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# FIRST QUARTER 2019 STATUS REPORT
## Maricopa County Cave Creek Landfill
## Phoenix, Arizona

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## EXECUTIVE SUMMARY

In response to the detection of elevated levels of trichloroethene (TCE) in groundwater underlying Cave Creek Landfill, Maricopa County entered into a Consent Order in 1999 with the Arizona Department of Environmental Quality to characterize the nature and extent of site groundwater contamination, develop a Remedial Action Plan (RAP) to address contamination impacts, implement the RAP, and provide quarterly status updates on project activities. This status report documents site assessment and remediation efforts conducted pursuant to the RAP during the first calendar quarter of 2019 (January through March 2019).

***Groundwater Data Collection and Discussion.*** Quarterly groundwater levels were monitored on February 27 through March 4, 2019. During the reporting period, the predominant direction of groundwater flow was 174 degrees from north with a gradient of 0.002 feet per foot (ft/ft). Groundwater elevations at the site stayed relatively stable between First Quarter 2018 and First Quarter 2019, with an average site-wide decrease in groundwater elevation of 0.40 feet. Maricopa County collected quarterly groundwater samples concurrent with quarterly groundwater level monitoring. The analytical results from the First Quarter 2019 indicate that the highest concentrations of TCE underlie the southern and western portion of the New Landfill (near TSSV-03-PZ and MW-10). The concentration of TCE in duplicate samples collected from TSSV-03-PZ were 180 and 170 micrograms per liter (µg/L). This is the fifth consecutive quarter that TCE concentrations at TSSV-03-PZ have declined, indicating that the higher concentrations previously observed at this well may have migrated to the south. The TCE concentration in the sample collected from MW-02, 1,200 feet downgradient of TSSV-03-PZ, was comparable to previous quarters at 93 µg/L. The TCE concentration in the sample collected from MW-10, on the southwest boundary of the New Landfill, was 340 µg/L. This represents the highest observed concentration of TCE at the site in First Quarter 2019. TCE is present above the Arizona Water Quality Standard for TCE of 5 µg/L in off-site downgradient wells MW-05 (43 µg/L), MW-07 (30 µg/L), and MW-11 (22 µg/L). TCE concentrations in duplicate samples collected from MW-08, south of the Old Landfill, were 71 and 76 µg/L. This is a decrease from the Fourth Quarter 2018 observed concentration of 140/130 µg/L.

***Soil Vapor Data Collection and Discussion.*** Wood collected quarterly soil vapor samples on March 14 and March 18 through March 22, 2019. The analytical results from First Quarter 2019 indicate that the highest concentrations of TCE in site soil vapor occur in the deep zone around SVE-04 and TSSV-07-D, in the southwest corner of the Old Landfill. In general, compared to the Fourth Quarter 2018, TCE concentrations in soil vapor at all depth profiles have decreased. This suggests that the soil vapor extraction (SVE) system operating at the site is successfully extracting contaminated vapors from the subsurface. TCE concentrations in soil vapor samples collected from the shallow zone were less than 20 milligrams per cubic meter (mg/m$^3$). The duplicate samples collected from TSSV-02-M had the highest concentrations of TCE for the middle zone at 28/29 mg/m$^3$, which represents a decrease from the TCE concentrations observed in this same well during 2018, which were greater than 100 mg/m$^3$. Duplicate samples collected from TSSV-07-D and the sample collected from SVE-04 in the deep zone had TCE concentrations of 160/130 mg/m$^3$ and 200 mg/m$^3$, respectively. TCE concentrations in soil vapor from TSSV-07-PZ and MW-09 were the highest observed in the above water table zone, at 100 mg/m$^3$ and 83 mg/m$^3$, respectively.

***SVE System Performance.*** Based on the results of SVE system performance sampling, the soil vapor treatment system captured or destroyed over 97% of extracted volatile organic compounds (VOCs), as defined by Maricopa County Air Quality Department Rule 100 Section 200.113, and over 73% of Federal Hazardous Air Pollutants (HAPs) present in extracted vapors during the reporting period. The calculated total mass of VOCs removed from the vadose zone since full-scale SVE system startup on September 15, 2015 is 40,047 pounds (lbs). During First Quarter 2019, the SVE system removed 2,741 lbs of VOCs, which is equivalent to a daily mass removal rate of approximately 30 lbs per day.

## 1.0 INTRODUCTION

In response to the detection of elevated levels of trichloroethene (TCE) in groundwater underlying Cave Creek Landfill, Maricopa County entered into a Consent Order (CO) in 1999 with the Arizona Department of Environmental Quality (ADEQ) to characterize the nature and extent of site groundwater contamination. Since that time, the CO has been revised based on the results of multiple site investigations, and the current CO (ADEQ Identification Number 30604, Docket No. S-2-10) requires Maricopa County to complete groundwater characterization, develop a revised Remedial Action Plan (RAP), and complete ADEQ-approved remedial activities (ADEQ, 2010). Maricopa County submitted the final version of the RAP in May 2016 which includes soil vapor extraction (SVE) to address TCE-impacted vapor that serves as a source of groundwater contamination and an on-site pump and treat groundwater system to contain and remediate the existing groundwater plume (Amec Foster Wheeler Environment & Infrastructure, Inc. [Amec Foster Wheeler], 2016). ADEQ approved the RAP in their letter dated November 23, 2016 (ADEQ, 2016a).

Section IV of the CO requires quarterly status reports to document Maricopa County's progress implementing the stipulations of the CO and provide evidence of regulatory compliance (ADEQ, 2016b). This status report documents site assessment and remediation efforts conducted pursuant to the RAP during the first calendar quarter of 2019 (January through March 2019).

Wood Environment and Infrastructure Solutions, Inc. (Wood) prepared this quarterly report on behalf of Maricopa County Risk Management and Maricopa County Waste Resources & Recycling under the terms and conditions of Environmental Services Contract 13134-ITN.

## 2.0 SUMMARY OF MEASURES TAKEN TO IMPLEMENT THE RAP

Activities conducted in support of RAP implementation during the reporting period are as follows:

*Monitoring Program*

- Maricopa County collected quarterly groundwater levels and samples on February 27 through March 4, 2019.
- Pace Analytical, an environmental laboratory certified by the Arizona Department of Health Services (ADHS), analyzed the groundwater samples.
- Maricopa County collected quarterly soil vapor samples on March 14 and March 18 through March 22, 2019.
- Airtech Environmental Laboratories (AEL), an environmental laboratory certified by the ADHS, analyzed the soil vapor samples for volatile organic compounds (VOCs) in air by United States Environmental Protection Agency (EPA) Method TO-15.

*SVE System Operation and Compliance*

- The SVE system operated in the First Quarter 2019 from January 2 to March 29, 2019.
- Maricopa County collected monthly SVE system performance samples on January 16, March 4, and March 20, 2019.
- AEL analyzed the monthly SVE system performance samples for VOCs in air by EPA Method TO-15.
- On behalf of Maricopa County, Wood submitted the quarterly SVE system performance report for compliance with the Maricopa County Air Quality permit on April 3, 2019.

*Design, Permitting, and Construction of the Groundwater Treatment System (GWTS):*

- Maricopa County completed the following activities with regards to Phase 1, On-Site Infrastructure:
  - Construction oversight of the groundwater treatment system on the New Landfill. Work included preparation of the treatment system pad subgrade and installation of the Arizona Public Service (APS) electrical service line.
  - Renewal of the Phase 1 building permit through the Maricopa County Planning and Development Department (MCPDD).
- Maricopa County completed the following activities with regards to Phase 2, Conveyance Pipeline:
  - Continued design modifications based on City of Phoenix (COP) Planning and Development (PDD) input.
  - Access coordination with COP and Maricopa County real estate departments.
- Maricopa County completed the following activities with regards to Phase 3, Injection Well Site:
  - Solicitation of bids for implementation of injection well site landscape design following wall construction.
  - Developed a revised injection well IW-01 design based on the depth to bedrock observed at groundwater monitoring well MW-11.
  - Groundwater modeling with existing site groundwater model to evaluate potential alternative IW-01 operating scenarios based on recent groundwater quality data from MW-11.
  - Met with ADEQ on February 1, 2019 to review groundwater quality data and propose assessment of potential impacts based on groundwater modeling.

**Exhibit 1** summarizes the progress of activities programmed for Cave Creek Landfill RAP implementation. The schedule has been updated with the current status of project tasks. Notable revisions include:

- Drilling at IW-01 was delayed until June 2019 due to permitting issues with COP related to landscape salvage at the drilling site.
- GWTS operations are currently projected to begin in September 2020.

## 3.0 DATA COLLECTED DURING THE REPORTING PERIOD

### 3.1 Groundwater Elevations

On behalf of Maricopa County, Wood collected quarterly groundwater levels on February 27 through March 4, 2019. Locations and construction details of site wells are presented in **Figure 1** and **Table 1**, respectively. Groundwater elevations and the calculated groundwater flow direction and gradient for the reporting period are presented in **Table 2**. Contoured water table elevations and the calculated flow direction and gradient are shown in **Figure 2**. During the reporting period, the direction of groundwater flow was 174 degrees from north with a gradient of 0.002 feet per foot (ft/ft). As discussed in the Fourth Quarter 2018 status report (Wood, 2019), only groundwater elevations derived from the groundwater monitoring wells (i.e., well identifiers starting with MW and PW) were used for contouring the water table surface.

### 3.2 Groundwater Quality Monitoring

Maricopa County conducts groundwater quality monitoring at Cave Creek Landfill in accordance with the requirements of 40 Code of Federal Regulations (CFR) 258.50, as detailed in the Post-Closure Care Plan for Maricopa County Solid Waste Landfills (Post-Closure Care Plan) (Hydro Geo Chem, 2014). Groundwater samples from applicable Cave Creek Landfill wells are collected and analyzed for VOCs on a quarterly basis (typically February, May, August, and November). In addition to the evaluation of organic constituents, Maricopa County also samples compliance wells (i.e., MW-02, MW-03, MW-04, MW-05, MW-06, MW-07, MW-08, and PW) semi-annually for 40 CFR 258 Appendix I inorganic constituents (total metals) and general chemistry parameters.

Wood, on behalf of Maricopa County, collected quarterly groundwater samples on February 27 through March 4, 2019. In addition to the compliance wells noted above, the following site wells were also sampled: EW-01, MW-09, MW-10, MW-11, MW-12, MW-13, TSSV-02-PZ, TSSV-03-PZ, TSSV-04-PZ, TSSV-05-PZ, TSSV-06-PZ, and TSSV-07-PZ. Groundwater samples in the First Quarter 2019 were collected using passive sampling devices (i.e., passive diffusion bags [PDBs] and HydraSleeve™ samplers) placed approximately 15 feet below the water table. The sampling devices were deployed in November of 2018 during the Fourth Quarter 2018 groundwater sampling event.

Pace Analytical analyzed the groundwater samples for VOCs in water by EPA Method 8260. Samples collected from the compliance wells were additionally analyzed for total metals by 6010C, alkalinity by SM 2320B, specific conductance by SM 2510B, total dissolved solids by SM 2540C, pH by SM 4500-H, inorganic anions by EPA Method 300, nitrite by SM 4500-NO2B, and nitrogen and nitrate-nitrite by EPA Method 353.2. Laboratory results of analyses for samples collected during the reporting period are included in **Appendix A**. Due to a change in analytical laboratory between Fourth Quarter 2018 and First Quarter 2019, Wood conducted a review of consistency with historical results. The results of this review are discussed in **Section 4.2**.

Groundwater analytical results for the First Quarter 2019 are presented in **Table 3** (VOCs), **Table 4** (General Chemistry), and **Table 5** (Metals). The estimated extent of the TCE plume in groundwater and results of sampling at individual wells are shown in **Figure 2**.

### 3.3 Soil Vapor Monitoring

Maricopa County conducts quarterly soil vapor monitoring at the Cave Creek Landfill to evaluate the concentration and extent of contaminated soil vapors in the vadose zone. Wood, on behalf of Maricopa County, collected quarterly soil vapor samples from 42 site wells on March 14 and March 18 through March 22, 2019.

Wood collected the soil vapor samples using laboratory-supplied 1.0-liter passivated vacuum canisters. AEL analyzed the soil vapor samples for VOCs in air by EPA Method TO-15. Soil vapor analytical results for the First Quarter 2019 are presented in **Table 6**. The estimated extent of the TCE plume in soil vapor in the shallow, middle, deep, and above water table zones is shown in **Figures 3**, **4**, **5**, and **6**, respectively. The estimated extent of 1,1-Dichloroethene (1,1-DCE) in soil vapor in the deep zone is shown in **Figure 7**. Laboratory results of analyses for samples collected during the reporting period are included in **Appendix A**.

### 3.4 SVE System Performance Monitoring

The SVE system is part of the remedy identified in the RAP and provides source control (extraction of contaminated soil vapors) at the site. It was in full operation from January 2 to March 29, 2019 and extracted vapor from SVE-03 and SVE-04 during that time. The Carbon Adsorption System (CAS) treated the extracted vapor under pressurized flow (**Figure 8**).

The SVE system consists of three Granular Activated Carbon (GAC) vessels, identified as C1, C2, and C3, and one Hydrosil (i.e., potassium permanganate impregnated media) vessel, identified as H1. During routine operation, two GAC vessels are operated in lead/lag series configuration and the Hydrosil vessel is operated as the third and final vessel in the series. The remaining GAC vessel is a standby (offline) vessel and is placed into service as a lag vessel when the lead GAC vessel is spent and removed from service. During a change-out event, the lag vessel is moved into the lead position and the standby vessel is moved into the lag position. GAC is replaced in the former lead vessel and it becomes the new standby vessel.

Eleven GAC vessel change-outs were conducted during the reporting period. The change-outs occurred on the following dates:

- January 8, 2019
- January 14, 2019
- January 21, 2019
- January 28, 2019
- February 4, 2019
- February 11, 2019
- February 18, 2019
- March 6, 2019
- March 13, 2019
- March 20, 2019
- March 27, 2019

No Hydrosil change-outs were required during the reporting period.

Discharge of treated effluent from the SVE system is permitted by Maricopa County Air Quality Permit 980398 (Maricopa County Air Quality Department, 2016a). Under this permit, Maricopa County is required to collect monthly samples to calculate 12-month rolling total emissions and quarterly performance samples to demonstrate compliance with the site air quality permit. Wood collected monthly process samples on January 16 and March 20, 2019 and the monthly and quarterly performance sample on March 4, 2019. Process samples were collected with laboratory-supplied 1.0-liter passivated vacuum canisters at four locations: entering the CAS (at sample port [SP]-01), after the lead carbon vessel (at SP-02), after the lag carbon vessel (at SP-03), and after the Hydrosil vessel (at SP-04). These samples are named using the following convention: the sample port (e.g., SP-02) – the vessel that is monitored (e.g., C1 or H1) – the sample date in MMDDYY format. Sample locations are shown in **Figure 8**.

AEL analyzed the process samples for VOCs in air by EPA Method TO-15. Results of the process sample analysis are presented in **Table 7**. Laboratory results of analyses for samples collected during the reporting period are included in **Appendix A**.

# 4.0 DISCUSSION OF COLLECTED DATA

## 4.1 Groundwater Elevations

Groundwater elevations at the site stayed relatively stable between First Quarter 2018 and First Quarter 2019, with an average site-wide decrease in groundwater elevations derived from groundwater monitoring wells of 0.40 feet. No measured groundwater elevations were observed to increase during this time frame. The range of decrease was observed to be between 0.2 ft (at MW-07) and 0.6 ft (at PW). Groundwater flow direction continues to be nearly due south (174.3 degrees from north) and the gradient is 0.002 ft/ft.

## 4.2 Groundwater Quality

The analytical results from First Quarter 2019 indicate that the highest concentrations of TCE underlie the southern and western portion of the New Landfill (near TSSV-03-PZ and MW-10). The concentration of TCE in the original and duplicate samples collected from TSSV-03-PZ were 180 and 170 µg/L, respectively. This is the fifth consecutive quarter that TCE concentrations in TSSV-03-PZ have declined, indicating that the higher concentrations previously observed at this well may have migrated to the south. The TCE concentration in the sample collected from MW-02, 1,200 feet downgradient of TSSV-03-PZ, was comparable to previous quarters at 93 µg/L. The TCE concentration in the sample collected from MW-10, on the southwest boundary of the New Landfill, was comparable to previous quarters at 340 µg/L. This represents the highest observed concentration of TCE at the site in the First Quarter 2019. TCE is present above the Arizona Water Quality Standard for TCE of 5 µg/L in off-site downgradient wells MW-05 (43 µg/L), MW-07 (30 µg/L), and MW-11 (22 µg/L). TCE concentrations in duplicate samples collected from MW-08, south of the Old Landfill, were 71 and 76 µg/L. This is a decrease from the Fourth Quarter 2018 observed concentration of 140/130 µg/L.

Co-contaminants 1,1-DCE and PCE have been observed in groundwater samples collected from site monitoring wells for some time. The analytical results from the First Quarter 2019 indicate that the highest concentrations of 1,1-DCE and PCE are generally observed in the wells that have the highest concentrations of TCE. The sample from MW-10, for example, has PCE concentrations of 11 µg/L (above the AWQS for PCE of 5 µg/L) and 1,1-DCE concentrations of 7.8 µg/L (above the AWQS for 1,1-DCE of 7 µg/L). Similarly, the sample collected from MW-02 has a PCE concentration of 4.6 µg/L and a 1,1-DCE concentration of 9.8 µg/L. The PCE concentration in the sample collected from TSSV-04-PZ was 5.7 µg/L, and the 1,1-DCE concentration was 4.6 µg/L. The original and duplicate samples collected from MW-08 had PCE concentrations of 1.5/1.3 µg/L and 1,1-DCE concentrations of 4.7/4.5 µg/L. No other samples collected from site monitoring wells contained concentrations of PCE, 1,1-DCE, or other constituent above the respective AWQS.

Based on performance issues from the previous environmental laboratory during the Fourth Quarter 2018 reporting period, Pace Analytical Laboratories was selected to analyze samples collected in the First Quarter 2019. Wood conducted a review of First Quarter 2019 groundwater sample results to evaluate consistency with historical trends. Based on a comparison of First Quarter 2019 data to historical results, First Quarter 2019 groundwater data are consistent with previous results and usable for evaluation of long-term trends in contaminant concentrations in groundwater at the site. A review of data consistency with laboratory results corresponding to recent monitoring events will occur throughout 2019.

## 4.3 Soil Vapor

The analytical results from First Quarter 2019 indicate that the highest concentrations of TCE in site soil vapor occur in the deep zone around SVE-04 and TSSV-07-D, in the southwest corner of the Old Landfill

(**Figure 5**). In general, compared to the Fourth Quarter 2018, TCE concentrations in soil vapor at all depth profiles have decreased. This suggests the SVE system is successfully extracting contaminated vapors from the subsurface. TCE concentrations in soil vapor samples collected from the shallow zone were less than 20 milligrams per cubic meter (mg/m$^3$) (**Figure 3**). In the middle zone (**Figure 4**), the highest concentrations were observed in original and duplicate samples collected from TSSV-02-M at 28 mg/m$^3$ and 29 mg/m$^3$, respectively, which represent a decrease from the TCE concentrations observed in this same well during 2018 (greater than 100 mg/m$^3$). Duplicate samples collected from TSSV-07-D and the sample collected from SVE-04 in the deep zone had TCE concentrations of 160/130 mg/m$^3$ and 200 mg/m$^3$, respectively, marking a decrease from the TCE concentrations of 470/520 mg/m$^3$ and 330 mg/m$^3$, respectively, observed during the Fourth Quarter 2018. TCE concentrations in soil vapor from TSSV-07-PZ and MW-09 were the highest observed in the above water table zone, at 100 mg/m$^3$ and 83 mg/m$^3$, respectively (**Figure 6**). This is generally a decrease from the TCE concentrations observed at these wells during the Third and Fourth Quarter 2018.

1,1-DCE is frequently observed in soil vapor samples collected from wells in and near the Old Landfill (**Figure 7**). During First Quarter 2019, and consistent with previous quarters, the highest concentrations of 1,1-DCE in the soil vapor occurred in the deep zone around SVE-04 and TSSV-07-D.

### 4.4 SVE System Performance

Based on the results of SVE system performance sampling, the CAS captured or destroyed over 97% of extracted VOCs, as defined by Maricopa County Air Quality Department Rule 100 Section 200.113, and over 73% of Federal Hazardous Air Pollutants (HAPs) in extracted vapors, during the reporting period.

The calculated total mass removed from the vadose zone since SVE system startup is presented in **Table 8**. Mass removal rates are based on actual hours of operation (hour meter readings) and the estimated hourly VOC extraction rate derived from performance testing. During the reporting period, the SVE system removed 2,741 pounds (lbs) of VOCs over a time period of 91 days, which is equivalent to a daily mass extraction rate of approximately 30 lbs per day. Since operations began on September 15, 2015, the calculated total mass of VOCs removed through March 20, 2019 is 40,047 lbs.

The SVE system operated for 72% of the time in the First Quarter 2019. The system was commonly turned off for the weekend if on Friday, the field readings to estimate VOC removal efficiency of the CAS indicated that the removal efficiency on Saturday or Sunday would fall below the minimum VOC removal efficiency of 90% mandated by the air quality permit. The system was also turned off for several hours approximately every week to change the GAC order. Monthly testing of the CAS indicates that the system is operating as intended and is compliant with the air quality permit issued by Maricopa County.

