/14	TN	n/a	n/a	VW1787
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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%

(a) AZ:T2,T6

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-EFF		
Lab Sample ID:	C37154-1	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
		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	< 10	10	mg/l	1	11/17/14 15:35	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	11/20/14 10:30	PH	EPA 1664A
Solids, Total Suspended	13.0	5.0	mg/l	1	11/19/14 08:00	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C37154-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	W49414.D	1	11/17/14	TN	n/a	n/a	VW1787
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C37154-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

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

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-130%
2037-26-5	Toluene-D8	102%		70-130%

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-CV1		
Lab Sample ID:	C37154-2	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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%

(a) AZ:T2,T6

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-INF		
Lab Sample ID:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	W49415.D	2	11/17/14	TN	n/a	n/a	VW1787
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	14.6	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	
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	
106-46-7	p-Dichlorobenzene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	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:	HQUST-GW-INF		
Lab Sample ID:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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	1.0	ug/l	
100-41-4	Ethylbenzene	37.4	2.0	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	4.0	ug/l	
591-78-6	2-Hexanone	ND	20	ug/l	
87-68-3	Hexachlorobutadiene	ND	4.0	ug/l	
98-82-8	Isopropylbenzene	2.8	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	49.5	10	ug/l	
103-65-1	n-Propylbenzene	5.2	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	
75-65-0	Tert-Butyl Alcohol	ND	20	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	47.6	4.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	21.7	4.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	ug/l	
108-88-3	Toluene	2.5	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	
	m,p-Xylene	38.9	2.0	ug/l	
95-47-6	o-Xylene	40.6	2.0	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:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
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%

(a) AZ:T2,T6

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

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

Report of Analysis

Client Sample ID:	HQUST-GW-INF		
Lab Sample ID:	C37154-3	**Date Sampled:**	11/12/14
Matrix:	AQ - Ground Water	**Date Received:**	11/15/14
		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	32.3	10	mg/l	1	11/17/14 15:35	RL	HACH 8000
HEM Oil and Grease	< 5.0	5.0	mg/l	1	11/20/14 10:30	PH	EPA 1664A
Solids, Total Suspended	< 5.0	5.0	mg/l	1	11/19/14 08:00	DQ	SM2540 D-07

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37154-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/15/14
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	W49412.D	1	11/17/14	TN	n/a	n/a	VW1787
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

VOA 624 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-86-1	Bromobenzene	ND	1.0	ug/l	
74-97-5	Bromochloromethane	ND	1.0	ug/l	
75-27-4	Bromodichloromethane	ND	0.50	ug/l	
75-25-2	Bromoform	ND	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	ug/l	
108-90-7	Chlorobenzene	ND	0.50	ug/l	
75-00-3	Chloroethane	ND	0.50	ug/l	
67-66-3	Chloroform	ND	0.50	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	ug/l	
56-23-5	Carbon tetrachloride	ND	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	ug/l	
108-20-3	Di-Isopropyl ether [a]	ND	2.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	ug/l	
124-48-1	Dibromochloromethane	ND	0.50	ug/l	
75-71-8	Dichlorodifluoromethane	ND	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	0.50	ug/l	

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

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37154-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/15/14
Method:	EPA 624	**Percent Solids:**	n/a
Project:	HQUST P01152 - 260 South Stone Avenue, Tucson, AZ		

VOA 624 List

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

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

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

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

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	C37154-4	**Date Sampled:**	11/12/14
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/15/14
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	102%		70-130%

(a) AZ:T2,T6

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

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

Northern California ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Arizona Qualifiers
- Chain of Custody

Arizona Qualifiers

Job Number: C37154
Account: CTESAZT City of Tucson Environmental Services
Project: HQUST P01152 - 260 South Stone Avenue, Tucson, AZ

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

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

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 # 7718 6942 8651
Bottle Order Control #
Accutest Quote #
Accutest NC Job #: C C37154

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: Norman Buxton

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	11/12/14	1215	NB	GW	8	3			4				1		X	X	X	X							
-2	HQUST-GW-CV1	11/12/14	1220	NB	GW	3	3										X									
-3	HQUST-GW-INF	11/12/14	1225	NB	GW	8	3			4				1		X	X	X	X							
-4	Trip Blank						3										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	11.14.14 1455	1	2	11/14/14 1700	2 Fed-Ex
3 FEDEX 11/15/14	Date Time: 1000	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time: 1030	Received By: 5	Custody Seal #	Appropriate Bottle / Pres. Y / N; Headspace Y / N; On Ice Y / N; Labels match Coc? Y / N; Separate Receiving Check List used: Y / N	Cooler Temp. 2.2/2.2 oC

C37154: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C37154 **Client:** CITY OF TUCSON **Project:** HQUST P01152

Date / Time Received: 11/15/2014 10:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 771869428651