## 5.0 FUTURE ACTIVITIES

Maricopa County will continue to conduct quarterly monitoring as described in Section 3.0 of this report. In addition to the reporting activities targeted for completion during the Second Quarter of 2019 listed in Section 2.0, upcoming activities scheduled through the Third Quarter of 2019 include:

- Continued operation of the SVE system for source control;
- Continued Phase 1 GWTS construction. This activity is currently on schedule and completion is estimated in early September 2019;
- Continue to work with COP real estate departments to develop access agreement(s) for Phase 2 construction and initiate procurement of a contractor to construct the conveyance pipeline;

- Development of a Site Groundwater Characterization Work Plan (the former Old Landfill Groundwater Characterization Work Plan) pending ADEQ concurrence on the scope of this document; and
- Initiate Phase 3 injection well drilling, which is projected to extend through August 2019.

## 6.0 REFERENCES

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016. *Draft Final Revised Remedial Action Plan*. Prepared on behalf of the Maricopa County Risk Management and Maricopa County Waste Resources & Recycling Management. May 6, 2016.

Arizona Department of Environmental Quality (ADEQ), 2010. *Consent Order in the matter of Cave Creek Landfill located at 8.3 miles east of I-17 approximately ½ mile south of Carefree Highway Phoenix, Maricopa, Arizona, Azurite Place ID 1169*. Docket No. S-2-10. Filed on January 19, 2010.

ADEQ, 2016a. *Letter to Ms. Rita Neill of Maricopa County from Ms. Laura Malone of ADEQ regarding Approval of the Revised Remedial Action Plan (RAP) dated 5-6-2016*; *Maricopa County, Cave Creek Landfill; Azurite Place ID Number 1169*. PRU16-513. Dated November 23, 2016.

ADEQ, 2016b. *Amendment No. 1 to Consent Order in the matter of Cave Creek Landfill located at 8.3 miles east of I-17 approximately ½ mile south of Carefree Highway Phoenix, Maricopa, Arizona, Azurite Place ID 1169*. Docket No. S-2-10. Signed on September 27, 2016.

ADEQ, 2018. Letter to *Ms. Rita Neill of Maricopa County from Ms. Tracy Neal of ADEQ regarding Fourth Quarter 2017 Status Report Maricopa County Cave Creek Landfill*. PRU18-137. Dated March 15, 2018.

Hydro Geo Chem, Inc. (Hydro Geo Chem), 2014. *Post-Closure Care Plan for Maricopa County Solid Waste Landfills*. Prepared for Maricopa County Waste Resources and Recycling. June 19, 2014.

Maricopa County Air Quality Department, 2016a. *Air Quality Permit to Operate and/or Construct Issued to Cave Creek Landfill. Permit Number 980398*. Revision Date: June 16, 2016. Expiration Date: November 30, 2021.

# TABLES

## Table 1. Well Construction Summary

## Cave Creek Landfill, Maricopa County

| WellName | Location Type | ADWR ID | Northing (NAD83SP Int'l Ft) | Easting (NAD83SP Int'l Ft) | TOC (ft amsl) | Ground Surface (ft amsl) | Total Well Depth (ft) | Date Installed | Casing Diameter (I.D.) | CasingType | Top Screen Depth (ft bgs) | Bottom Screen Depth (ft bgs) | Top Screen Elevation (ft amsl) | Pump Intake Depth (ft bgs) | Pump Intake Elevation (ft amsl) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EW-01 | Groundwater | 55-226136 | 1012934.6 | 675653.9 | 1,854.5 | 1,852.9 | 830 | 8/20/2016 | 12 | HSLA | 729.1 | 809.4 | 1,123.8 | - | - | - |
| MW-01 | Groundwater | 55-538298 | 1013459.3 | 675955.8 | 1,895.6 | 1,895.6 | 820 | 5/1/1993 | 6 inch | LCS | 660 | 820 | 1,235.6 | - | - | Originally installed at 695 ft bgs; moved to 740 ft bgs (at bottom of pump) on 3/2/2005. |
| MW-02 | Groundwater | 55-538299 | 1012899.4 | 675673.9 | 1,856.0 | 1,855.0 | 805 | 5/1/1993 | 6 inch | LCS | 630 | 805 | 1,225.0 | - | - | Originally installed at 675 ft bgs; moved to 704 ft bgs (at bottom of pump) on 3/1/2005; moved to 714 ft bgs on 6/26/2009. Pump removed 8/2017 |
| MW-03 | Groundwater | 55-216293 | 1013323.0 | 676495.2 | 1,866.4 | 1,867.0 | 830 | 12/13/2007 | 6 inch | LCS | 679 | 799 | 1,188.0 | - | - | Originally installed at 777 ft bgs; moved to 724 ft bgs on 6/25/2009. Pump removed 8/2017 |
| MW-04 | Groundwater | 55-912575 | 1012613.0 | 675427.0 | 1,849.8 | 1,848.7 | 768 | 10/26/2010 | 6 inch | LCS | 667.5 | 752.7 | 1,181.2 | - | - | Pump removed 8/2017 |
| MW-05 | Groundwater | 55-912728 | 1012467.6 | 674571.8 | 1,845.1 | 1,843.2 | 767 | 12/15/2010 | 6 inch | LCS | 660 | 740.2 | 1,183.2 | - | - | Pump removed 8/2017 |
| MW-06 | Groundwater | 55-913112 | 1012139.1 | 675961.1 | 1,860.7 | 1,858.6 | 776.9 | 5/16/2011 | 6 inch | LCS | 683 | 763 | 1,175.6 | - | - | Pump removed 8/2017 |
| MW-07 | Groundwater | 55-914001 | 1012607.3 | 675919.7 | 1,859.6 | 1,857.8 | 765 | 2/8/2012 | 8.25 inch | LCS | 674.8 | 754.8 | 1,183.0 | - | - | Pump removed 8/2017 |
| MW-08 | Groundwater | 55-913859 | 1015700.0 | 676938.9 | 1,889.1 | 1,887.5 | 766.5 | 1/9/2012 | 8.25 inch | LCS | 691.5 | 761.5 | 1,196.0 | - | - | Pump removed 8/2017 |
| MW-09 | Groundwater | 55-920632 | 1015090.4 | 675043.7 | 1,864.8 | 1,864.2 | 775 | 7/25/2017 | 6 inch | Sch 80 PVC | 685 | 775 | 1,179.2 | - | - | - |
| MW-09-S | Soil Vapor | 55-920632 | 1015090.4 | 675043.7 | 1,864.8 | 1,864.2 | 160 | 7/25/2017 | 1 inch | Sch 80 PVC | 140 | 160 | 1,724.2 | - | - | - |
| MW-09-M | Soil Vapor | 55-920632 | 1015090.4 | 675043.7 | 1,864.8 | 1,864.2 | 360 | 7/25/2017 | 1 inch | Sch 80 PVC | 340 | 360 | 1,524.2 | - | - | - |
| MW-09-D | Soil Vapor | 55-920632 | 1015090.4 | 675043.7 | 1,864.8 | 1,864.2 | 585 | 7/25/2017 | 1 inch | Sch 80 PVC | 535 | 585 | 1,329.2 | - | - | - |
| MW-10 | Groundwater | 55-920633 | 1013594.3 | 674997.4 | 1,848.3 | 1,847.4 | 765 | 9/3/2017 | 6 inch | Sch 80 PVC | 670 | 760 | 1,177.4 | - | - | - |
| MW-10-S | Soil Vapor | 55-920633 | 1013594.3 | 674997.4 | 1,848.3 | 1,847.4 | 140 | 9/6/2017 | 1 inch | Sch 80 PVC | 120 | 140 | 1,727.4 | - | - | - |
| MW-10-M | Soil Vapor | 55-920633 | 1013594.3 | 674997.4 | 1,848.3 | 1,847.4 | 340 | 9/6/2017 | 1 inch | Sch 80 PVC | 320 | 340 | 1,527.4 | - | - | - |
| MW-10-D | Soil Vapor | 55-920633 | 1013594.3 | 674997.4 | 1,848.3 | 1,847.4 | 570 | 9/6/2017 | 1 inch | Sch 80 PVC | 520 | 570 | 1,327.4 | - | - | - |
| MW-11 | Groundwater | 55-229174 | 1011611.5 | 675676.7 | 1,850.8 | 1,851.1 | 781 | 10/8/2018 | 6 inch | Sch 80 PVC | 686 | 776 | 1,165.1 | - | - | - |
| MW-12 | Groundwater | 55-921934 | 1014678.7 | 676009.7 | 1,873.2 | 1,873.6 | 785 | 9/5/2018 | 6 inch | Sch 80 PVC | 690 | 780 | 1,183.6 | - | - | - |

## Table 1. Well Construction Summary

## Cave Creek Landfill, Maricopa County

| WellName | Location Type | ADWR ID | Northing (NAD83SP Int'l Ft) | Easting (NAD83SP Int'l Ft) | TOC (ft amsl) | Ground Surface (ft amsl) | Total Well Depth (ft) | Date Installed | Casing Diameter (I.D.) | CasingType | Top Screen Depth (ft bgs) | Bottom Screen Depth (ft bgs) | Top Screen Elevation (ft amsl) | Pump Intake Depth (ft bgs) | Pump Intake Elevation (ft amsl) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-12-S | Soil Vapor | 55-921934 | 1014679.0 | 676009.8 | 1,873.5 | 1,873.6 | 196 | 9/5/2018 | 1 inch | Sch 80 PVC | 146 | 196 | 1,727.6 | - | - | - |
| MW-12-M | Soil Vapor | 55-921934 | 1014678.8 | 676009.5 | 1,873.4 | 1,873.6 | 396 | 9/5/2018 | 1 inch | Sch 80 PVC | 346 | 396 | 1,527.6 | - | - | - |
| MW-12-D | Soil Vapor | 55-921934 | 1014679.2 | 676009.7 | 1,873.3 | 1,873.6 | 596 | 9/5/2018 | 2 inch | Sch 80 PVC | 546 | 596 | 1,327.6 | - | - | - |
| MW-13 | Groundwater | 55-229175 | 1016320.9 | 676680.0 | 1,900.7 | 1,900.0 | 802 | 11/10/2018 | 6 inch | Sch 80 PVC | 707 | 797 | 1,193.0 | - | - | - |
| MW-13-S | Soil Vapor | 55-229175 | 1016321.0 | 676680.3 | 1,900.5 | 1,900.0 | 223 | 11/10/2018 | 1 inch | Sch 80 PVC | 173 | 223 | 1,727.0 | - | - | - |
| MW-13-M | Soil Vapor | 55-229175 | 1016321.1 | 676680.0 | 1,900.5 | 1,900.0 | 423 | 11/10/2018 | 1 inch | Sch 80 PVC | 373 | 423 | 1,527.0 | - | - | - |
| MW-13-D | Soil Vapor | 55-229175 | 1016320.9 | 676679.8 | 1,900.5 | 1,900.0 | 623 | 11/10/2018 | 2 inch | Sch 80 PVC | 573 | 623 | 1,327.0 | - | - | - |
| PW | Groundwater | 55-503913 | 1015806.0 | 675722.2 | 1,882.0 | 1,881.4 | 820 | 10/1/1982 | 6 inch | LCS | 680 | 810 | 1,201.4 | - | - | Originally installed at 750 ft bgs; moved to 729 ft bgs on 6/25/2009. Pump removed 8/2017 |
| SVE-01 | Soil Vapor Extraction | 55-917896 | 1015834.8 | 675971.9 | - | 1,882.1 | 610 | 5/18/2015 | 6 inch | Sch 80 PVC | 120 | 600 | 1,762.1 | - | - | - |
| SVE-01-S | Soil Vapor | 55-917896 | 1015834.8 | 675971.9 | 1,882.1 | 1,882.1 | 610 | 5/18/2015 | 1 inch | Sch 80 PVC | 180 | 200 | 1,702.1 | - | - | - |
| SVE-01-M | Soil Vapor | 55-917896 | 1015834.8 | 675971.9 | 1,882.1 | 1,882.1 | 610 | 5/18/2015 | 1 inch | Sch 80 PVC | 360 | 380 | 1,522.1 | - | - | - |
| SVE-01-D | Soil Vapor | 55-917896 | 1015834.8 | 675971.9 | 1,882.1 | 1,882.1 | 610 | 5/18/2015 | 1 inch | Sch 80 PVC | 480 | 500 | 1,402.1 | - | - | - |
| SVE-02 | Soil Vapor Extraction | 55-917897 | 1015472.6 | 675617.9 | 1,900.4 | 1,900.4 | 630 | 5/5/2015 | 6 inch | Sch 80 PVC | 400 | 620 | 1,500.4 | - | - | - |
| SVE-02-S | Soil Vapor | 55-917897 | 1015472.6 | 675617.9 | 1,900.4 | 1,900.4 | 630 | 5/5/2015 | 1 inch | Sch 80 PVC | 150 | 170 | 1,750.4 | - | - | - |
| SVE-02-M | Soil Vapor | 55-917897 | 1015472.6 | 675617.9 | 1,900.4 | 1,900.4 | 630 | 5/5/2015 | 1 inch | Sch 80 PVC | 300 | 350 | 1,600.4 | - | - | - |
| SVE-03 | Soil Vapor | 55-920634 | 1015112.6 | 675423.8 | 1,907.5 | 1,905.1 | 655 | 8/8/2017 | 6 inch | Sch 80 PVC | 530 | 650 | 1,375.1 | - | - | - |
| SVE-03-S | Soil Vapor | 55-920634 | 1015112.6 | 675423.8 | 1,907.5 | 1,905.1 | 200 | 8/8/2017 | 1 inch | Sch 80 PVC | 180 | 200 | 1,725.1 | - | - | - |
| SVE-03-M | Soil Vapor | 55-920634 | 1015112.6 | 675423.8 | 1,907.5 | 1,905.1 | 400 | 8/8/2017 | 1 inch | Sch 80 PVC | 380 | 400 | 1,525.1 | - | - | - |
| SVE-04 | Soil Vapor | 55-920878 | 1015934.6 | 676182.8 | 1,893.0 | 1,890.8 | 644 | 10/4/2017 | 6 inch | Sch 80 PVC | 514 | 639 | 1,376.8 | - | - | - |
| SVE-04-S | Soil Vapor | 55-920878 | 1015934.6 | 676182.8 | 1,893.0 | 1,890.8 | 185 | 10/4/2017 | 1 inch | Sch 80 PVC | 165 | 185 | 1,725.8 | - | - | - |
| SVE-04-M | Soil Vapor | 55-920878 | 1015934.6 | 676182.8 | 1,893.0 | 1,890.8 | 385 | 10/4/2017 | 1 inch | Sch 80 PVC | 365 | 385 | 1,525.8 | - | - | - |
| TSSV-01-S | Soil Vapor | 55-911519 | 1015918.8 | 675991.0 | 1,881.0 | 1,881.0 | 610 | 1/22/2010 | 2 inch | Sch 80 PVC | 150 | 200 | 1,731.0 | - | - | - |

## Table 1. Well Construction Summary

## Cave Creek Landfill, Maricopa County

| WellName | Location Type | ADWR ID | Northing (NAD83SP Int'l Ft) | Easting (NAD83SP Int'l Ft) | TOC (ft amsl) | Ground Surface (ft amsl) | Total Well Depth (ft) | Date Installed | Casing Diameter (I.D.) | CasingType | Top Screen Depth (ft bgs) | Bottom Screen Depth (ft bgs) | Top Screen Elevation (ft amsl) | Pump Intake Depth (ft bgs) | Pump Intake Elevation (ft amsl) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TSSV-01-M | Soil Vapor | 55-911519 | 1015918.8 | 675991.0 | 1,881.0 | 1,881.0 | 610 | 1/22/2010 | 2 inch | Sch 80 PVC | 350 | 400 | 1,531.0 | - | - | - |
| TSSV-01-D | Soil Vapor | 55-911519 | 1015918.8 | 675991.0 | 1,881.0 | 1,881.0 | 610 | 1/22/2010 | 2 inch | Sch 80 PVC | 549 | 599 | 1,332.0 | - | - | - |
| TSSV-02-S | Soil Vapor | 55-915432 | 1015688.3 | 675875.9 | 1,880.2 | 1,881.4 | 210 | 5/3/2013 | 2 inch | Sch 80 PVC | 150.3 | 200.3 | 1,731.1 | - | - | - |
| TSSV-02-M | Soil Vapor | 55-915432 | 1015688.3 | 675875.9 | 1,880.2 | 1,881.4 | 410 | 5/3/2013 | 2 inch | Sch 80 PVC | 350.3 | 400.3 | 1,531.1 | - | - | - |
| TSSV-02-D | Soil Vapor | 55-915279 | 1015688.8 | 675860.8 | 1,880.2 | 1,881.2 | 609 | 4/24/2013 | 2 inch | Sch 80 PVC | 549.3 | 599.3 | 1,331.9 | - | - | - |
| TSSV-02-PZ | Groundwater | 55-915279 | 1015688.8 | 675860.8 | 1,880.2 | 1,881.2 | 779 | 4/24/2013 | 2 inch | Sch 80 PVC | 699.3 | 769.3 | 1,181.9 | - | - | - |
| TSSV-03-S | Soil Vapor | 55-915281 | 1014061.5 | 675688.5 | 1,902.7 | 1,901.8 | 230 | 4/26/2013 | 2 inch | Sch 80 PVC | 170.5 | 220.5 | 1,731.3 | - | - | - |
| TSSV-03-M | Soil Vapor | 55-915281 | 1014061.5 | 675688.5 | 1,902.7 | 1,901.8 | 430 | 4/26/2013 | 2 inch | Sch 80 PVC | 370.5 | 420.5 | 1,531.3 | - | - | - |
| TSSV-03-D | Soil Vapor | 55-915281 | 1014061.5 | 675688.5 | 1,902.7 | 1,901.8 | 629 | 4/26/2013 | 2 inch | Sch 80 PVC | 569.5 | 619.5 | 1,332.3 | - | - | - |
| TSSV-03-PZ | Groundwater | 55-915281 | 1014061.5 | 675688.5 | 1,902.7 | 1,901.8 | 799 | 4/26/2013 | 2 inch | Sch 80 PVC | 719.5 | 789.5 | 1,182.3 | - | - | - |
| TSSV-03-P | Soil Vapor | 55-915281 | 1014061.5 | 675688.5 | 1,902.7 | 1,901.8 | 73 | 4/26/2013 | 1 inch | Sch 80 PVC | 60 | 70 | 1,841.8 | - | - | - |
| TSSV-04-S | Soil Vapor | 55-915282 | 1015319.7 | 675423.9 | 1,906.0 | 1,905.4 | 235 | 5/31/2013 | 2 inch | Sch 80 PVC | 174.5 | 224.5 | 1,730.9 | - | - | - |
| TSSV-04-M | Soil Vapor | 55-915282 | 1015319.7 | 675423.9 | 1,906.0 | 1,905.4 | 435 | 5/31/2013 | 2 inch | Sch 80 PVC | 374.5 | 424.5 | 1,530.9 | - | - | - |
| TSSV-04-D | Soil Vapor | 55-915629 | 1015319.7 | 675423.9 | 1,906.0 | 1,905.0 | 635 | 6/10/2013 | 2 inch | Sch 80 PVC | 575 | 625 | 1,330.0 | - | - | - |
| TSSV-04-PZ | Groundwater | 55-915282 | 1015319.7 | 675423.9 | 1,906.0 | 1,905.8 | 804 | 5/31/2013 | 3 inch | Sch 80 PVC | 723.5 | 793.5 | 1,182.3 | - | - | - |
| TSSV-05-S | Soil Vapor | 55-917870 | 1014659.1 | 675396.6 | 1,905.7 | 1,904.7 | 430 | 3/8/2015 | 2 inch | Sch 80 PVC | 170 | 220 | 1,734.7 | - | - | - |
| TSSV-05-M | Soil Vapor | 55-917870 | 1014659.1 | 675396.6 | 1,905.7 | 1,904.7 | 430 | 3/8/2015 | 2 inch | Sch 80 PVC | 370 | 420 | 1,534.7 | - | - | - |
| TSSV-05-D | Soil Vapor | 55-917892 | 1014659.1 | 675396.6 | 1,905.7 | 1,905.1 | 805 | 4/21/2015 | 2 inch | Sch 80 PVC | 570 | 620 | 1,335.1 | - | - | - |
| TSSV-05-PZ | Groundwater | 55-917892 | 1014659.1 | 675396.6 | 1,905.7 | 1,905.1 | 805 | 4/21/2015 | 4 inch | Sch 80 PVC | 720 | 790 | 1,185.1 | - | - | - |
| TSSV-06-S | Soil Vapor | 55-917894 | 1015997.6 | 675654.5 | 1,876.9 | 1,876.5 | 610 | 3/18/2015 | 2 inch | Sch 80 PVC | 150 | 200 | 1,726.5 | - | - | - |
| TSSV-06-M | Soil Vapor | 55-917894 | 1015997.6 | 675654.5 | 1,876.9 | 1,876.5 | 610 | 3/18/2015 | 2 inch | Sch 80 PVC | 350 | 400 | 1,526.5 | - | - | - |
| TSSV-06-D | Soil Vapor | 55-917894 | 1015997.6 | 675654.5 | 1,876.9 | 1,876.5 | 610 | 3/18/2015 | 2 inch | Sch 80 PVC | 550 | 600 | 1,326.5 | - | - | - |
| TSSV-06-PZ | Groundwater | 55-917895 | 1015997.6 | 675654.5 | 1,876.9 | 1,876.1 | 794 | 4/8/2015 | 4 inch | Sch 80 PVC | 700 | 785 | 1,176.1 | - | - | - |

## Table 1. Well Construction Summary

## Cave Creek Landfill, Maricopa County

| WellName | Location Type | ADWR ID | Northing (NAD83SP Int'l Ft) | Easting (NAD83SP Int'l Ft) | TOC (ft amsl) | Ground Surface (ft amsl) | Total Well Depth (ft) | Date Installed | Casing Diameter (I.D.) | CasingType | Top Screen Depth (ft bgs) | Bottom Screen Depth (ft bgs) | Top Screen Elevation (ft amsl) | Pump Intake Depth (ft bgs) | Pump Intake Elevation (ft amsl) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TSSV-07-S | Soil Vapor | 55-917947 | 1015855.0 | 676202.1 | 1,889.9 | 1,889.5 | 620 | 3/30/2015 | 2 inch | Sch 80 PVC | 160 | 210 | 1,729.5 | - | - | - |
| TSSV-07-M | Soil Vapor | 55-917947 | 1015855.0 | 676202.1 | 1,889.9 | 1,889.5 | 620 | 3/30/2015 | 2 inch | Sch 80 PVC | 360 | 410 | 1,529.5 | - | - | - |
| TSSV-07-D | Soil Vapor | 55-917947 | 1015855.0 | 676202.1 | 1,889.9 | 1,889.5 | 620 | 3/30/2015 | 2 inch | Sch 80 PVC | 560 | 610 | 1,329.5 | - | - | - |
| TSSV-07-PZ | Groundwater | 55-917946 | 1015855.0 | 676202.1 | 1,889.9 | 1,889.0 | 795 | 4/13/2015 | 4 inch | Sch 80 PVC | 710 | 780 | 1,179.0 | - | - | - |

Notes: LFG - Landfill Gas
ft - Feet
ft bgs - Feet below ground surface
ft amsl - Feet above mean sea level
I.D. - Inner Diameter
Pumps removed for wells MW-02 - MW-08 and PW 8/2017.