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

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. Cooler temp verification:	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

5.2

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C37154: 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: C37154
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
VW1787-MB	W49390.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

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: C37154
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
VW1787-MB	W49390.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

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: C37154
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
VW1787-MB	W49390.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	102%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37154
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
VW1787-BS	W49387.D	1	11/17/14	TN	n/a	n/a	VW1787
VW1787-BSD	W49388.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	20.4	102	20.3	102	0	77-122/25
108-86-1	Bromobenzene	20	19.9	100	20.7	104	4	76-126/17
74-97-5	Bromochloromethane	20	21.8	109	21.8	109	0	77-130/17
75-27-4	Bromodichloromethane	20	20.3	102	20.1	101	1	75-127/16
75-25-2	Bromoform	20	21.9	110	21.9	110	0	69-141/17
104-51-8	n-Butylbenzene	20	21.0	105	21.4	107	2	72-129/18
135-98-8	sec-Butylbenzene	20	19.6	98	20.2	101	3	74-128/18
98-06-6	tert-Butylbenzene	20	19.0	95	19.6	98	3	73-127/18
108-90-7	Chlorobenzene	20	19.8	99	20.0	100	1	77-122/16
75-00-3	Chloroethane	20	16.6	83	16.3	82	2	69-133/18
67-66-3	Chloroform	20	21.1	106	21.0	105	0	74-126/17
95-49-8	o-Chlorotoluene	20	20.0	100	21.8	109	9	72-127/20
106-43-4	p-Chlorotoluene	20	20.1	101	19.5	98	3	68-127/18
56-23-5	Carbon tetrachloride	20	21.2	106	21.0	105	1	71-133/19
75-34-3	1,1-Dichloroethane	20	20.8	104	20.5	103	1	71-125/17
75-35-4	1,1-Dichloroethylene	20	21.3	107	21.3	107	0	66-125/20
563-58-6	1,1-Dichloropropene	20	20.4	102	20.2	101	1	75-124/18
96-12-8	1,2-Dibromo-3-chloropropane	20	22.0	110	21.7	109	1	65-131/20
106-93-4	1,2-Dibromoethane	20	20.1	101	20.3	102	1	75-135/17
107-06-2	1,2-Dichloroethane	20	20.6	103	20.3	102	1	71-131/17
78-87-5	1,2-Dichloropropane	20	20.2	101	20.2	101	0	78-124/16
142-28-9	1,3-Dichloropropane	20	20.1	101	20.1	101	0	78-123/16
108-20-3	Di-Isopropyl ether	20	21.0	105	20.8	104	1	68-129/17
594-20-7	2,2-Dichloropropane	20	22.1	111	21.8	109	1	70-131/19
124-48-1	Dibromochloromethane	20	20.0	100	20.0	100	0	76-132/16
75-71-8	Dichlorodifluoromethane	20	18.6	93	17.1	86	8	32-168/28
156-59-2	cis-1,2-Dichloroethylene	20	21.0	105	21.1	106	0	73-126/17
10061-01-5	cis-1,3-Dichloropropene	20	20.6	103	20.5	103	0	72-130/16
541-73-1	m-Dichlorobenzene	20	19.9	100	20.7	104	4	75-124/16
95-50-1	o-Dichlorobenzene	20	20.0	100	20.6	103	3	76-124/16
106-46-7	p-Dichlorobenzene	20	19.5	98	20.3	102	4	75-124/16
156-60-5	trans-1,2-Dichloroethylene	20	20.3	102	20.3	102	0	71-126/18
10061-02-6	trans-1,3-Dichloropropene	20	19.3	97	19.3	97	0	71-126/16
100-41-4	Ethylbenzene	20	20.3	102	20.2	101	0	76-126/17
637-92-3	Ethyl Tert Butyl Ether	20	23.2	116	23.0	115	1	75-134/17
591-78-6	2-Hexanone	80	83.7	105	83.5	104	0	67-150/22