**Table 2. Groundwater Elevation, Gradient, and Flow Direction**

**Cave Creek Landfill, Maricopa County**

**Groundwater Elevation by Well (ft amsl)**

| Sample Date | First Quarter 2018 (Feb. 13 to Feb. 16, 2018) | Second Quarter 2018 (May 7 to May 10, 2018) | Third Quarter 2018 (Aug. 13 to Aug. 15, 2018) | Fourth Quarter 2018 (Nov. 15 to Nov. 28, 2018) | First Quarter 2019 (Feb. 8 to Mar. 4, 2019) |
|---|---|---|---|---|---|
| EW-01[(1)] | 1156.53 | 1156.65 | 1156.66 | 1156.63 | 1156.54 |
| PW | 1162.96 | 1162.96 | 1162.91 | 1162.73 | 1162.45 |
| MW-02 | 1156.62 | 1156.78 | 1156.80 | 1156.79 | 1156.61 |
| MW-03 | 1157.50 | 1157.50 | 1157.66 | 1157.71 | 1157.33 |
| MW-04 | 1156.23 | 1156.30 | 1156.31 | 1156.39 | 1156.15 |
| MW-05 | 1155.78 | 1155.98 | 1156.04 | 1155.94 | 1155.74 |
| MW-06 | 1154.98 | 1155.21 | 1155.15 | 1155.21 | 1154.93 |
| MW-07 | 1156.18 | 1156.31 | 1156.29 | 1156.40 | 1156.21 |
| MW-08 | 1162.59 | 1162.58 | 1162.60 | 1162.47 | 1162.06 |
| MW-09 | 1161.44 | 1161.62 | 1161.45 | 1161.30 | 1161.11 |
| MW-10 | 1158.34 | 1158.47 | 1158.46 | 1158.40 | 1158.20 |
| MW-11 | NM | NM | NM | 1154.12 | 1153.97 |
| MW-12 | NM | NM | NM | 1158.69 | 1158.46 |
| MW-13 | NM | NM | NM | 1163.27 | 1162.93 |
| TSSV-02-PZ[(1)] | 1162.69 | 1162.69 | 1162.66 | 1162.69 | 1161.70 |
| TSSV-03-PZ[(1)] | 1158.04 | 1158.04 | 1158.04 | 1157.87 | 1158.72 |
| TSSV-04-PZ* | 1160.84 | 1160.86 | 1160.65 | 1160.60 | 1163.90 |
| TSSV-05-PZ[(1)] | 1160.51 | 1160.54 | 1160.37 | 1160.34 | 1160.06 |
| TSSV-06-PZ[(1)] | 1162.52 | 1162.73 | 1162.64 | 1162.52 | 1162.16 |
| TSSV-07-PZ[(1)] | 1162.49 | 1162.62 | 1162.35 | 1162.04 | 1161.98 |
| Gradient (ft/ft) | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| Flow Direction (deg. from N) | 177.8 | 176.2 | 177.5 | 176.7 | 174.3 |

**Notes:**

Flow direction measured in a clockwise rotation; North is 0 degrees, East is 90 degrees, South is 180 degrees, and West is 270 degrees.

deg. = degrees

ft amsl = Feet above mean sea level

PW = Production Well

MW = Monitoring Well

NM = Not Measured

TSSV = Monitoring Well

PZ = Piezometer

* = not included in calculation of gradient or flow direction, all quarters

[(1)] = not included in calculation of gradient or flow direction starting in First Quarter 2019

## Table 3. Groundwater Analytical Results - Summary of VOC Data

**Cave Creek Landfill, Maricopa County**

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Sample Method | 1,1-Dichloroethane | 1,1-Dichloroethene | Benzene | Bromoform | Carbon disulfide | Chlorobenzene | Chloroform | cis-1,2-Dichloroethene | Naphthalene | Tetrachloroethene | Toluene | trans-1,2-dichloroethene | Trichloroethene | Vinyl Chloride | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EW-01** | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,141.5 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | 1.5 | <5 | <1 | <1 | <1 | 21 | <1 | -- |
| **MW-02** | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,142.0 | µg/L | PDB | 0.22 | 9.8 | <1 | <1 | <1 | <1 | <5 | 3.6 | <5 | 4.6 | <1 | <1 | 93 | <1 | -- |
| **MW-03** | | | | | | | | | | | | | | | | | | | |
| | 3/4/2019 | 1,142.4 | µg/L | PDB | <1 | 1.4 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 2.7 | <1 | -- |
| **MW-04** | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,141.8 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | -- |
| **MW-05** | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,141.1 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 43 | <1 | -- |
| **MW-06** | | | | | | | | | | | | | | | | | | | |
| | 2/28/2019 | 1,140.7 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 1.3 | <1 | -- |
| **MW-07** | | | | | | | | | | | | | | | | | | | |
| | 2/28/2019 | 1,141.6 | µg/L | PDB | <1 | 1.0 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 30 | <1 | -- |
| **MW-08** | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,147.1 | µg/L | PDB | <1 | 4.7 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | 1.5 | <1 | <1 | 76 | <1 | Duplicate |
| | 2/27/2019 | 1,147.1 | µg/L | PDB | <1 | 4.5 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | 1.3 | <1 | <1 | 71 | <1 | -- |
| **MW-09** | | | | | | | | | | | | | | | | | | | |
| | 3/1/2019 | 1,146.8 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 15 | <1 | -- |
| | 3/1/2019 | 1,146.8 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 15 | <1 | Duplicate |
| **MW-10** | | | | | | | | | | | | | | | | | | | |
| | 3/1/2019 | 1,143.3 | µg/L | PDB | 1.3 | 7.8 | <1 | <1 | <1 | <1 | <5 | 23 | <5 | 11 | <1 | <1 | 340 | <1 | -- |
| **MW-11** | | | | | | | | | | | | | | | | | | | |
| | 2/28/2019 | 1,138.8 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 22 | <1 | -- |
| | 2/28/2019 | 1,138.8 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 22 | <1 | Duplicate |
| **MW-12** | | | | | | | | | | | | | | | | | | | |
| | 3/4/2019 | 1,144.2 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 1.9 | <1 | -- |
| **AWQS:** | | | | | **N/A** | **7** | **5** | **80** | **N/A** | **100** | **80** | **70** | **N/A** | **5** | **1,000** | **100** | **5** | **2** | |

## Table 3. Groundwater Analytical Results - Summary of VOC Data

**Cave Creek Landfill, Maricopa County**

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Sample Method | 1,1-Dichloroethane | 1,1-Dichloroethene | Benzene | Bromoform | Carbon disulfide | Chlorobenzene | Chloroform | cis-1,2-Dichloroethene | Naphthalene | Tetrachloroethene | Toluene | trans-1,2-dichloroethene | Trichloroethene | Vinyl Chloride | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-13** | | | | | | | | | | | | | | | | | | | |
| | 3/1/2019 | 1,148.7 | µg/L | PDB | <1 | 2.3 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | 2.1 | <1 | <1 | 5.7 | <1 | - - |
| **PW** | | | | | | | | | | | | | | | | | | | |
| | 2/28/2019 | 1,148.0 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | - - |
| **TSSV-02-PZ** | | | | | | | | | | | | | | | | | | | |
| | 3/4/2019 | 1,147.2 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | - - |
| **TSSV-03-PZ** | | | | | | | | | | | | | | | | | | | |
| | 3/1/2019 | 1,142.7 | µg/L | PDB | 1.2 | 3.2 | <1 | <1 | <1 | <1 | <5 | 10 | <5 | 3.9 | <1 | <1 | 180 | <1 | - - |
| | 3/1/2019 | 1,142.7 | µg/L | PDB | 1.2 | 3.0 | <1 | <1 | <1 | <1 | <5 | 10.0 | <5 | 3.9 | <1 | <1 | 170 | <1 | Duplicate |
| **TSSV-04-PZ** | | | | | | | | | | | | | | | | | | | |
| | 3/1/2019 | 1,146.0 | µg/L | PDB | <1 | 4.6 | <1 | <1 | <1 | <1 | <5 | 7.1 | <5 | 5.7 | <1 | <1 | 94 | <1 | - - |
| **TSSV-05-PZ** | | | | | | | | | | | | | | | | | | | |
| | 3/4/2019 | 1,145.7 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | 4.8 | <1 | - - |
| **TSSV-06-PZ** | | | | | | | | | | | | | | | | | | | |
| | 3/4/2019 | 1,147.9 | µg/L | PDB | <1 | 1.3 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | 2.4 | <1 | <1 | 14 | <1 | - - |
| **TSSV-07-PZ** | | | | | | | | | | | | | | | | | | | |
| | 3/1/2019 | 1,146.9 | µg/L | PDB | <1 | <1 | <1 | <1 | <1 | <1 | <5 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | - - |
| **AWQS:** | | | | | **N/A** | **7** | **5** | **80** | **N/A** | **100** | **80** | **70** | **N/A** | **5** | **1,000** | **100** | **5** | **2** | |

Notes: AWQS - Aquifer Water Quality Standard
Grey text indicates result was less than the reporting limit
Red text indicates a result detected above the AWQS
µg/L - micrograms per liter
ft amsl - feet above mean sea level
btw - below water table
PDB - Passive Diffusion Bag
VOC - Volatile Organic Compound
Analytical method is VOCs by SW 8260B unless otherwise noted.
- = data not applicable or not available
* = approximate sample location
B1 = Method blank: Target analyte detected in method blank at or above the method reporting limit.
D2 = Dilution: Sample required dilution due to high concentration of target analyte. See case narrative.
E4 = Estimated Concentration: Concentration estimated. Analyte was detected below laboratory minimum reporting level limit (mrl).
E8 = Analyte reported to mdl per project specification. Target analyte was not detected in the sample.
H1 = Hold time: Sample analysis performed past holding time.
M3 = Matrix spike: The spike recovery value is unusable the analyte concentration in the sample is disproportionate to the spike level the associated blank spike recovery was acceptable
N1 = General: see case narrative.
V1 = Calibration verification: CCV recovery was above method acceptance limits. This target analyte was not detected in the sample

# Table 4. Groundwater Analytical Results - Summary of General Chemistry

# Cave Creek Landfill, Maricopa County

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Alkalinity, (as CaCO3) | Chloride | Fluoride | Nitrate (As N) | Sulfate | Comments |
|---|---|---|---|---|---|---|---|---|---|
| **MW-02** | | | | | | | | | |
| | 2/27/2019 | 1,142.0 | mg/L | 380 | 18 | 0.16 | <0.1 | <5 | -- |
| **MW-03** | | | | | | | | | |
| | 3/4/2019 | 1,142.4 | mg/L | 140 | 19 | 0.29 | <0.1 | <5 | -- |
| **MW-04** | | | | | | | | | |
| | 2/27/2019 | 1,141.8 | mg/L | 220 | 23 | 0.30 | <0.1 | 6.9 | -- |
| **MW-05** | | | | | | | | | |
| | 2/27/2019 | 1,141.1 | mg/L | 220 | 20 | 0.63 | <0.1 | 8.3 | -- |
| **MW-06** | | | | | | | | | |
| | 2/28/2019 | 1,140.7 | mg/L | 230 | 17 | 0.22 | <0.1 | 9.8 | -- |
| **MW-07** | | | | | | | | | |
| | 2/28/2019 | 1,141.6 | mg/L | 170 | 22 | 0.30 | <0.1 | <5 | -- |
| **MW-08** | | | | | | | | | |
| | 2/27/2019 | 1,147.1 | mg/L | 120 | 20 | 0.39 | <0.1 | <5 | -- |
| | 2/27/2019 | 1,147.1 | mg/L | 120 | 20 | 0.39 | <0.1 | <5 | Duplicate |
| **PW** | | | | | | | | | |
| | 2/28/2019 | 1,148.0 | mg/L | 240 | 21 | 0.33 | 1.3 | 18 | -- |
| **AWQS:** | | | | **N/A** | **N/A** | **4** | **10** | **N/A** | |

Notes: AWQS - Aquifer Water Quality Standard
Grey text indicates result was less than the reporting limit
Bold text indicates a result detected above the AWQS
mg/L - milligrams per liter
ft amsl - feet above mean sea level
- = data not applicable or not available
D2 = Dilution: Sample required dilution due to high concentration of target analyte. See case narrative.
E4 = Estimated Concentration: Concentration estimated. Analyte was detected below laboratory minimum reporting level limit (mrl).
M1 = Matrix Spike: Matrix spike recovery was high, the method control sample associated blank spike recovery was acceptable

## Table 5. Groundwater Analytical Results - Summary of Metals Data

## Cave Creek Landfill, Maricopa County

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Antimony | Arsenic | Barium | Beryllium | Cadmium | Chromium | Cobalt | Copper | Lead | Nickel | Selenium | Silver | Thallium | Vanadium | Zinc | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-02 | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,142.0 | mg/L | 0.16 | <5 | <0.1 | 220 | 23 | 0.30 | 6.9 | <0.1 | 120 | 20 | 20 | 0.39 | <5 | <0.1 | 220 | -- |
| MW-03 | | | | | | | | | | | | | | | | | | | |
| | 3/4/2019 | 1,142.4 | mg/L | <0.01 | <0.01 | 0.017 | <0.002 | <0.002 | <0.01 | <0.01 | <0.01 | <0.005 | <0.01 | <0.01 | <0.005 | <0.01 | <0.02 | 0.48 | -- |
| MW-04 | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,141.8 | mg/L | <0.01 | <0.01 | 0.018 | <0.002 | <0.002 | <0.01 | <0.01 | <0.01 | 0.0063 | <0.01 | <0.01 | <0.005 | <0.01 | 0.029 B1 | 0.069 | -- |
| MW-05 | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,141.1 | mg/L | <0.01 | <0.01 | 0.021 | <0.002 | <0.002 | <0.01 | <0.01 | <0.01 | <0.005 | <0.01 | <0.01 | <0.005 | <0.01 | <0.02 | 0.17 | -- |
| MW-06 | | | | | | | | | | | | | | | | | | | |
| | 2/28/2019 | 1,140.7 | mg/L | <0.01 | <0.01 | 0.0093 | <0.002 | <0.002 | <0.01 | <0.01 | 0.026 | <0.005 | <0.01 | <0.01 | <0.005 | <0.01 | <0.02 | 2.1 | -- |
| MW-07 | | | | | | | | | | | | | | | | | | | |
| | 2/28/2019 | 1,141.6 | mg/L | <0.01 | 0.013 | 0.014 | <0.002 | <0.002 | <0.01 | <0.01 | <0.01 | <0.005 | <0.01 | <0.01 | <0.005 | <0.01 | <0.02 | <0.05 | -- |
| MW-08 | | | | | | | | | | | | | | | | | | | |
| | 2/27/2019 | 1,147.1 | mg/L | <0.01 | <0.01 | 0.017 | <0.002 | <0.002 | <0.01 | <0.01 | <0.01 | <0.005 | <0.01 | <0.01 | <0.005 | <0.01 | <0.02 | 0.12 | -- |
| | 2/27/2019 | 1,147.1 | mg/L | <0.01 | <0.01 | 0.016 | <0.002 | <0.002 | <0.01 | <0.01 | <0.01 | <0.005 | <0.01 | <0.01 | <0.005 | <0.01 | <0.02 | 0.092 | Duplicate |
| PW | | | | | | | | | | | | | | | | | | | |
| | 2/28/2019 | 1,148.0 | mg/L | <0.01 | <0.01 | 0.0062 | <0.002 | <0.002 | <0.01 | <0.01 | <0.01 | <0.005 | <0.01 | <0.01 | <0.005 | <0.01 | <0.02 | 0.092 | -- |
| **AWQS:** | | | | **0.006** | **0.01** | **2.0** | **0.004** | **0.005** | **0.1** | **NA** | **NA** | **0.05** | **0.1** | **0.05** | **NA** | **0.002** | **NA** | **NA** | |
| **Upper Background Threshold Value:** | | | | ***** | **0.1** | **0.25** | ***** | ***** | **0.025** | **0.025** | **0.025** | **0.1** | **0.25** | **0.05** | ***** | ***** | **0.045** | **0.7948** | |

Notes: AWQS - Aquifer Water Quality Standard
Grey text indicates result was less than the reporting limit
Red text indicates a result detected above the AWQS
mg/L - milligrams per liter
ft amsl - feet above mean sea level
NA = data not applicable or not available
* = Two consecutive detect values in downgradient wells
B1 = Target analyte detected in method blank at or above the method reporting limit.
E4 = Estimated Concentration: Concentration estimated. Analyte was detected below laboratory minimum reporting level limit (mrl).
E8 = Analyte reported to mdl per project specification. Target analyte was not detected in the sample

## Table 6. Soil Vapor Analytical Results - Wellhead TO-15 Analysis Data

**Cave Creek Landfill, Maricopa County**

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Acetone | 2-Butanone (MEK) | Chlorobenzene | Chloroform | 1,1-Dichloroethane | 1,2-Dichloroethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Freon 11 | Freon 12 | Freon 113 | Methylene chloride | Tetrachloroethene | Tetrahydrofuran | Trichloroethene | Vinyl Chloride | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MW-09** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,179.2 | µg/m³ | <11,900 | <14,800 | <2,300 | <2,440 | <2,030 | <2,030 | 2,380 | <1,980 | <1,980 | <2,810 | <4,950 | 8,040 | <6,940 | <6,780 | <5,900 | 83,200 | <1,280 | - - |
| **MW-09-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,724.2 | µg/m³ | <59.5 | <73.8 | <11.5 | <12.2 | <10.1 | <10.1 | 19.9 | <9.90 | <9.90 | 44.4 | 43.8 | 96.1 | <34.7 | 217 | <29.5 | 810 | <6.40 | - - |
| | 3/14/2019 | 1,724.2 | µg/m³ | <59.5 | <73.8 | <11.5 | <12.2 | <10.1 | <10.1 | 19.7 | <9.90 | <9.90 | 46.1 | 43.8 | 90.0 | <34.7 | 261 | <29.5 | 874 | <6.40 | - - |
| **MW-09-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,329.2 | µg/m³ | <59.5 | <73.8 | <11.5 | <12.2 | 13.6 | <10.1 | <9.93 | <9.90 | <9.90 | 89.9 | 160 | 517 | <34.7 | 172 | <29.5 | 876 | <6.40 | - - |
| **MW-10-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,727.4 | µg/m³ | <59.5 | <73.8 | <11.5 | 12.9 | 80.8 | <10.1 | <9.93 | <9.90 | <9.90 | 2,280 | 8,070 | 559 | <34.7 | 1,330 | <29.5 | 48.9 | <6.40 | - - |
| **MW-10-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,327.4 | µg/m³ | <2,380 | <2,950 | <460 | <488 | 7,740 | <405 | 1,030 | <396 | <396 | 7,030 | 21,600 | 1,330 | 1,470 | 3,580 | <1,180 | 2,230 | <6.40 | - - |
| **PW** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,201.4 | µg/m³ | <1,190 | <1,480 | <230 | <244 | <203 | <203 | <199 | <198 | <198 | <281 | <495 | 552 | <694 | <678 | <590 | 5,480 | <128 | - - |
| **SVE-01** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,762.1 | µg/m³ | <1,190 | <1,480 | 3,720 | 332 | <203 | <203 | <199 | 598 | <198 | <281 | <495 | 743 | <694 | 861 | <590 | 10,500 | <128 | - - |
| **SVE-01-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,702.1 | µg/m³ | <2,380 | <2,950 | 616 | <488 | <405 | <405 | <397 | <396 | <396 | <562 | <990 | 873 | <1,390 | 1,650 | <1,180 | 16,500 | <256 | - - |
| **SVE-01-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,522.1 | µg/m³ | <1,190 | <1,480 | 800 | <244 | <203 | <203 | <199 | 230 | <198 | <281 | <495 | 620 | <694 | 773 | <590 | 8,000 | <128 | - - |
| **SVE-01-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,402.1 | µg/m³ | <1,190 | <1,480 | 1,030 | <244 | <203 | <203 | <199 | 218 | <198 | <281 | <495 | 590 | <694 | 786 | <590 | 8,060 | <128 | - - |
| **SVE-02** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,500.4 | µg/m³ | <1,190 | <1,480 | <230 | 351 | <203 | <203 | <199 | 317 | <198 | <281 | <495 | 1,020 | <694 | 1,740 | <590 | 13,300 | <128 | - - |
| **SVE-02-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,750.4 | µg/m³ | <1,190 | <1,480 | <230 | <244 | <203 | <203 | <199 | 3,830 | <198 | <281 | <495 | <383 | <694 | 685 | <590 | 854 | 681 | - - |

## Table 6. Soil Vapor Analytical Results - Wellhead TO-15 Analysis Data

**Cave Creek Landfill, Maricopa County**

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Acetone | 2-Butanone (MEK) | Chlorobenzene | Chloroform | 1,1-Dichloroethane | 1,2-Dichloroethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Freon 11 | Freon 12 | Freon 113 | Methylene chloride | Tetrachloroethene | Tetrahydrofuran | Trichloroethene | Vinyl Chloride | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SVE-02-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,600.4 | µg/m³ | <238 | <295 | <46.0 | <48.8 | <40.5 | <40.5 | <39.7 | 196 | <39.6 | 199 | 453 | <76.6 | <139 | 618 | <118 | 919 | 221 | - - |
| **SVE-03** | | | | | | | | | | | | | | | | | | | | | |
| | 3/21/2019 | 1,375.1 | µg/m³ | <5,950 | <7,380 | <1,150 | <1,220 | <1,010 | <1,010 | 5,320 | 5,500 | <990 | 2,980 | 7,130 | 21,000 | <3,470 | 4,540 | <2,950 | 77,300 | <640 | - - |
| **SVE-03-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/21/2019 | 1,525.1 | µg/m³ | <238 | <295 | <46.0 | 88.8 | <40.5 | <40.5 | <39.7 | <39.6 | <39.6 | 588 | 600 | 297 | 628 | 545 | <118 | 644 | <25.6 | - - |
| **SVE-04** | | | | | | | | | | | | | | | | | | | | | |
| | 3/21/2019 | 1,376.8 | µg/m³ | <23,800 | <29,500 | <4,600 | <4,880 | <4,050 | <4,050 | 166,000 | 23,000 | <3,960 | <5,620 | <9,900 | 86,600 | 239,000 | 42,000 | <11,800 | 198,000 | <2,560 | - - |
| **SVE-04-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/21/2019 | 1,725.8 | µg/m³ | 104 | <73.8 | 343 | 19.5 | <10.1 | <10.1 | <9.93 | 97.8 | <9.90 | 429 | 81.2 | 110 | <34.7 | 292 | <29.5 | 691 | <6.40 | - - |
| **TSSV-01-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/18/2019 | 1,731.0 | µg/m³ | <2,380 | <2,950 | <460 | <488 | <405 | <405 | <397 | <396 | <396 | <562 | <990 | 1,200 | <1,390 | 1,570 | <1,180 | 14,900 | <256 | - - |
| **TSSV-01-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/18/2019 | 1,531.0 | µg/m³ | <2,380 | <2,950 | 12,000 | 1,320 | - | <405 | <397 | 515 | <396 | <562 | <990 | 873 | <1,390 | 3,280 | <1,180 | 28,400 | <256 | - - |
| | 3/18/2019 | 1,531.0 | µg/m³ | <2,380 | <2,950 | 12,800 | 1,380 | <405 | <405 | <397 | 523 | <396 | <562 | <990 | 827 | <1,390 | 3,440 | <1,180 | 28,800 | <256 | - - |
| **TSSV-01-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/18/2019 | 1,332.0 | µg/m³ | <2,380 | <2,950 | 2,710 | 1,600 | <405 | <405 | 627 | 4,990 | <396 | <562 | <990 | 3,770 | 1,590 | 4,200 | <1,180 | 47,300 | <256 | - - |
| **TSSV-02-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,731.2 | µg/m³ | <238 | <295 | <46.0 | <48.8 | <40.5 | <40.5 | <39.7 | <39.6 | <39.6 | <56.2 | <99.0 | 130 | <139 | 393 | 172 | 3,250 | <25.6 | - - |
| **TSSV-02-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,531.2 | µg/m³ | <23.8 | <29.5 | <4.60 | <4.88 | <4.05 | <4.05 | 4.84 | 4.36 | <3.96 | <5.62 | <9.90 | <7.66 | <13.9 | 15.3 | 262 | 100 | <2.56 | - - |
| **TSSV-02-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,331.9 | µg/m³ | <238 | <295 | 144 | 127 | <40.5 | <40.5 | 40.5 | 1,280 | <39.6 | <56.2 | <99.0 | 446 | <139 | 239 | <118 | 4,530 | <25.6 | - - |
| **TSSV-02-PZ** | | | | | | | | | | | | | | | | | | | | | |
| | 3/22/2019 | 1,181.9 | µg/m³ | 29.9 | <29.5 | <4.60 | <4.88 | <4.05 | <4.05 | 44.3 | 290 | <3.96 | <5.62 | <9.90 | 48.9 | <13.9 | 84.9 | <11.8 | 269 | <2.56 | - - |

## Table 6. Soil Vapor Analytical Results - Wellhead TO-15 Analysis Data

**Cave Creek Landfill, Maricopa County**

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Acetone | 2-Butanone (MEK) | Chlorobenzene | Chloroform | 1,1-Dichloroethane | 1,2-Dichloroethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Freon 11 | Freon 12 | Freon 113 | Methylene chloride | Tetrachloroethene | Tetrahydrofuran | Trichloroethene | Vinyl Chloride | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TSSV-03-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/20/2019 | 1,731.3 | µg/m³ | 659 | <295 | <46.0 | <48.8 | 193 | <40.5 | <39.7 | 1,150 | <39.6 | 400 | 4,250 | 225 | 443 | 964 | <118 | 154 | <25.6 | - - |
| **TSSV-03-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/20/2019 | 1,531.3 | µg/m³ | <238 | <295 | <46.0 | 69.3 | 2,790 | <40.5 | 148 | 1,150 | <39.6 | 5,430 | 23,900 | 1,720 | 2,820 | 2,310 | <118 | 753 | <25.6 | - - |
| **TSSV-03-PZ** | | | | | | | | | | | | | | | | | | | | | |
| | 3/20/2019 | 1,182.3 | µg/m³ | <23.8 | <29.5 | <4.60 | <4.88 | <4.05 | <4.05 | <3.97 | <3.96 | <3.96 | <5.62 | <9.90 | <7.66 | <13.9 | <13.6 | <11.8 | 6.87 | <2.56 | - - |
| **TSSV-04-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/21/2019 | 1,730.9 | µg/m³ | <59.5 | <73.8 | <11.5 | 649 | 19.6 | <10.1 | 22.6 | 25.9 | <9.90 | 92.2 | 196 | 59.7 | <34.7 | 838 | <29.5 | 269 | <6.40 | - - |
| **TSSV-04-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/21/2019 | 1,330.0 | µg/m³ | <238 | <295 | <46.0 | <48.8 | <40.5 | <40.5 | 183 | 774 | <39.6 | <56.2 | 163 | 2,630 | <139 | 419 | <118 | 4,680 | <25.6 | - - |
| **TSSV-04-PZ** | | | | | | | | | | | | | | | | | | | | | |
| | 3/21/2019 | 1,182.2 | µg/m³ | 25.3 | <29.5 | <4.60 | <4.88 | <4.05 | <4.05 | <3.97 | <3.96 | <3.96 | <5.62 | <9.90 | <7.66 | <13.9 | <13.6 | <11.8 | 7.63 | <2.56 | - - |
| **TSSV-05-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/20/2019 | 1,734.7 | µg/m³ | <59.5 | <73.8 | <11.5 | 32.0 | 42.3 | <10.1 | 11.3 | 89.1 | <9.90 | 150 | 382 | 116 | <34.7 | 678 | <29.5 | 121 | 9.73 | - - |
| **TSSV-05-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/20/2019 | 1,335.1 | µg/m³ | <238 | <295 | <46.0 | <48.8 | 1,340 | <40.5 | 307 | 1,150 | <39.6 | 9,100 | 22,200 | 1,150 | 310 | 1,960 | <118 | 914 | <25.6 | - - |
| **TSSV-05-PZ** | | | | | | | | | | | | | | | | | | | | | |
| | 3/20/2019 | 1,185.1 | µg/m³ | <238 | <295 | <46.0 | 122 | 54.3 | <40.5 | 505 | 1,150 | <39.6 | 4,040 | 11,100 | 2,040 | <139 | 1,230 | <118 | 23,800 | <25.6 | - - |
| | 3/20/2019 | 1,185.1 | µg/m³ | <238 | <295 | <46.0 | 126 | 47.8 | <40.5 | 540 | 1,150 | <39.6 | 4,320 | 9,550 | 2,110 | <139 | 1,380 | <118 | 17,900 | <25.6 | - - |
| **TSSV-06-S** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,726.5 | µg/m³ | <238 | <295 | <46.0 | 95.6 | <40.5 | <40.5 | <39.7 | <39.6 | <39.6 | <56.2 | <99.0 | 804 | <139 | 597 | <118 | 4,120 | <25.6 | - - |
| **TSSV-06-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,526.5 | µg/m³ | <59.5 | <73.8 | <11.5 | <12.2 | <10.1 | <10.1 | <9.93 | <9.90 | <9.90 | <14.1 | <24.8 | <19.2 | <34.7 | 106 | <29.5 | 460 | <6.40 | - - |
| **TSSV-06-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/14/2019 | 1,326.5 | µg/m³ | <238 | <295 | 93.8 | 529 | <40.5 | <40.5 | <39.7 | 1,150 | <39.6 | <56.2 | <99.0 | 374 | <139 | 860 | <118 | 4,860 | <25.6 | - - |

## Table 6. Soil Vapor Analytical Results - Wellhead TO-15 Analysis Data

**Cave Creek Landfill, Maricopa County**

| Well Name | Sample Date | Sample Elevation (ft amsl) | Units | Acetone | 2-Butanone (MEK) | Chlorobenzene | Chloroform | 1,1-Dichloroethane | 1,2-Dichloroethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Freon 11 | Freon 12 | Freon 113 | Methylene chloride | Tetrachloroethene | Tetrahydrofuran | Trichloroethene | Vinyl Chloride | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TSSV-07-M** | | | | | | | | | | | | | | | | | | | | | |
| | 3/18/2019 | 1,529.5 | µg/m³ | <238 | <295 | 821 | <48.8 | <40.5 | <40.5 | 362 | 310 | <39.6 | 413 | 2,080 | 138 | 248 | 513 | <118 | 1,590 | <25.6 | - - |
| **TSSV-07-D** | | | | | | | | | | | | | | | | | | | | | |
| | 3/18/2019 | 1,329.5 | µg/m³ | <23,800 | <29,500 | <4,600 | <4,880 | <4,050 | <4,050 | 41,300 | 4,280 | <3,960 | <5,620 | <9,900 | 21,000 | <13,900 | <13,600 | <11,800 | 125,000 | <2,560 | - - |
| | 3/18/2019 | 1,329.5 | µg/m³ | <11,900 | <14,800 | <2,300 | <2,440 | <2,030 | <2,030 | 51,600 | 5,430 | <1,980 | <2,810 | <4,950 | 24,500 | <6,940 | <6,780 | <5,900 | 158,000 | <1,280 | - - |
| **TSSV-07-PZ** | | | | | | | | | | | | | | | | | | | | | |
| | 3/18/2019 | 1,179.0 | µg/m³ | <5,950 | <7,380 | <1,150 | <1,220 | 1,360 | <1,010 | 84,200 | 37,400 | <990 | <1,410 | 3,710 | 54,200 | <3,470 | 22,400 | <2,950 | 103,000 | 3,480 | - - |

Notes: Grey text indicates a non-detected compound
µg/m³ - micrograms per cubic meter
ft amsl - feet above mean sea level
- = data not applicable or not available
L5 = Laboratory fortified blank/blank spike: The associated blank spike recovery was below method acceptance limits.

## Table 7. Soil Vapor Analytical Results - Process Sample TO-15 Analysis Data

**Cave Creek Landfill, Maricopa County**

| Sample Location Identifier | Sample Date | Sample Elevation (ft amsl) | Units | Acetone | 2-Butanone (MEK) | Chloroform | Chlorobenzene | 1,1-Dichloroethane | 1,2-Dichloroethane | 1,1-Dichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Freon 11 | Freon 12 | Freon 113 | Methylene chloride | Tetrachloroethene | Tetrahydrofuran | Trichloroethene | Vinyl Chloride | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SP-01** | | | | | | | | | | | | | | | | | | | | | |
| | 1/16/2019 | - | µg/m³ | <23,800 | <29,500 | <4,880 | <4,600 | <4,050 | <4,050 | 145,000 | 29,500 | <3,960 | <5,620 | <9,900 | 100,000 | 195,000 | 65,100 | <11,800 | 343,000 | <4,050 | - - |
| | 3/4/2019 | - | µg/m³ | <23,800 | <29,500 | <4,880 | <4,600 | <4,050 | <4,050 | 118,000 | 26,300 | <3,960 | <5,620 | <9,900 | 81,200 | 168,000 | 95,600 | <11,800 | 249,000 | <2,560 | - - |
| | 3/20/2019 | - | µg/m³ | <23,800 | <29,500 | <4,880 | <4,600 | <4,050 | <4,050 | 71,100 | 12,500 | <3,960 | <5,620 | <9,900 | 42,300 | 99,900 | <13,600 | <11,800 | 94,000 | <2,560 | - - |
| **SP-02** | | | | | | | | | | | | | | | | | | | | | |
| | 1/16/2019 | - | µg/m³ | <11,900 | <14,800 | <2,440 | <2,300 | <2,030 | <2,030 | <1,990 | <1,980 | <1,980 | <2,810 | 6,290 | <3,830 | 143,000 | <6,780 | <5,900 | <2,690 | <1,280 | - - |
| | 3/4/2019 | - | µg/m³ | <11,900 | <14,800 | <2,440 | <2,300 | <2,030 | <2,030 | 10,600 | <1,980 | <1,980 | <2,810 | 7,620 | <3,830 | 221,000 | <6,780 | <5,900 | <2,690 | <1,280 | - - |
| | 3/20/2019 | - | µg/m³ | <11,900 | <14,800 | <2,440 | <2,300 | <2,030 | <2,030 | 59,200 | <1,980 | <1,980 | <2,810 | 8,020 | <3,830 | 175,000 | <6,780 | <5,900 | <2,690 | <1,280 | - - |
| **SP-03** | | | | | | | | | | | | | | | | | | | | | |
| | 1/16/2019 | - | µg/m³ | <5,950 | <7,380 | <1,220 | <1,150 | <1,010 | <1,010 | <993 | <990 | <990 | <1,410 | 8,470 | <1,920 | 35,400 | <3,390 | <2,950 | 2,550 | 1,280 | - - |
| | 3/4/2019 | - | µg/m³ | <2,380 | <2,950 | <488 | <460 | <405 | <405 | <397 | <396 | <396 | <562 | 6,530 | <766 | 172,000 | <1,360 | <1,180 | <537 | 742 | - - |
| | 3/20/2019 | - | µg/m³ | <11,900 | <14,800 | <2,440 | <2,300 | <2,030 | <2,030 | <1,990 | <1,980 | <1,980 | <2,810 | 8,220 | <3,830 | 138,000 | <6,780 | <5,900 | <2,690 | <1,280 | - - |
| **SP-04** | | | | | | | | | | | | | | | | | | | | | |
| | 1/16/2019 | - | µg/m³ | <5,950 | <7,380 | <1,220 | <1,150 | <1,010 | <1,010 | <993 | <990 | <990 | <1,410 | 8,270 | <1,920 | 32,300 | <3,390 | <2,950 | <1,340 | 794 | - - |
| | 3/4/2019 | - | µg/m³ | <2,380 | <2,950 | <488 | <460 | <405 | <405 | <397 | <396 | <396 | <562 | 7,970 | <766 | 220,000 | <1,360 | <1,180 | <537 | 773 | - - |
| | 3/20/2019 | - | µg/m³ | <11,900 | <14,800 | <2,440 | <2,300 | <2,030 | <2,030 | 4,170 | <1,980 | <1,980 | <2,810 | 8,070 | <3,830 | 170,000 | <6,780 | <5,900 | 11,200 | <1,280 | - - |

Notes: Grey text indicates a non-detected compound
µg/m³ - micrograms per cubic meter
ft amsl - feet above mean sea level
- = data not applicable or not available
L5 = Laboratory fortified blank/blank spike: The associated blank spike recovery was below method acceptance limits.
R6 = Duplicates: lfb/lfbd rpd exceeded the method control acceptance limit. Recovery met acceptance criteria

## Table 8. Soil Vapor Extraction Mass Removal

## Cave Creek Landfill, Maricopa County

| Date of Reading [Mon-DD-YR] | Blower Hour Meter Reading [hrs] | Time Operated Since Last Reading [hrs] | System Uptime [%] | VOC Concentration in Extracted Soil Vapor [mg/m$^3$] | SVE Flow Rate [scfm] | Hourly Rate of VOC Mass Extracted [lbs/hr] | VOC Mass Removed Since Last Reading [lbs] | Total VOC Mass Extracted Since Startup [lbs] |
|---|---|---|---|---|---|---|---|---|
| 1/16/2019 | 22,131 | 286 | 43 | 518 | 934 | 1.81 | 574 | 37,880 |
| 3/4/2019 | 23,039 | 908 | 81 | 396 | 927 | 1.38 | 1,646 | 39,526 |
| 3/20/2019 | 23,418 | 379 | 99 | 178 | 932 | 0.62 | 521 | 40,047 |

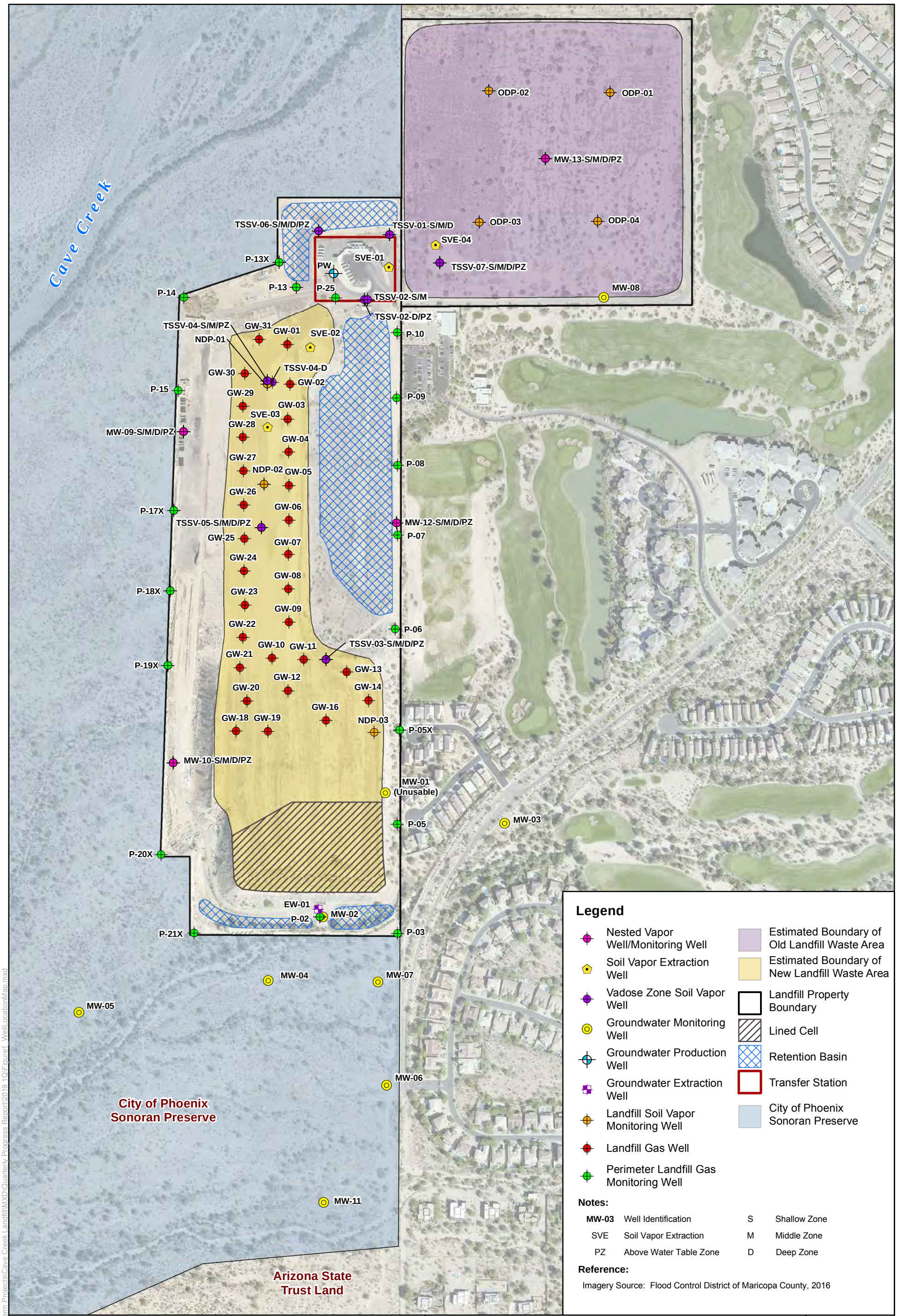
**Notes:**

Startup of the full-scale SVE system occurred on September 15, 2015. Mass totals presented in this table reflect full-scale SVE operations only.