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37154
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
VW1787-BS	W49387.D	1	11/17/14	TN	n/a	n/a	VW1787
VW1787-BSD	W49388.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	20	20.6	103	21.2	106	3	69-135/20
98-82-8	Isopropylbenzene	20	20.1	101	19.8	99	2	61-125/17
99-87-6	p-Isopropyltoluene	20	19.7	99	20.2	101	3	68-127/18
108-10-1	4-Methyl-2-pentanone	80	82.1	103	83.2	104	1	71-142/21
74-83-9	Methyl bromide	20	18.3	92	18.4	92	1	68-132/18
74-87-3	Methyl chloride	20	18.1	91	18.0	90	1	39-150/28
74-95-3	Methylene bromide	20	21.1	106	21.0	105	0	77-127/16
75-09-2	Methylene chloride	20	20.6	103	20.7	104	0	67-128/18
78-93-3	Methyl ethyl ketone	80	81.4	102	81.0	101	0	56-155/23
1634-04-4	Methyl Tert Butyl Ether	20	21.9	110	22.1	111	1	73-132/17
91-20-3	Naphthalene	20	20.4	102	20.6	103	1	70-136/20
103-65-1	n-Propylbenzene	20	19.5	98	20.0	100	3	71-127/17
100-42-5	Styrene	20	20.8	104	20.9	105	0	72-134/16
994-05-8	Tert-Amyl Methyl Ether	20	22.1	111	22.3	112	1	73-133/17
75-65-0	Tert-Butyl Alcohol	100	130	130	123	123	6	60-149/26
630-20-6	1,1,1,2-Tetrachloroethane	20	20.9	105	20.8	104	0	77-130/16
71-55-6	1,1,1-Trichloroethane	20	21.5	108	21.3	107	1	74-128/19
79-34-5	1,1,2,2-Tetrachloroethane	20	20.7	104	21.4	107	3	77-129/17
79-00-5	1,1,2-Trichloroethane	20	19.7	99	19.8	99	1	77-125/16
87-61-6	1,2,3-Trichlorobenzene	20	22.7	114	23.0	115	1	70-133/18
96-18-4	1,2,3-Trichloropropane	20	23.2	116	22.5	113	3	69-126/18
120-82-1	1,2,4-Trichlorobenzene	20	21.2	106	21.9	110	3	68-129/17
95-63-6	1,2,4-Trimethylbenzene	20	20.0	100	20.7	104	3	74-129/17
108-67-8	1,3,5-Trimethylbenzene	20	20.6	103	21.3	107	3	77-129/17
127-18-4	Tetrachloroethylene	20	19.1	96	18.9	95	1	69-127/20
108-88-3	Toluene	20	20.0	100	19.8	99	1	75-122/17
79-01-6	Trichloroethylene	20	19.3	97	19.4	97	1	78-123/17
75-69-4	Trichlorofluoromethane	20	18.1	91	17.4	87	4	65-136/23
75-01-4	Vinyl chloride	20	17.8	89	17.3	87	3	57-146/22
	m,p-Xylene	40	40.2	101	40.2	101	0	76-125/17
95-47-6	o-Xylene	20	20.5	103	20.5	103	0	77-125/17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	106%	105%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C37154
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
VW1787-BS	W49387.D	1	11/17/14	TN	n/a	n/a	VW1787
VW1787-BSD	W49388.D	1	11/17/14	TN	n/a	n/a	VW1787

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

C37154-1, C37154-2, C37154-3, C37154-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
2037-26-5	Toluene-D8	100%	99%	70-130%
460-00-4	4-Bromofluorobenzene	103%	101%	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: C37154
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	GP7078/GN15000	10	0.0	mg/l	50	51.9	103.7	90-110%
HEM Oil and Grease	GP7091/GN15019	5.0	0.0	mg/l	40	33	82.8	78-114%
Solids, Total Suspended	GN15012	5.0	0.0	mg/l				

Associated Samples:
Batch GP7078: C37154-1, C37154-3
Batch GP7091: C37154-1, C37154-3
Batch GN15012: C37154-1, C37154-3
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GP7078/GN15000	mg/l	50	54.3	4.6	25%
HEM Oil and Grease	GP7091/GN15019	mg/l	40	33	0.6	18%

Associated Samples:
Batch GP7078: C37154-1, C37154-3
Batch GP7091: C37154-1, C37154-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GN15012	C37154-1	mg/l	13.0	13.0	0.0	0-25%

Associated Samples:
Batch GN15012: C37154-1, C37154-3
(*) Outside of QC limits

7.3

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GP7078/GN15000	C37154-1	mg/l	0.0	50	47.0	92.8	90-110%
HEM Oil and Grease	GP7091/GN15019	C37091-1	mg/l	0.0	40	30.4	74.6*(a)	78-114%

Associated Samples:
Batch GP7078: C37154-1, C37154-3
Batch GP7091: C37154-1, C37154-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike recovery outside of acceptable QC criteria due to matrix interference. However, LCS/LCSD is within control limits. AZ:M2

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C37154
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	GP7078/GN15000	C37154-1	mg/l	0.0	50	47.0	0.0	25%

Associated Samples:
Batch GP7078: C37154-1, C37154-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

APPENDIX F

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:

Richard M. Byrd
Name

4004 South Park Avenue, Building #1, Tucson 85726
Street Address City Zip Code

(520) 837-3710
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

May 15, 2015
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: May 15, 2015 (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: May 15, 2015 (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: 39-74 feet bgs (known) / estimated Aquifer type: ☒ unconfined ☐ confined ☐ perched

Groundwater Flow Direction: NNW Gradient: 0.008 (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