**Acronyms and Abbreviations:**

DD - day of the month
hrs - hours
lbs - pounds
lbs/hr - pounds per hour
mg/m$^3$ - milligrams per cubic meter
Mon - month
scfm - standard cubic feet per minute
YR - year
VOC - Volatile Organic Compound per Maricopa County Air Quality Department Rule 100 Section 200.113

# FIGURES




0 200 400 800 Feet

| | |
|---|---|
| Job No. | 1420192004 |
| PM: | NC |
| Date: | 5/29/2019 |
| Scale: | 1" = 400' |

N

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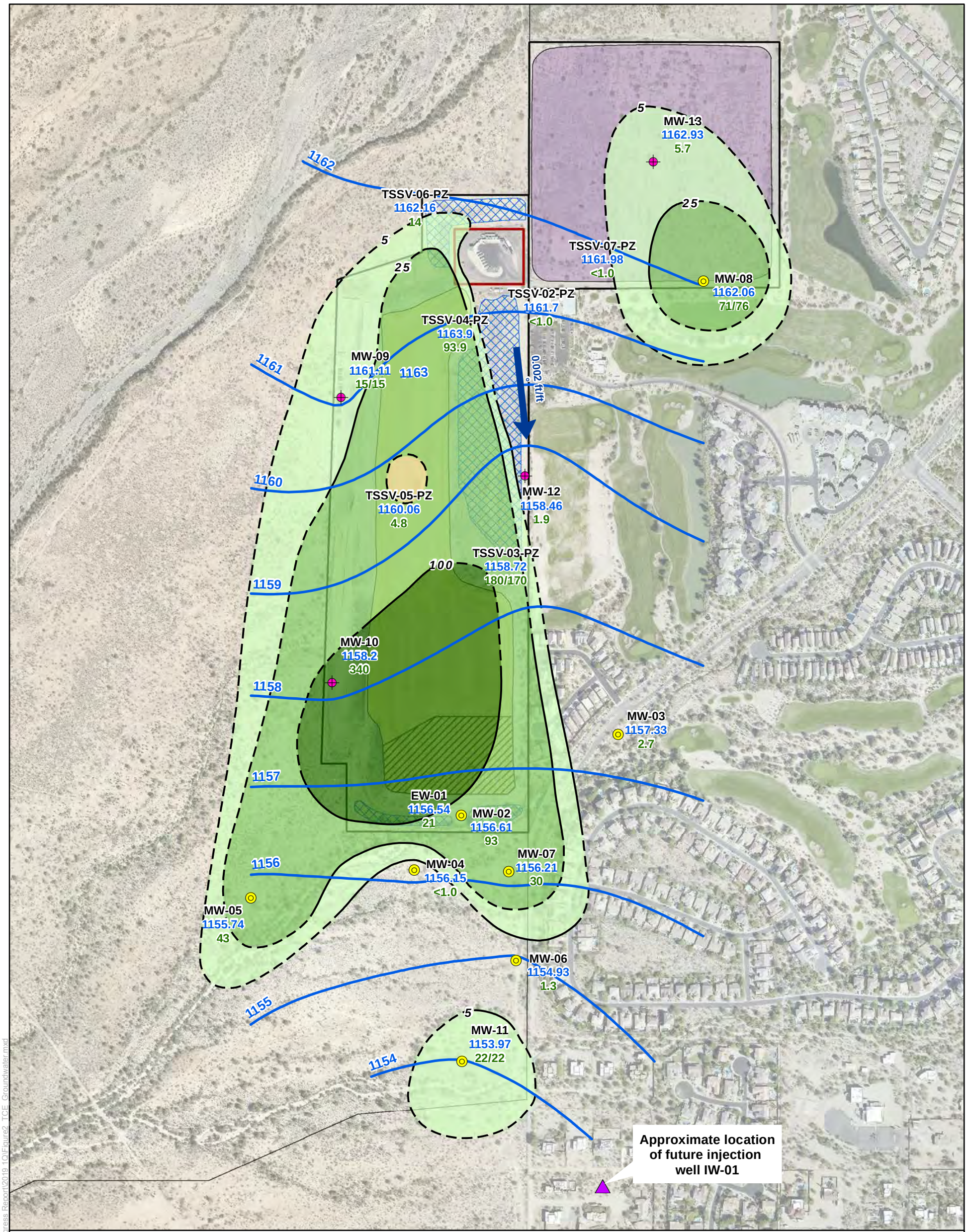
Phoenix, Arizona

**Well Map**

FIGURE
**1**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2019 1Q\Figure1_WellLocationMap.mxd




## Legend

**TCE Concentrations (µg/L) in Groundwater**

(Dashed Where Inferred)

- 5-25
- 25-100
- 100-500
- Nested Vapor Well/ Monitoring Well
- Production Well
- Nested Vapor Well/ Piezometer
- Groundwater Monitoring Well
- Groundwater Extraction Well
- Groundwater Elevation Contour (ft amsl) based upon March 2019 Data
- Groundwater Flow Direction (degrees) Groundwater Flow Gradient (ft/ft)
- Estimated Boundary of Old Landfill Waste Area
- Estimated Boundary of New Landfill Waste Area
- Landfill Property Boundaries
- Lined Cell
- Retention Basin
- Transfer Station

**Notes:**

| | |
|---|---|
| MW-06 | Well Identification |
| 1154.93 | Groundwater Elevation (ft amsl) collected in February/March 2019 |
| 1.3 | TCE Concentration (µg/L) collected in February/March 2019 |
| 22/22 | Original/Duplicate Results |
| ND | Not Detected |
| * | EW-01 has a different screen interval and concentrations in this well are not comparable to the others on this figure. |
| µg/L | microgram per liter |
| ft amsl | feet above mean sea level |
| TCE | Trichloroethene |

**Reference:**

Imagery Source: Flood Control District of Maricopa County, 2016

0 250 500 1,000 Feet

| | |
|---|---|
| Job No. | 1420192004 |
| PM: | NC |
| Date: | 6/7/2019 |
| Scale: | 1" = 500' |

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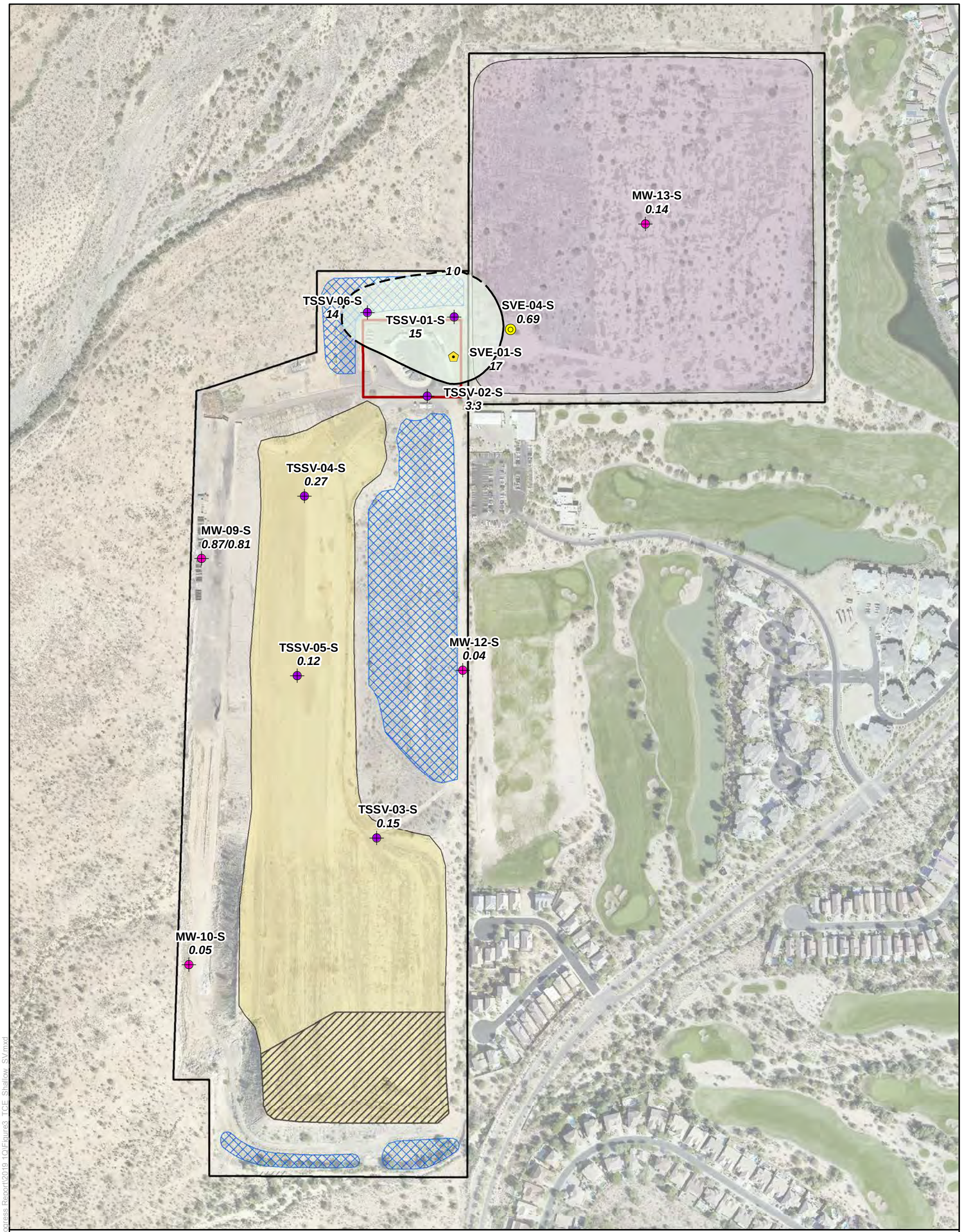
**Estimated Extent of TCE Plume in Groundwater February/March 2019**

FIGURE **2**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2019 1Q\Figure2_TCE_Groundwater.mxd




**Legend**

**TCE Concentrations (mg/m³) in Soil Vapor**

(Dashed Where Inferred)

10-100

- Nested Vapor Well/Monitoring Well
- Monitoring Well
- Soil Vapor Extraction Well
- Vadose Zone Soil Vapor Well
- Estimated Boundary of Old Landfill Waste Area
- Estimated Boundary of New Landfill Waste Area
- Landfill Property Boundaries
- Lined Cell
- Retention Basin
- Transfer Station

**Notes:**

| | |
|---|---|
| **TSSV-02-S** | Well Identification |
| ***3.3*** | TCE soil gas result (mg/m³) collected February/March 2019 |
| ***0.87/0.81*** | Duplicate Result |
| ft amsl | Feet above mean sea level |
| mg/m³ | Milligram per cubic meter |
| NS | Not Sampled |
| TCE | Trichloroethene |

Range of Vapor Well Screen Intervals: 1702-1750 ft amsl

**Reference:**

Imagery Source: Flood Control District of Maricopa County, 2016

0 175 350 525 700 Feet

| | |
|---|---|
| Job No.: | 1420192004 |
| PM: | NC |
| Date: | 6/7/2019 |
| Scale: | 1" = 350' |

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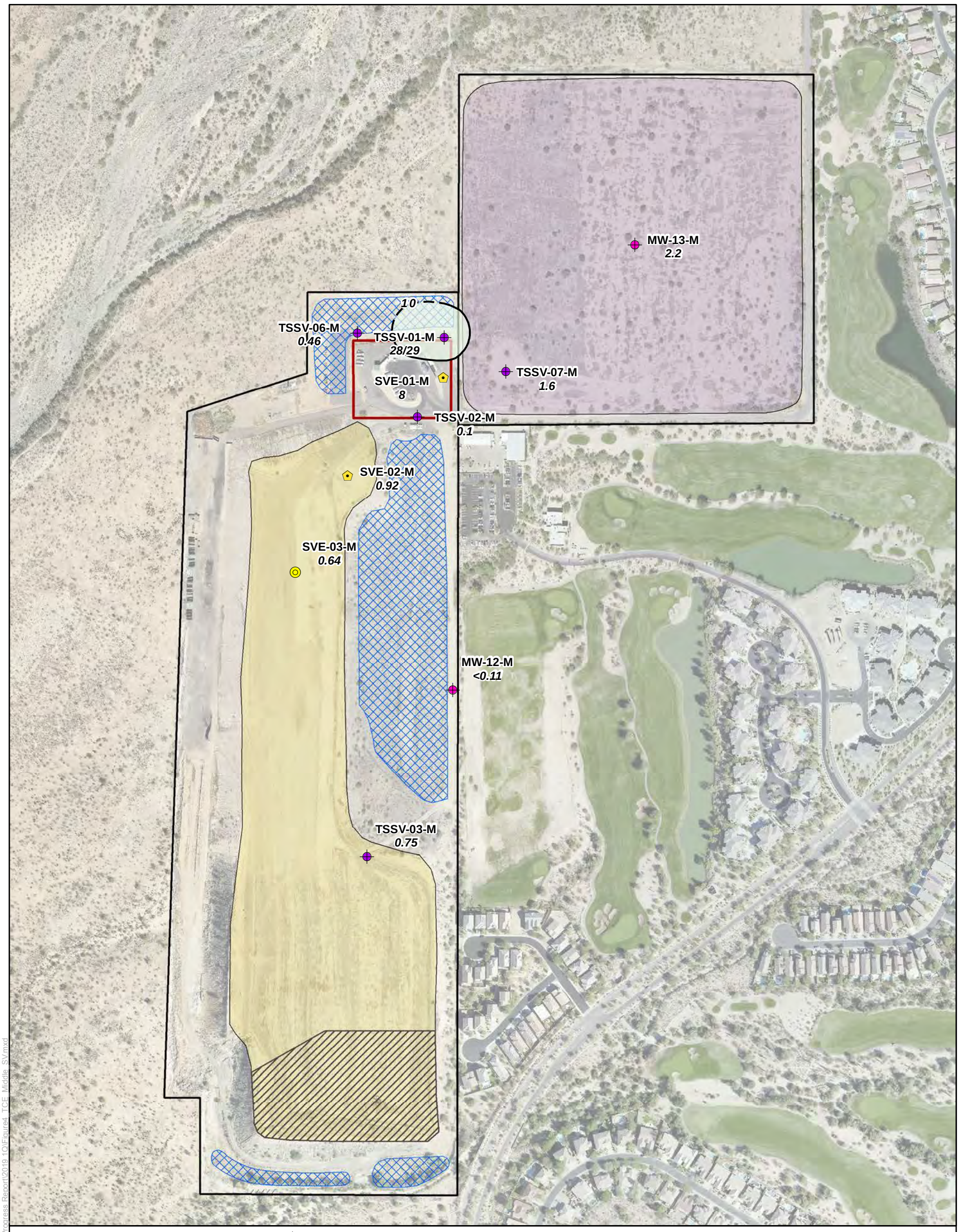
Phoenix, Arizona

**Shallow Zone TCE Soil Vapor Concentrations February/March 2019**

FIGURE **3**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2019 1Q\Figure3_TCE_Shallow_SV.mxd




**Legend**

**TCE Concentrations (mg/m³) in Soil Vapor**
(Dashed Where Inferred)

10-100

- Nested Vapor Well/Monitoring Well
- Monitoring Well
- Soil Vapor Extraction Well
- Vadose Zone Soil Vapor Well
- Estimated Boundary of Old Landfill Waste Area
- Estimated Boundary of New Landfill Waste Area
- Landfill Property Boundaries
- Lined Cell
- Retention Basin
- Transfer Station

**Notes:**

| | |
|---|---|
| **TSSV-07-M** | Well Identification |
| ***1.6*** | TCE soil gas result (mg/m³) collected February/March 2019 |
| **28/29** | Duplicate Result |
| ft amsl | Feet above mean sea level |
| mg/m³ | Milligram per cubic meter |
| NS | Not Sampled |
| TCE | Trichloroethene |

Range of Vapor Well Screen Intervals: 1522-1600 ft amsl

**Reference:**
Imagery Source: Flood Control District of Maricopa County, 2016

0 175 350 525 700 Feet

| | |
|---|---|
| Job No.: | 1420192004 |
| PM: | NC |
| Date: | 6/7/2019 |
| Scale: | 1" = 350' |

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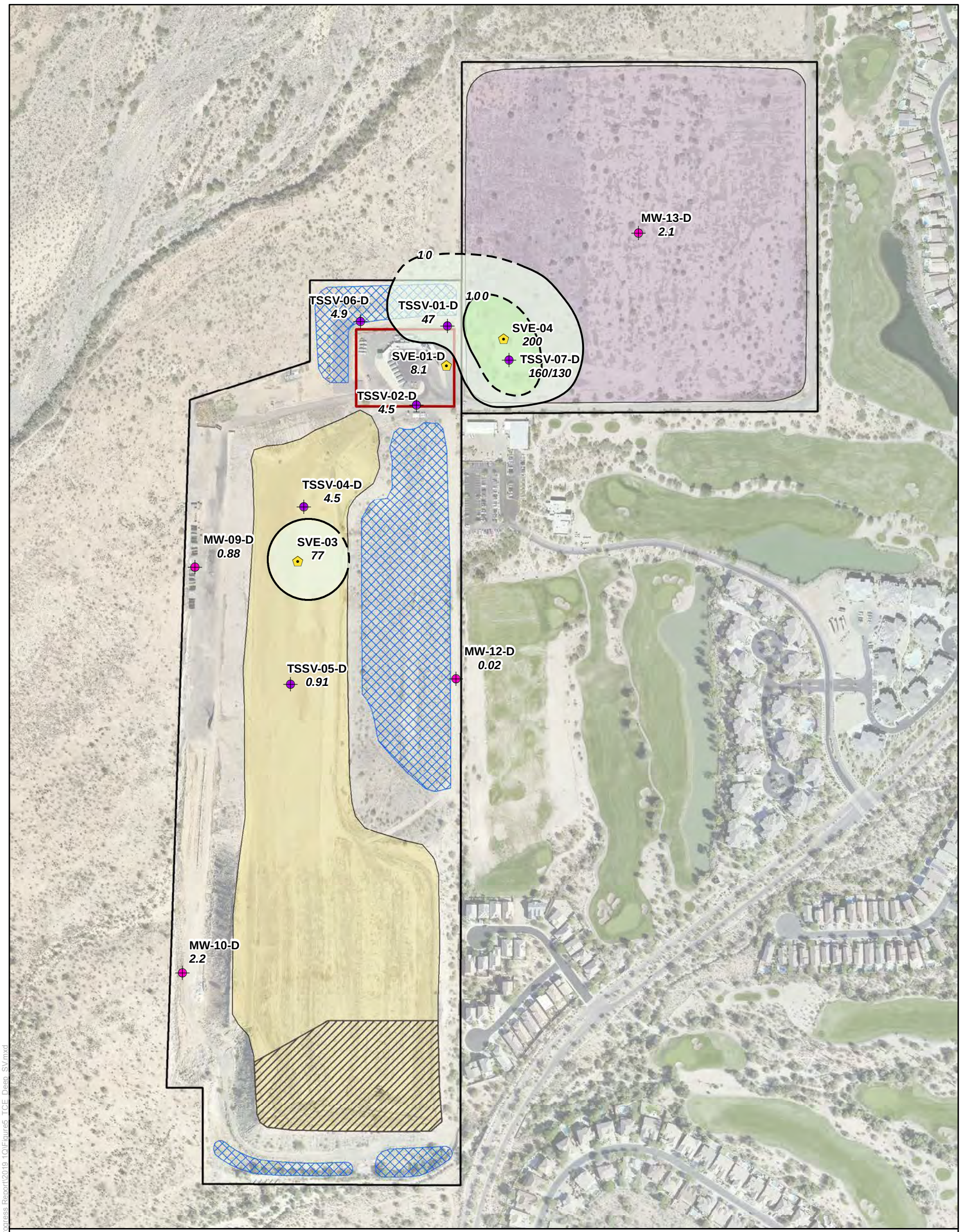
Phoenix, Arizona

**Middle Zone TCE Soil Vapor Concentrations February/March 2019**

FIGURE **4**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2019 1Q\Figure4_TCE_Middle_SV.mxd




**Legend**

**TCE Concentrations (mg/m³) in Soil Vapor**

(Dashed Where Inferred)

10-100

100-250

- Nested Vapor Well/Monitoring Well
- Monitoring Well
- Soil Vapor Extraction Well
- Vadose Zone Soil Vapor Well
- Estimated Boundary of Old Landfill Waste Area
- Estimated Boundary of New Landfill Waste Area
- Landfill Property Boundaries
- Lined Cell
- Retention Basin
- Transfer Station

**Notes:**

| | |
|---|---|
| **TSSV-01-D** | Well Identification |
| ***47*** | TCE soil gas result (mg/m³) collected February/March 2019 |
| **160/130** | Duplicate Result |
| ft amsl | Feet above mean sea level |
| mg/m³ | Milligram per cubic meter |
| NS | Not Sampled |
| TCE | Trichloroethene |

Range of Vapor Well Screen Intervals: 1327-1500 ft amsl

**Reference:**

Imagery Source: Flood Control District of Maricopa County, 2016

0 175 350 525 700 Feet

| | |
|---|---|
| Job No.: | 1420192004 |
| PM: | NC |
| Date: | 5/30/2019 |
| Scale: | 1" = 350' |

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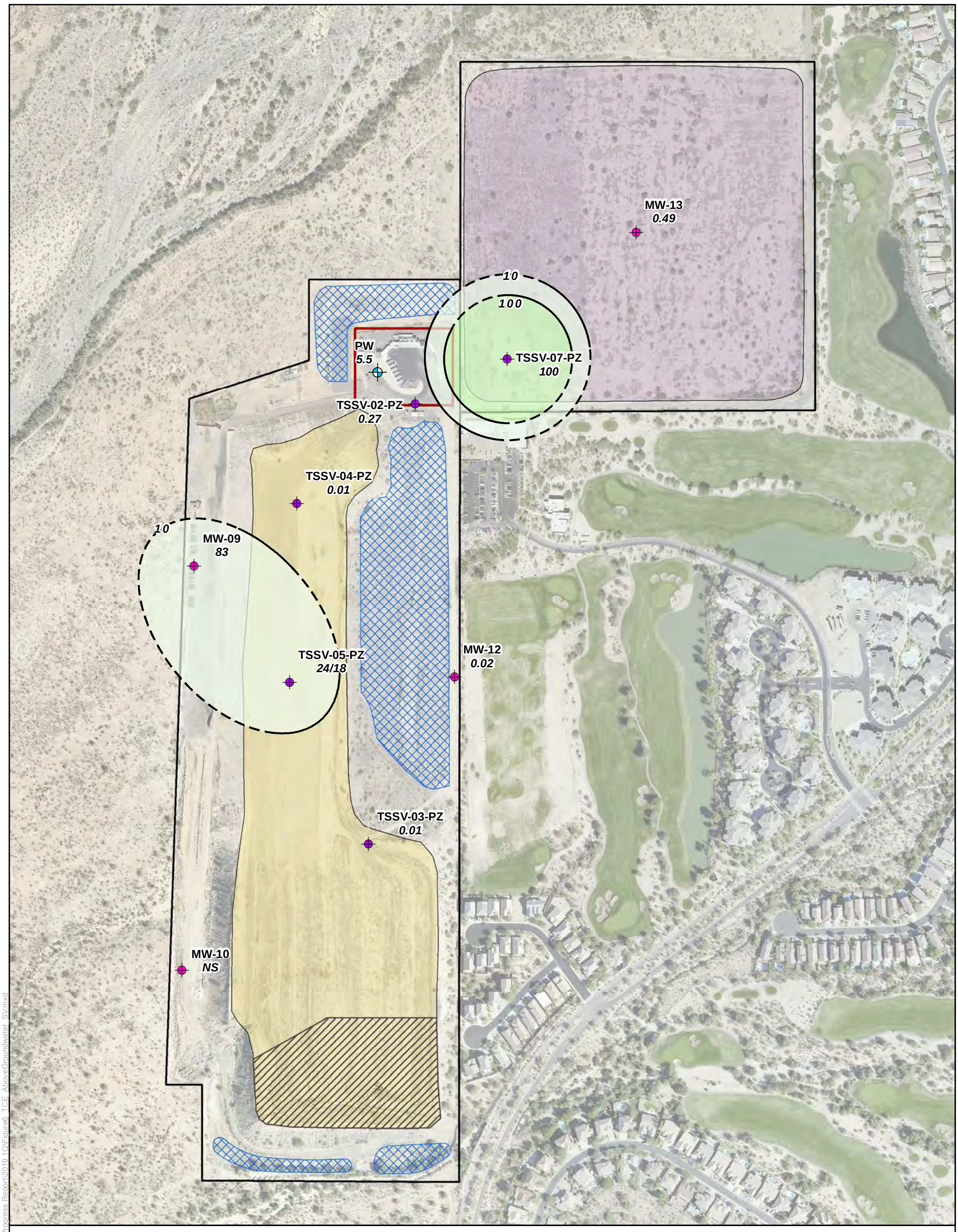
Phoenix, Arizona

**Deep Zone TCE Soil Vapor Concentrations**
**February/March 2019**

FIGURE
**5**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2019 1Q\Figure5_TCE_Deep_SV.mxd




## Legend

**TCE Concentrations (mg/m³) in Soil Vapor**
(Dashed Where Inferred)

10-100
100-250

- Nested Vapor Well/Monitoring Well
- Deep Soil Vapor Well
- Groundwater Monitoring Well
- Production Well
- Soil Vapor Extraction Well
- Estimated Boundary of Old Landfill Waste Area
- Estimated Boundary of New Landfill Waste Area
- Landfill Property Boundaries
- Lined Cell
- Retention Basin
- Transfer Station

**Notes:**

| | |
|---|---|
| **MW-09** | Well Identification |
| ***83*** | TCE soil gas result (mg/m³) collected February/March 2019 |
| ft amsl | Feet above mean sea level |
| mg/m³ | Milligram per cubic meter |
| NS | Not Sampled |
| TCE | Trichloroethene |

Range of Vapor Well Screen Intervals: 1162-1201 ft amsl

**Reference:**
Imagery Source: Flood Control District of Maricopa County, 2016

0 175 350 525 700 Feet

| | |
|---|---|
| Job No.: | 1420192004 |
| PM: | NC |
| Date: | 6/2/2019 |
| Scale: | 1" = 350' |

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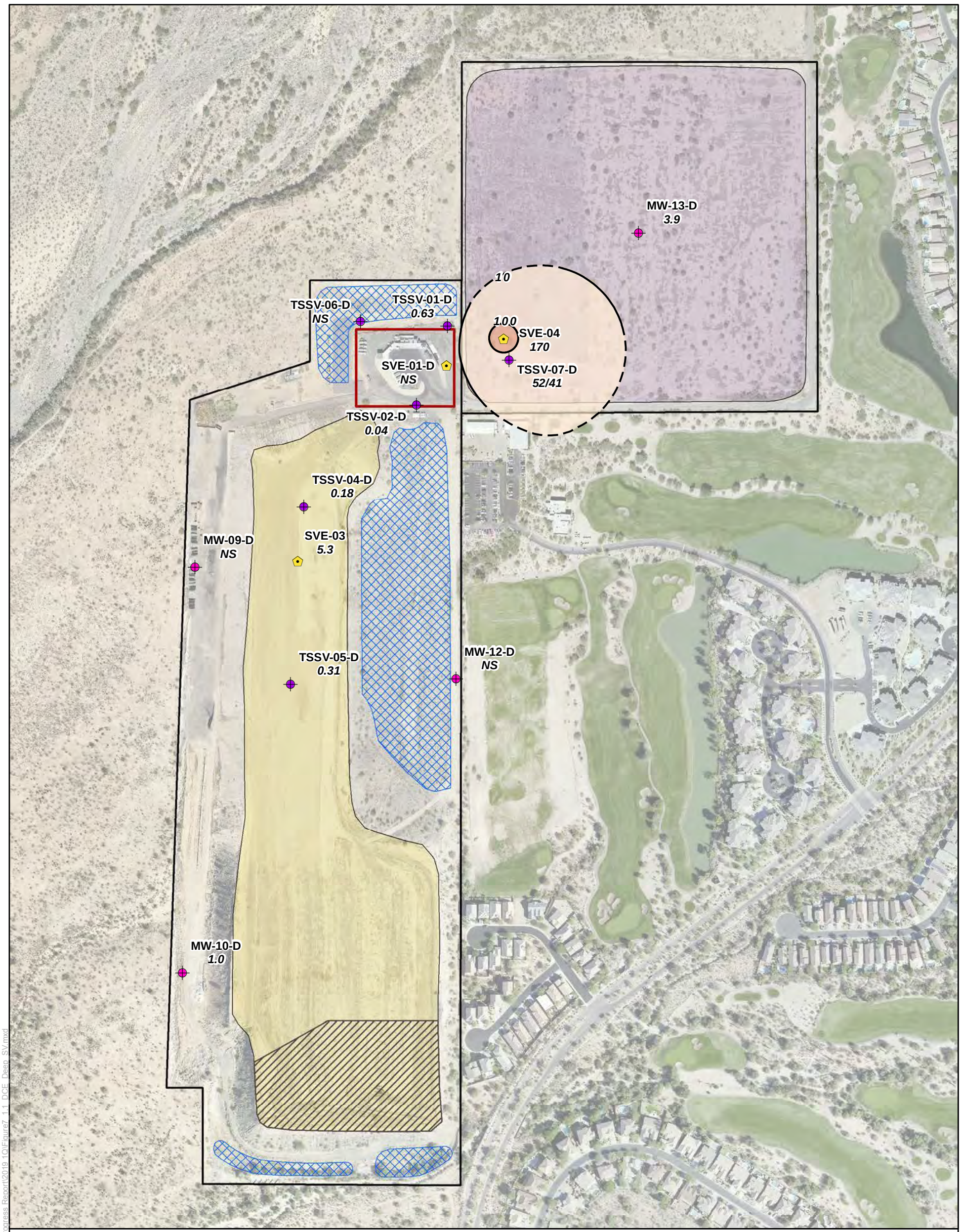
Phoenix, Arizona

**Above Water Table TCE Soil Vapor Concentrations February/March 2019**

FIGURE
**6**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2019 1Q\Figure6_TCE_AboveGroundwater_SV.mxd




## Legend

**1,1-DCE Concentrations (mg/m³) in Soil Vapor**

10-100

100-250

- Nested Vapor Well/Monitoring Well
- Production Well
- Monitoring Well
- Soil Vapor Extraction Well
- Vadose Zone Soil Vapor Well
- Estimated Boundary of Old Landfill Waste Area
- Estimated Boundary of New Landfill Waste Area
- Landfill Property Boundaries
- Lined Cell
- Retention Basin
- Transfer Station

**Notes:**

| | |
|---|---|
| **MW-13-D** | Well Identification |
| ***3.9*** | 1,1-DCE soil gas result (mg/m³) collected February/March 2019 |
| **52/41** | Duplicate Result |
| ft amsl | Feet above mean sea level |
| mg/m³ | Milligram per cubic meter |
| NS | Not Sampled |
| 1,1-DCE | 1,1-Dichloroethene |

Range of Vapor Well Screen Intervals: 1327-1500 ft amsl

**Reference:**

Imagery Source: Flood Control District of Maricopa County, 2016

0 175 350 525 700 Feet

| | |
|---|---|
| Job No.: | 1420192004 |
| PM: | NC |
| Date: | 6/7/2019 |
| Scale: | 1" = 350' |

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Maricopa County Cave Creek Landfill
Phoenix, Arizona

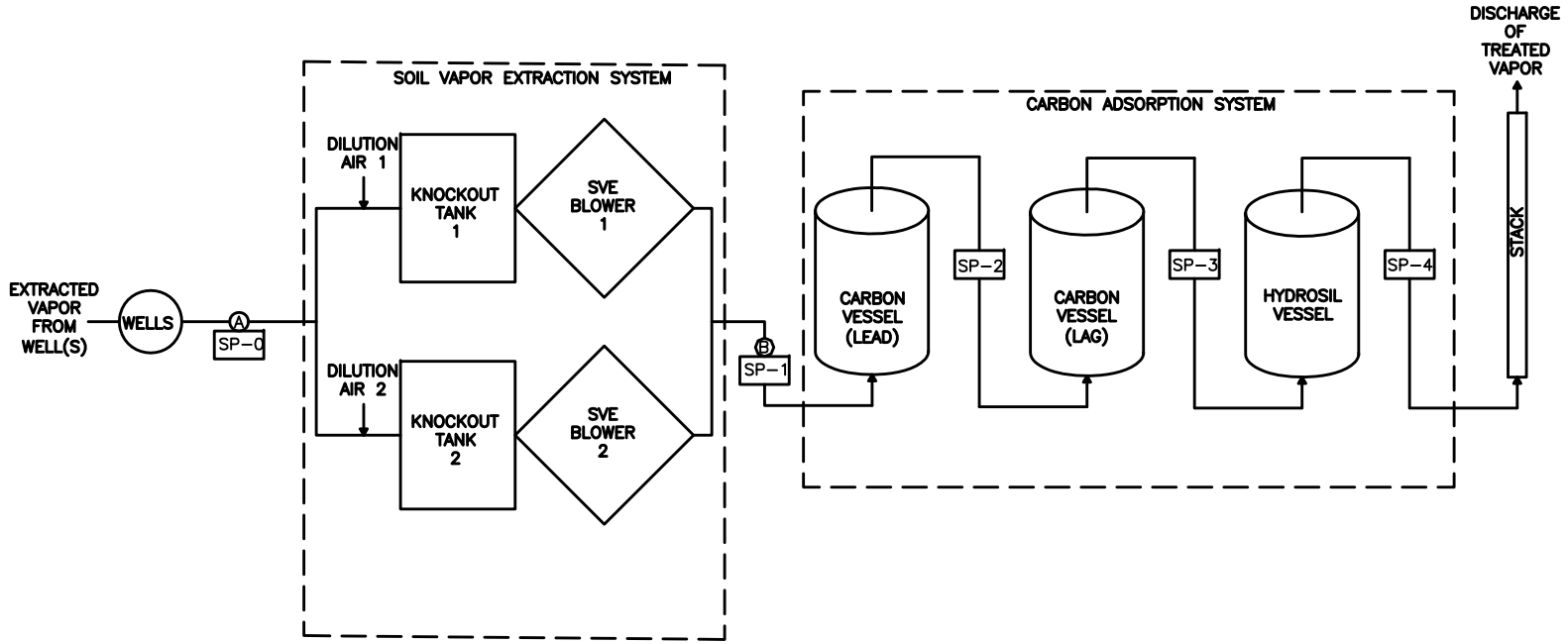
**Deep Zone 1,1-DCE Soil Vapor Concentrations February/March 2019**

FIGURE **7**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2019 1Q\Figure7_1.1_DCE_Deep_SV.mxd

# PRESSURE FLOW THROUGH CARBON ADSORPTION SYSTEM




**LEGEND**

- Ⓐ SYSTEM FLOW MEASUREMENT (PRE-DILUTION LOCATION)
- Ⓑ SYSTEM FLOW MEASUREMENT (POST-DILUTION LOCATION)
- SP-0 SYSTEM INLET SAMPLE LOCATION
- SP-1 CAS INLET SAMPLE LOCATION
- SP-2 CAS LEAD VESSEL OUTLET SAMPLE LOCATION
- SP-3 CAS LAG VESSEL OUTLET SAMPLE LOCATION
- SP-4 CAS OUTLET SAMPLE LOCATION

| | | | | | |
|---|---|---|---|---|---|
| CLIENT | MARICOPA COUNTY | | | | |
| PROJECT | CAVE CREEK LANDFILL | | | | |
| TITLE | SVE SYSTEM PROCESS FLOW DIAGRAM – PRESSURE FLOW | | | | |
| DESIGNED BY | BJN | CHECKED BY | AY | DATE | ISSUED FOR |
| DRAWN BY | BJN | APPROVED BY | NC | 11/15/16 | FINAL |
| FILENAME | FIGURE 8 | FIGURE No. | 8.1 | REV | 1 |
| PROJECT NO. | 14-2017-2034 | | | | |

wood.

G:\Environmental-Development\2017 Projects\14-2017-2034 Cave Creek Landfill FY2018\5.0_Technical\5.1_Reports_Deliverables\5.1.27_SVE Expansion OMM\Support-6/5/2017 11:11 AM

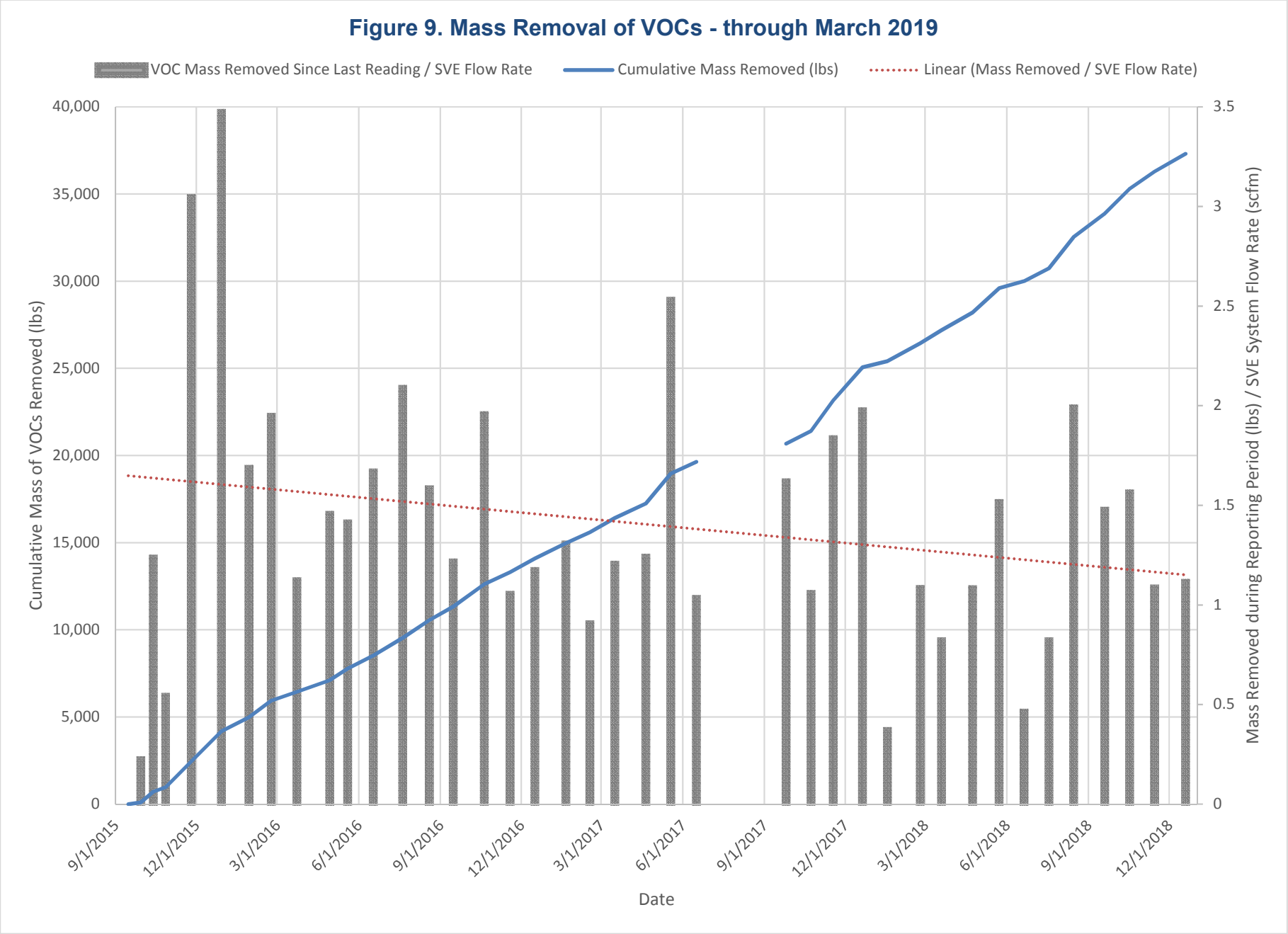


Figure 9. Mass Removal of VOCs - through March 2019
VOC Mass Removed Since Last Reading / SVE Flow Rate
Cumulative Mass Removed (lbs)
Linear (Mass Removed / SVE Flow Rate)
Cumulative Mass of VOCs Removed (lbs)
Mass Removed during Reporting Period (lbs) / SVE System Flow Rate (scfm)
Date
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
3.5
3
2.5
2
1.5
1
0.5
0
9/1/2015
12/1/2015
3/1/2016
6/1/2016
9/1/2016
12/1/2016
3/1/2017
6/1/2017
9/1/2017
12/1/2017
3/1/2018
6/1/2018
9/1/2018
12/1/2018

# APPENDIX A

## LABORATORY REPORTS OF ANALYSIS

# ANALYTICAL REPORT

March 11, 2019

## Wood E&I Solutions Inc. - Phoenix, AZ

| | |
|---|---|
| Sample Delivery Group: | L1075080 |
| Samples Received: | 03/02/2019 |
| Project Number: | 1420192004.****.021 |
| Description: | Cave Creek Landfill |
| Report To: | Samantha Sargent<br>4600 East Washington Street, Ste 600<br>Phoenix, AZ 85034 |

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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## MW09-718-030119 L1075080-01 GW

Collected by: Jasmine Ramirez | Collected date/time: 03/01/19 09:15 | Received date/time: 03/02/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 00:49 | 03/04/19 00:49 | JCP | Mt. Juliet, TN |

## MW10-705-030119 L1075080-02 GW

Collected by: Jasmine Ramirez | Collected date/time: 03/01/19 08:25 | Received date/time: 03/02/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 01:09 | 03/04/19 01:09 | JCP | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1247471 | 20 | 03/09/19 11:02 | 03/09/19 11:02 | DWR | Mt. Juliet, TN |

## MW11-712-022819 L1075080-03 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/28/19 14:00 | Received date/time: 03/02/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 01:29 | 03/04/19 01:29 | JCP | Mt. Juliet, TN |

## MW13-752-030119 L1075080-04 GW

Collected by: Jasmine Ramirez | Collected date/time: 03/01/19 12:40 | Received date/time: 03/02/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 01:49 | 03/04/19 01:49 | JCP | Mt. Juliet, TN |

## TSSV03-760-030119 L1075080-05 GW

Collected by: Jasmine Ramirez | Collected date/time: 03/01/19 11:00 | Received date/time: 03/02/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 02:09 | 03/04/19 02:09 | JCP | Mt. Juliet, TN |

## TSSV04-760-030119 L1075080-06 GW

Collected by: Jasmine Ramirez | Collected date/time: 03/01/19 10:05 | Received date/time: 03/02/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 02:30 | 03/04/19 02:30 | JCP | Mt. Juliet, TN |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 00:49 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 00:49 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 00:49 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 00:49 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 00:49 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 00:49 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 00:49 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 00:49 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Trichloroethene | 14.9 | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 00:49 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 00:49* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *103* | | *77.0-126* | | *03/04/2019 00:49* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *99.6* | | *70.0-130* | | *03/04/2019 00:49* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 01:09 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 01:09 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 01:09 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 01:09 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1-Dichloroethane | 1.32 | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1-Dichloroethene | 7.84 | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| cis-1,2-Dichloroethene | 22.8 | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 01:09 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 01:09 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 01:09 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 01:09 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | 1.71 | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Tetrachloroethene | 10.7 | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Trichloroethene | 338 | | 20.0 | 20 | 03/09/2019 11:02 | WG1247471 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 01:09 | WG1244697 |
| *(S) Toluene-d8* | *105* | | *80.0-120* | | *03/04/2019 01:09* | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/09/2019 11:02* | WG1247471 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 01:09* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *105* | | *77.0-126* | | *03/09/2019 11:02* | WG1247471 |
| *(S) 1,2-Dichloroethane-d4* | *100* | | *70.0-130* | | *03/04/2019 01:09* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *100* | | *70.0-130* | | *03/09/2019 11:02* | WG1247471 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 01:29 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 01:29 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 01:29 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 01:29 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 01:29 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 01:29 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 01:29 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 01:29 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Trichloroethene | 21.7 | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 01:29 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 01:29* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *105* | | *77.0-126* | | *03/04/2019 01:29* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *98.9* | | *70.0-130* | | *03/04/2019 01:29* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 01:49 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 01:49 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 01:49 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 01:49 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1-Dichloroethene | 2.31 | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 01:49 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 01:49 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 01:49 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 01:49 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Tetrachloroethene | 2.08 | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Trichloroethene | 5.73 | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 01:49 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 01:49* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *101* | | *77.0-126* | | *03/04/2019 01:49* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *100* | | *70.0-130* | | *03/04/2019 01:49* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 02:09 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 02:09 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 02:09 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 02:09 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1-Dichloroethane | 1.16 | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1-Dichloroethene | 3.18 | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| cis-1,2-Dichloroethene | 10.0 | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 02:09 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 02:09 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 02:09 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 02:09 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Tetrachloroethene | 3.90 | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Trichloroethene | 177 | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 02:09 | WG1244697 |
| *(S) Toluene-d8* | *105* | | *80.0-120* | | *03/04/2019 02:09* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 02:09* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | *70.0-130* | | *03/04/2019 02:09* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 02:30 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 02:30 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 02:30 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 02:30 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1-Dichloroethene | 4.62 | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| cis-1,2-Dichloroethene | 7.11 | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 02:30 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 02:30 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 02:30 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 02:30 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | 1.02 | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Tetrachloroethene | 5.72 | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Trichloroethene | 93.9 | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 02:30 | WG1244697 |
| *(S) Toluene-d8* | *102* | | *80.0-120* | | *03/04/2019 02:30* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *101* | | *77.0-126* | | *03/04/2019 02:30* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/04/2019 02:30* | WG1244697 |

## Method Blank (MB)

(MB) R3390066-3 03/04/19 00:08

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Acetone | U | | 10.0 | 50.0 |
| Acrolein | U | | 8.87 | 50.0 |
| Acrylonitrile | U | | 1.87 | 10.0 |
| Benzene | U | | 0.331 | 1.00 |
| Bromobenzene | U | | 0.352 | 1.00 |
| Bromodichloromethane | U | | 0.380 | 1.00 |
| Bromoform | U | | 0.469 | 1.00 |
| Bromomethane | U | | 0.866 | 5.00 |
| 1,3-Butadiene | U | | 0.330 | 2.00 |
| n-Butylbenzene | U | | 0.361 | 1.00 |
| sec-Butylbenzene | U | | 0.365 | 1.00 |
| tert-Butylbenzene | U | | 0.399 | 1.00 |
| Carbon disulfide | U | | 0.275 | 1.00 |
| Carbon tetrachloride | U | | 0.379 | 1.00 |
| Chlorobenzene | U | | 0.348 | 1.00 |
| Chlorodibromomethane | U | | 0.327 | 1.00 |
| Chloroethane | U | | 0.453 | 5.00 |
| Chloroform | U | | 0.324 | 5.00 |
| Chloromethane | U | | 0.276 | 2.50 |
| Cyclohexane | U | | 0.390 | 1.00 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 |
| 1,2-Dibromoethane | U | | 0.381 | 1.00 |
| Dibromomethane | U | | 0.346 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.274 | 1.00 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 |

## Method Blank (MB)

(MB) R3390066-3 03/04/19 00:08

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dicyclopentadiene | U | | 0.219 | 1.00 |
| Di-isopropyl ether | U | | 0.320 | 1.00 |
| Ethylbenzene | U | | 0.384 | 1.00 |
| 4-Ethyltoluene | U | | 0.172 | 1.00 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 |
| n-Hexane | U | | 0.736 | 10.0 |
| Isopropylbenzene | U | | 0.326 | 1.00 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 |
| 2-Butanone (MEK) | U | | 3.93 | 10.0 |
| Methyl Cyclohexane | U | | 0.380 | 1.00 |
| Methylene Chloride | U | | 1.00 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 |
| Naphthalene | U | | 1.00 | 5.00 |
| Propene | U | | 0.975 | 2.50 |
| n-Propylbenzene | U | | 0.349 | 1.00 |
| Styrene | U | | 0.307 | 1.00 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 |
| Tetrachloroethene | U | | 0.372 | 1.00 |
| Toluene | U | | 0.412 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 |
| Trichloroethene | U | | 0.398 | 1.00 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 |
| 1,2,3-Trichloropropane | U | | 0.807 | 2.50 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 |
| Vinyl chloride | U | | 0.259 | 1.00 |
| Xylenes, Total | U | | 1.06 | 3.00 |
| *(S) Toluene-d8* | *103* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *101* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *99.9* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390066-1 03/03/19 22:48 • (LCSD) R3390066-2 03/03/19 23:08

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 125 | 124 | 116 | 99.2 | 93.1 | 19.0-160 | | | 6.31 | 27 |
| Acrolein | 125 | 60.7 | 59.2 | 48.6 | 47.3 | 10.0-160 | | | 2.61 | 26 |
| Acrylonitrile | 125 | 130 | 114 | 104 | 91.5 | 55.0-149 | | | 12.9 | 20 |
| Benzene | 25.0 | 22.4 | 23.1 | 89.7 | 92.4 | 70.0-123 | | | 2.90 | 20 |
| Bromobenzene | 25.0 | 25.6 | 25.4 | 102 | 102 | 73.0-121 | | | 0.647 | 20 |
| Bromodichloromethane | 25.0 | 24.4 | 25.3 | 97.7 | 101 | 75.0-120 | | | 3.40 | 20 |
| Bromoform | 25.0 | 26.9 | 26.8 | 108 | 107 | 68.0-132 | | | 0.395 | 20 |
| Bromomethane | 25.0 | 20.7 | 21.4 | 82.8 | 85.6 | 10.0-160 | | | 3.25 | 25 |
| 1,3-Butadiene | 25.0 | 13.3 | 13.7 | 53.0 | 55.0 | 45.0-147 | | | 3.60 | 20 |
| n-Butylbenzene | 25.0 | 22.7 | 23.3 | 90.8 | 93.3 | 73.0-125 | | | 2.66 | 20 |
| sec-Butylbenzene | 25.0 | 25.8 | 26.8 | 103 | 107 | 75.0-125 | | | 3.83 | 20 |
| tert-Butylbenzene | 25.0 | 27.2 | 28.0 | 109 | 112 | 76.0-124 | | | 2.79 | 20 |
| Carbon disulfide | 25.0 | 19.5 | 20.3 | 77.8 | 81.0 | 61.0-128 | | | 4.07 | 20 |
| Carbon tetrachloride | 25.0 | 24.0 | 24.1 | 96.2 | 96.4 | 68.0-126 | | | 0.249 | 20 |
| Chlorobenzene | 25.0 | 23.7 | 24.0 | 94.8 | 96.0 | 80.0-121 | | | 1.25 | 20 |
| Chlorodibromomethane | 25.0 | 25.8 | 25.8 | 103 | 103 | 77.0-125 | | | 0.119 | 20 |
| Chloroethane | 25.0 | 22.0 | 23.1 | 88.0 | 92.6 | 47.0-150 | | | 5.03 | 20 |
| Chloroform | 25.0 | 23.2 | 24.0 | 92.6 | 96.1 | 73.0-120 | | | 3.69 | 20 |
| Chloromethane | 25.0 | 23.7 | 24.4 | 94.8 | 97.4 | 41.0-142 | | | 2.77 | 20 |
| Cyclohexane | 25.0 | 22.1 | 23.3 | 88.4 | 93.4 | 71.0-124 | | | 5.44 | 20 |
| 2-Chlorotoluene | 25.0 | 26.5 | 26.8 | 106 | 107 | 76.0-123 | | | 1.26 | 20 |
| 4-Chlorotoluene | 25.0 | 27.6 | 27.7 | 111 | 111 | 75.0-122 | | | 0.0884 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.0 | 23.8 | 96.0 | 95.3 | 58.0-134 | | | 0.773 | 20 |
| 1,2-Dibromoethane | 25.0 | 26.4 | 26.2 | 106 | 105 | 80.0-122 | | | 0.794 | 20 |
| Dibromomethane | 25.0 | 24.8 | 25.1 | 99.2 | 100 | 80.0-120 | | | 1.16 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 22.6 | 22.2 | 90.2 | 88.9 | 79.0-121 | | | 1.41 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.3 | 23.5 | 93.0 | 93.9 | 79.0-120 | | | 0.916 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 22.9 | 22.6 | 91.5 | 90.5 | 79.0-120 | | | 1.04 | 20 |
| Dichlorodifluoromethane | 25.0 | 23.8 | 25.1 | 95.3 | 100 | 51.0-149 | | | 5.15 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.4 | 24.1 | 93.5 | 96.3 | 70.0-126 | | | 2.98 | 20 |
| 1,2-Dichloroethane | 25.0 | 22.8 | 23.3 | 91.1 | 93.0 | 70.0-128 | | | 2.04 | 20 |
| 1,1-Dichloroethene | 25.0 | 21.8 | 22.6 | 87.2 | 90.3 | 71.0-124 | | | 3.51 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 23.7 | 24.4 | 94.9 | 97.8 | 73.0-120 | | | 2.95 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 22.6 | 23.8 | 90.5 | 95.2 | 73.0-120 | | | 5.06 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.2 | 25.0 | 96.9 | 100 | 77.0-125 | | | 3.32 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.5 | 24.9 | 93.8 | 99.4 | 74.0-126 | | | 5.75 | 20 |
| 1,3-Dichloropropane | 25.0 | 25.5 | 25.7 | 102 | 103 | 80.0-120 | | | 0.762 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 24.6 | 25.3 | 98.5 | 101 | 80.0-123 | | | 2.58 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 24.8 | 24.8 | 99.3 | 99.2 | 78.0-124 | | | 0.158 | 20 |
| 2,2-Dichloropropane | 25.0 | 21.8 | 23.2 | 87.2 | 92.6 | 58.0-130 | | | 6.03 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390066-1 03/03/19 22:48 • (LCSD) R3390066-2 03/03/19 23:08

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Dicyclopentadiene | 25.0 | 25.6 | 26.3 | 102 | 105 | 74.0-126 | | | 2.49 | 20 |
| Di-isopropyl ether | 25.0 | 24.2 | 24.0 | 96.9 | 96.0 | 58.0-138 | | | 0.906 | 20 |
| Ethylbenzene | 25.0 | 23.6 | 24.1 | 94.2 | 96.2 | 79.0-123 | | | 2.09 | 20 |
| 4-Ethyltoluene | 25.0 | 26.9 | 27.2 | 108 | 109 | 74.0-127 | | | 1.18 | 20 |
| Hexachloro-1,3-butadiene | 25.0 | 22.4 | 23.6 | 89.8 | 94.5 | 54.0-138 | | | 5.11 | 20 |
| n-Hexane | 25.0 | 20.6 | 20.3 | 82.2 | 81.2 | 57.0-133 | | | 1.27 | 20 |
| Isopropylbenzene | 25.0 | 24.9 | 25.6 | 99.7 | 102 | 76.0-127 | | | 2.61 | 20 |
| p-Isopropyltoluene | 25.0 | 24.9 | 25.8 | 99.8 | 103 | 76.0-125 | | | 3.20 | 20 |
| 2-Butanone (MEK) | 125 | 129 | 128 | 103 | 102 | 44.0-160 | | | 0.926 | 20 |
| Methyl Cyclohexane | 25.0 | 19.8 | 21.4 | 79.3 | 85.8 | 68.0-126 | | | 7.87 | 20 |
| Methylene Chloride | 25.0 | 21.7 | 22.3 | 86.8 | 89.0 | 67.0-120 | | | 2.50 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 130 | 127 | 104 | 101 | 68.0-142 | | | 2.34 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.7 | 23.5 | 99.0 | 93.9 | 68.0-125 | | | 5.29 | 20 |
| Naphthalene | 25.0 | 23.7 | 23.9 | 94.6 | 95.7 | 54.0-135 | | | 1.16 | 20 |
| Propene | 25.0 | 3.09 | 3.52 | 12.4 | 14.1 | 10.0-160 | | | 12.8 | 20 |
| n-Propylbenzene | 25.0 | 25.9 | 26.2 | 104 | 105 | 77.0-124 | | | 1.12 | 20 |
| Styrene | 25.0 | 26.1 | 26.5 | 104 | 106 | 73.0-130 | | | 1.60 | 20 |
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.1 | 25.2 | 101 | 101 | 75.0-125 | | | 0.137 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 26.6 | 26.2 | 106 | 105 | 65.0-130 | | | 1.66 | 20 |
| Tetrachloroethene | 25.0 | 24.6 | 24.8 | 98.6 | 99.2 | 72.0-132 | | | 0.623 | 20 |
| Toluene | 25.0 | 22.4 | 22.7 | 89.8 | 90.8 | 79.0-120 | | | 1.11 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 25.0 | 22.6 | 24.1 | 90.5 | 96.2 | 69.0-132 | | | 6.19 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 23.1 | 23.6 | 92.2 | 94.3 | 50.0-138 | | | 2.23 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 23.1 | 24.1 | 92.5 | 96.3 | 57.0-137 | | | 4.08 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.6 | 24.7 | 94.3 | 98.8 | 73.0-124 | | | 4.66 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 25.5 | 25.6 | 102 | 102 | 80.0-120 | | | 0.467 | 20 |
| Trichloroethene | 25.0 | 24.9 | 25.8 | 99.8 | 103 | 78.0-124 | | | 3.18 | 20 |
| Trichlorofluoromethane | 25.0 | 22.9 | 23.9 | 91.4 | 95.6 | 59.0-147 | | | 4.43 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 28.5 | 27.7 | 114 | 111 | 73.0-130 | | | 3.05 | 20 |
| 1,2,3-Trimethylbenzene | 25.0 | 23.8 | 24.3 | 95.4 | 97.3 | 77.0-120 | | | 1.97 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.8 | 26.5 | 103 | 106 | 76.0-121 | | | 2.64 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 27.3 | 27.8 | 109 | 111 | 76.0-122 | | | 2.03 | 20 |
| Vinyl chloride | 25.0 | 22.2 | 23.5 | 88.8 | 94.2 | 67.0-131 | | | 5.88 | 20 |
| Xylenes, Total | 75.0 | 73.3 | 74.5 | 97.7 | 99.3 | 79.0-123 | | | 1.62 | 20 |
| *(S) Toluene-d8* | | | | *102* | *99.4* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *106* | *105* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *98.4* | *96.7* | *70.0-130* | | | | |

## Method Blank (MB)

(MB) R3390228-3 03/09/19 09:42

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Trichloroethene | U | | 0.398 | 1.00 |
| *(S) Toluene-d8* | *103* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *104* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *103* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390228-1 03/09/19 08:41 • (LCSD) R3390228-2 03/09/19 09:01

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 25.0 | 25.5 | 26.3 | 102 | 105 | 78.0-124 | | | 3.15 | 20 |
| *(S) Toluene-d8* | | | | *101* | *101* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *103* | *104* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *97.7* | *99.1* | *70.0-130* | | | | |

## Instrument: VOCMS35 • File ID: 0303_28

03/03/19 22:28

| Sample ID | File ID | 8260-FLUOROBENZENE | 8260-CHLOROBENZENE-D5 | 8260-1,4-DICHLOROBENZENE-D4 |
|---|---|---|---|---|
| | | Response | Response | Response |
| Standard | 0303_28 | 66975 | 66975 | 91231 |
| Upper Limit | | 133950 | 133950 | 182462 |
| Lower Limit | | 33488 | 33488 | 45616 |
| LCS R3390066-1 WG1244697 1x | 0303_29 | 68440 | 68440 | 91295 |
| LCSD R3390066-2 WG1244697 1x | 0303_30 | 70607 | 70607 | 94984 |
| BLANK R3390066-3 WG1244697 1x | 0303_33 | 62690 | 62690 | 81896 |
| L1075080-01 WG1244697 1x | 0303_35 | 61428 | 61428 | 79721 |
| L1075080-02 WG1244697 1x | 0303_36 | 62122 | 62122 | 82364 |
| L1075080-03 WG1244697 1x | 0303_37 | 61833 | 61833 | 83835 |
| L1075080-04 WG1244697 1x | 0303_38 | 60589 | 60589 | 79456 |
| L1075080-05 WG1244697 1x | 0303_39 | 60194 | 60194 | 78268 |
| L1075080-06 WG1244697 1x | 0303_40 | 61063 | 61063 | 81626 |

## Instrument: VOCMS35 • File ID: 0309_02

03/09/19 08:41

| Sample ID | File ID | 8260-FLUOROBENZENE | 8260-CHLOROBENZENE-D5 | 8260-1,4-DICHLOROBENZENE-D4 |
|---|---|---|---|---|
| | | Response | Response | Response |
| Standard | 0309_02 | 66481 | 66481 | 86047 |
| Upper Limit | | 132962 | 132962 | 172094 |
| Lower Limit | | 33241 | 33241 | 43024 |
| LCS R3390228-1 WG1247471 1x | 0309_02LCSC | 66481 | 66481 | 86047 |
| LCSD R3390228-2 WG1247471 1x | 0309_03C | 66829 | 66829 | 85736 |
| BLANK R3390228-3 WG1247471 1x | 0309_05C | 65633 | 65633 | 85171 |
| L1075080-02 WG1247471 20x | 0309_09 | 64009 | 64009 | 81644 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

# ACCREDITATIONS & LOCATIONS



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

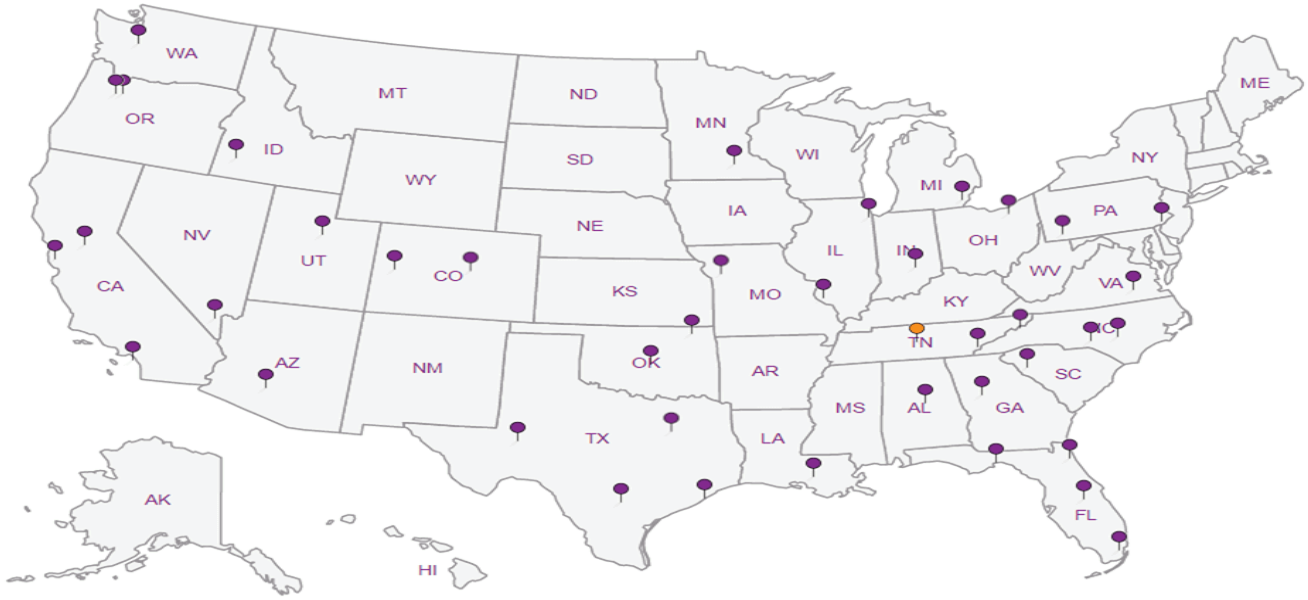
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Pace Analytical®

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**ALL SHADED AREAS are for LAB USE ONLY**

| | |
|---|---|
| Company: Wood E&IS | Billing Information: Wood E&IS- Attn: Samantha Sargent |
| Address: 4600 E Washington St Suite 600 Phoenix, AZ 85034 | |
| Report To: samantha.sargent@woodplc.com | Email To: samantha.sargent@woodplc.com |
| Copy To: emily.lodolce@woodplc.com | Site Collection Info/Address: Cave Creek Landfill |
| Customer Project Name/Number: Cave Creek Landfill 1420192004.****.021 | State: AZ County/City: /Phoenix Time Zone Collected: [ ] PT [✓] MT [ ] CT [ ] ET |
| Phone: 602-733-6000 Email: samantha.sargent@woodplc.com | Site/Facility ID #: |
| Collected By (print): Jasmine Ramirez | Purchase Order #: C014102663 Quote #: AMECTAZ012119S |
| Collected By (signature): | Turnaround Date Required: STD TAT |
| Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____ | Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) |

Compliance Monitoring? [ ] Yes [✓] No

DW PWS ID #:
DW Location Code:

Immediately Packed on Ice: [✓] Yes [ ] No

Field Filtered (if applicable): [ ] Yes [✓] No
Analysis: ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Lab Project Manager:

Analyses

| Customer Sample ID | Matrix * | Comp / Grab | Collected (or Composite Start) Date | Collected (or Composite Start) Time | Composite End Date | Composite End Time | Res Cl | # of Ctns | 8260B VOCs | 6020 Metals (See List) | 300.0 General Chemistry (See List) | 300.0 Nitrate/Nitrite | SM2320B Alkalinity | SM2450C (TDS), SM210 B (Specific Conductivity), SM4500 (pH) | | | | | | Lab Sample # / Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW09-718-030119 | W | Grab | 3/1/19 | 0915 | | | | 2 | X | | | | | | | | | | | -01 |
| MW10-705-030119 | W | Grab | 3/1/19 | 0825 | | | | 2 | X | | | | | | | | | | | -02 |
| MW11-712-022819 | W | Grab | 2/28/19 | 1400 | | | | 2 | X | | | | | | | | | | | -03 |
| ~~MW12~~ | ~~W~~ | ~~Grab~~ | | | | | | ~~2~~ | X | | | | | | | | | | | |
| MW13-752-030119 | W | Grab | 3/1/19 | 1240 | | | | 2 | X | | | | | | | | | | | -04 |
| ~~TSSV02~~ | ~~W~~ | ~~Grab~~ | | | | | | ~~2~~ | X | | | | | | | | | | | |
| TSSV03-780-030119 | W | Grab | 3/1/19 | 1100 | | | | 2 | X | | | | | | | | | | | -05 |
| TSSV04-780-030119 | W | Grab | 3/1/19 | 1005 | | | | 3 | X | | | | | | | | | | | 06 |
| ~~TSSV05~~ | ~~W~~ | ~~Grab~~ | | | | | | ~~2~~ | X | | | | | | | | | | | |
| ~~TSSV06~~ | ~~W~~ | ~~Grab~~ | | | | | | ~~2~~ | X | | | | | | | | | | | |

Lab Profile/Line: L1075080

Lab Sample Receipt Checklist:

| | | | |
|---|---|---|---|
| Custody Seals Present/Intact | Y | N | NA |
| Custody Signatures Present | Y | N | NA |
| Collector Signature Present | Y | N | NA |
| Bottles Intact | Y | N | NA |
| Correct Bottles | Y | N | NA |
| Sufficient Volume | Y | N | NA |
| Samples Received on Ice | Y | N | NA |
| VOA - Headspace Acceptable | Y | N | NA |
| USDA Regulated Soils | Y | N | NA |
| Samples in Holding Time | Y | N | NA |
| Residual Chlorine Present | Y | N | NA |
| Cl Strips: ____ | | | |
| Sample pH Acceptable | Y | N | NA |
| pH Strips: ____ | | | |
| Sulfide Present | Y | N | NA |
| Lead Acetate Strips: ____ | | | |

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: Am AS
Cooler 1 Temp Upon Receipt: 1.0 oC
Cooler 1 Therm Corr. Factor: -.2 oC
Cooler 1 Corrected Temp: 0.8 oC
Comments: RAD SCREEN: <0.5 mR/hr

| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
|---|---|---|---|
| Wood | 3-1-19 / 1513 | | |
| Relinquished by/Company: (Signature) Pace National | Date/Time: 3/1/19 @1800 | Received by/Company: (Signature) SWA | Date/Time: |
| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: 3/2/19 8:40 |

D129

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 3

Total = 12 Containers received

# ANALYTICAL REPORT

March 11, 2019

## Wood E&I Solutions Inc. - Phoenix, AZ

| | |
|---|---|
| Sample Delivery Group: | L1075087 |
| Samples Received: | 03/02/2019 |
| Project Number: | 142019004.****.021 |
| Description: | Cave Creek Landfill |
| Report To: | Samantha Sargent<br>4600 East Washington Street, Ste 600<br>Phoenix, AZ 85034 |

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

## EW01-713-022719 L1075087-01 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 02/27/19 08:30 | 03/02/19 08:00 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244881 | 1 | 03/04/19 13:34 | 03/04/19 13:34 | ADM | Mt. Juliet, TN |

## DUP2-030119 L1075087-02 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/01/19 14:15 | 03/02/19 08:00 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 02:50 | 03/04/19 02:50 | JCP | Mt. Juliet, TN |

## DUP03-022819 L1075087-03 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 02/28/19 15:00 | 03/02/19 08:00 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 03:10 | 03/04/19 03:10 | JCP | Mt. Juliet, TN |

## DUP04-030119 L1075087-04 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/01/19 11:30 | 03/02/19 08:00 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 03:30 | 03/04/19 03:30 | JCP | Mt. Juliet, TN |

## TSSV07-743-030119 L1075087-05 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/01/19 13:40 | 03/02/19 08:00 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 03:50 | 03/04/19 03:50 | JCP | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1247471 | 1 | 03/09/19 10:42 | 03/09/19 10:42 | DWR | Mt. Juliet, TN |

## PDB BLANK-022719 L1075087-06 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 02/27/19 13:15 | 03/02/19 08:00 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 04:10 | 03/04/19 04:10 | JCP | Mt. Juliet, TN |

## TRIP BLANK-022719 L1075087-07 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 02/27/19 13:15 | 03/02/19 08:00 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 00:29 | 03/04/19 00:29 | JCP | Mt. Juliet, TN |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | R7 | 50.0 | 1 | 03/04/2019 13:34 | WG1244881 |
| Acrolein | ND | R7 | 50.0 | 1 | 03/04/2019 13:34 | WG1244881 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 13:34 | WG1244881 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 13:34 | WG1244881 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| cis-1,2-Dichloroethene | 1.52 | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 13:34 | WG1244881 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 13:34 | WG1244881 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 13:34 | WG1244881 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 13:34 | WG1244881 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Trichloroethene | 20.6 | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 13:34 | WG1244881 |
| *(S) Toluene-d8* | *103* | | *80.0-120* | | *03/04/2019 13:34* | WG1244881 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 13:34* | WG1244881 |
| *(S) 1,2-Dichloroethane-d4* | *99.8* | | *70.0-130* | | *03/04/2019 13:34* | WG1244881 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 02:50 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 02:50 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 02:50 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 02:50 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 02:50 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 02:50 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 02:50 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 02:50 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Trichloroethene | 15.2 | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 02:50 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 02:50* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *101* | | *77.0-126* | | *03/04/2019 02:50* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | *70.0-130* | | *03/04/2019 02:50* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 03:10 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 03:10 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 03:10 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 03:10 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 03:10 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 03:10 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 03:10 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 03:10 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Trichloroethene | 21.8 | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 03:10 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 03:10* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 03:10* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/04/2019 03:10* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 03:30 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 03:30 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 03:30 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 03:30 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1-Dichloroethane | 1.16 | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1-Dichloroethene | 3.03 | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| cis-1,2-Dichloroethene | 9.98 | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 03:30 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 03:30 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 03:30 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 03:30 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Tetrachloroethene | 3.93 | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Trichloroethene | 168 | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 03:30 | WG1244697 |
| *(S) Toluene-d8* | *105* | | *80.0-120* | | *03/04/2019 03:30* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *104* | | *77.0-126* | | *03/04/2019 03:30* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | *70.0-130* | | *03/04/2019 03:30* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 03:50 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 03:50 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 03:50 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 03:50 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 03:50 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 03:50 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 03:50 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 03:50 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Trichloroethene | ND | | 1.00 | 1 | 03/09/2019 10:42 | WG1247471 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 03:50 | WG1244697 |
| *(S) Toluene-d8* | *102* | | *80.0-120* | | *03/04/2019 03:50* | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/09/2019 10:42* | WG1247471 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 03:50* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *106* | | *77.0-126* | | *03/09/2019 10:42* | WG1247471 |
| *(S) 1,2-Dichloroethane-d4* | *104* | | *70.0-130* | | *03/04/2019 03:50* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *99.8* | | *70.0-130* | | *03/09/2019 10:42* | WG1247471 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 04:10 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 04:10 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 04:10 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 04:10 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 04:10 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 04:10 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 04:10 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 04:10 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Trichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 04:10 | WG1244697 |
| *(S) Toluene-d8* | *102* | | *80.0-120* | | *03/04/2019 04:10* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *104* | | *77.0-126* | | *03/04/2019 04:10* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/04/2019 04:10* | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 00:29 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 00:29 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 00:29 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 00:29 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 00:29 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 00:29 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 00:29 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 00:29 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Trichloroethene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 00:29 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 00:29* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *103* | | *77.0-126* | | *03/04/2019 00:29* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *99.6* | | *70.0-130* | | *03/04/2019 00:29* | WG1244697 |

## Method Blank (MB)

(MB) R3390066-3 03/04/19 00:08

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Acetone | U | | 10.0 | 50.0 |
| Acrolein | U | | 8.87 | 50.0 |
| Acrylonitrile | U | | 1.87 | 10.0 |
| Benzene | U | | 0.331 | 1.00 |
| Bromobenzene | U | | 0.352 | 1.00 |
| Bromodichloromethane | U | | 0.380 | 1.00 |
| Bromoform | U | | 0.469 | 1.00 |
| Bromomethane | U | | 0.866 | 5.00 |
| 1,3-Butadiene | U | | 0.330 | 2.00 |
| n-Butylbenzene | U | | 0.361 | 1.00 |
| sec-Butylbenzene | U | | 0.365 | 1.00 |
| tert-Butylbenzene | U | | 0.399 | 1.00 |
| Carbon disulfide | U | | 0.275 | 1.00 |
| Carbon tetrachloride | U | | 0.379 | 1.00 |
| Chlorobenzene | U | | 0.348 | 1.00 |
| Chlorodibromomethane | U | | 0.327 | 1.00 |
| Chloroethane | U | | 0.453 | 5.00 |
| Chloroform | U | | 0.324 | 5.00 |
| Chloromethane | U | | 0.276 | 2.50 |
| Cyclohexane | U | | 0.390 | 1.00 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 |
| 1,2-Dibromoethane | U | | 0.381 | 1.00 |
| Dibromomethane | U | | 0.346 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.274 | 1.00 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 |

## Method Blank (MB)

(MB) R3390066-3 03/04/19 00:08

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dicyclopentadiene | U | | 0.219 | 1.00 |
| Di-isopropyl ether | U | | 0.320 | 1.00 |
| Ethylbenzene | U | | 0.384 | 1.00 |
| 4-Ethyltoluene | U | | 0.172 | 1.00 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 |
| n-Hexane | U | | 0.736 | 10.0 |
| Isopropylbenzene | U | | 0.326 | 1.00 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 |
| 2-Butanone (MEK) | U | | 3.93 | 10.0 |
| Methyl Cyclohexane | U | | 0.380 | 1.00 |
| Methylene Chloride | U | | 1.00 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 |
| Naphthalene | U | | 1.00 | 5.00 |
| Propene | U | | 0.975 | 2.50 |
| n-Propylbenzene | U | | 0.349 | 1.00 |
| Styrene | U | | 0.307 | 1.00 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 |
| Tetrachloroethene | U | | 0.372 | 1.00 |
| Toluene | U | | 0.412 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 |
| Trichloroethene | U | | 0.398 | 1.00 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 |
| 1,2,3-Trichloropropane | U | | 0.807 | 2.50 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 |
| Vinyl chloride | U | | 0.259 | 1.00 |
| Xylenes, Total | U | | 1.06 | 3.00 |
| *(S) Toluene-d8* | *103* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *101* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *99.9* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390066-1 03/03/19 22:48 • (LCSD) R3390066-2 03/03/19 23:08

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 125 | 124 | 116 | 99.2 | 93.1 | 19.0-160 | | | 6.31 | 27 |
| Acrolein | 125 | 60.7 | 59.2 | 48.6 | 47.3 | 10.0-160 | | | 2.61 | 26 |
| Acrylonitrile | 125 | 130 | 114 | 104 | 91.5 | 55.0-149 | | | 12.9 | 20 |
| Benzene | 25.0 | 22.4 | 23.1 | 89.7 | 92.4 | 70.0-123 | | | 2.90 | 20 |
| Bromobenzene | 25.0 | 25.6 | 25.4 | 102 | 102 | 73.0-121 | | | 0.647 | 20 |
| Bromodichloromethane | 25.0 | 24.4 | 25.3 | 97.7 | 101 | 75.0-120 | | | 3.40 | 20 |
| Bromoform | 25.0 | 26.9 | 26.8 | 108 | 107 | 68.0-132 | | | 0.395 | 20 |
| Bromomethane | 25.0 | 20.7 | 21.4 | 82.8 | 85.6 | 10.0-160 | | | 3.25 | 25 |
| 1,3-Butadiene | 25.0 | 13.3 | 13.7 | 53.0 | 55.0 | 45.0-147 | | | 3.60 | 20 |
| n-Butylbenzene | 25.0 | 22.7 | 23.3 | 90.8 | 93.3 | 73.0-125 | | | 2.66 | 20 |
| sec-Butylbenzene | 25.0 | 25.8 | 26.8 | 103 | 107 | 75.0-125 | | | 3.83 | 20 |
| tert-Butylbenzene | 25.0 | 27.2 | 28.0 | 109 | 112 | 76.0-124 | | | 2.79 | 20 |
| Carbon disulfide | 25.0 | 19.5 | 20.3 | 77.8 | 81.0 | 61.0-128 | | | 4.07 | 20 |
| Carbon tetrachloride | 25.0 | 24.0 | 24.1 | 96.2 | 96.4 | 68.0-126 | | | 0.249 | 20 |
| Chlorobenzene | 25.0 | 23.7 | 24.0 | 94.8 | 96.0 | 80.0-121 | | | 1.25 | 20 |
| Chlorodibromomethane | 25.0 | 25.8 | 25.8 | 103 | 103 | 77.0-125 | | | 0.119 | 20 |
| Chloroethane | 25.0 | 22.0 | 23.1 | 88.0 | 92.6 | 47.0-150 | | | 5.03 | 20 |
| Chloroform | 25.0 | 23.2 | 24.0 | 92.6 | 96.1 | 73.0-120 | | | 3.69 | 20 |
| Chloromethane | 25.0 | 23.7 | 24.4 | 94.8 | 97.4 | 41.0-142 | | | 2.77 | 20 |
| Cyclohexane | 25.0 | 22.1 | 23.3 | 88.4 | 93.4 | 71.0-124 | | | 5.44 | 20 |
| 2-Chlorotoluene | 25.0 | 26.5 | 26.8 | 106 | 107 | 76.0-123 | | | 1.26 | 20 |
| 4-Chlorotoluene | 25.0 | 27.6 | 27.7 | 111 | 111 | 75.0-122 | | | 0.0884 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.0 | 23.8 | 96.0 | 95.3 | 58.0-134 | | | 0.773 | 20 |
| 1,2-Dibromoethane | 25.0 | 26.4 | 26.2 | 106 | 105 | 80.0-122 | | | 0.794 | 20 |
| Dibromomethane | 25.0 | 24.8 | 25.1 | 99.2 | 100 | 80.0-120 | | | 1.16 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 22.6 | 22.2 | 90.2 | 88.9 | 79.0-121 | | | 1.41 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.3 | 23.5 | 93.0 | 93.9 | 79.0-120 | | | 0.916 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 22.9 | 22.6 | 91.5 | 90.5 | 79.0-120 | | | 1.04 | 20 |
| Dichlorodifluoromethane | 25.0 | 23.8 | 25.1 | 95.3 | 100 | 51.0-149 | | | 5.15 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.4 | 24.1 | 93.5 | 96.3 | 70.0-126 | | | 2.98 | 20 |
| 1,2-Dichloroethane | 25.0 | 22.8 | 23.3 | 91.1 | 93.0 | 70.0-128 | | | 2.04 | 20 |
| 1,1-Dichloroethene | 25.0 | 21.8 | 22.6 | 87.2 | 90.3 | 71.0-124 | | | 3.51 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 23.7 | 24.4 | 94.9 | 97.8 | 73.0-120 | | | 2.95 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 22.6 | 23.8 | 90.5 | 95.2 | 73.0-120 | | | 5.06 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.2 | 25.0 | 96.9 | 100 | 77.0-125 | | | 3.32 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.5 | 24.9 | 93.8 | 99.4 | 74.0-126 | | | 5.75 | 20 |
| 1,3-Dichloropropane | 25.0 | 25.5 | 25.7 | 102 | 103 | 80.0-120 | | | 0.762 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 24.6 | 25.3 | 98.5 | 101 | 80.0-123 | | | 2.58 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 24.8 | 24.8 | 99.3 | 99.2 | 78.0-124 | | | 0.158 | 20 |
| 2,2-Dichloropropane | 25.0 | 21.8 | 23.2 | 87.2 | 92.6 | 58.0-130 | | | 6.03 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390066-1 03/03/19 22:48 • (LCSD) R3390066-2 03/03/19 23:08

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Dicyclopentadiene | 25.0 | 25.6 | 26.3 | 102 | 105 | 74.0-126 | | | 2.49 | 20 |
| Di-isopropyl ether | 25.0 | 24.2 | 24.0 | 96.9 | 96.0 | 58.0-138 | | | 0.906 | 20 |
| Ethylbenzene | 25.0 | 23.6 | 24.1 | 94.2 | 96.2 | 79.0-123 | | | 2.09 | 20 |
| 4-Ethyltoluene | 25.0 | 26.9 | 27.2 | 108 | 109 | 74.0-127 | | | 1.18 | 20 |
| Hexachloro-1,3-butadiene | 25.0 | 22.4 | 23.6 | 89.8 | 94.5 | 54.0-138 | | | 5.11 | 20 |
| n-Hexane | 25.0 | 20.6 | 20.3 | 82.2 | 81.2 | 57.0-133 | | | 1.27 | 20 |
| Isopropylbenzene | 25.0 | 24.9 | 25.6 | 99.7 | 102 | 76.0-127 | | | 2.61 | 20 |
| p-Isopropyltoluene | 25.0 | 24.9 | 25.8 | 99.8 | 103 | 76.0-125 | | | 3.20 | 20 |
| 2-Butanone (MEK) | 125 | 129 | 128 | 103 | 102 | 44.0-160 | | | 0.926 | 20 |
| Methyl Cyclohexane | 25.0 | 19.8 | 21.4 | 79.3 | 85.8 | 68.0-126 | | | 7.87 | 20 |
| Methylene Chloride | 25.0 | 21.7 | 22.3 | 86.8 | 89.0 | 67.0-120 | | | 2.50 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 130 | 127 | 104 | 101 | 68.0-142 | | | 2.34 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.7 | 23.5 | 99.0 | 93.9 | 68.0-125 | | | 5.29 | 20 |
| Naphthalene | 25.0 | 23.7 | 23.9 | 94.6 | 95.7 | 54.0-135 | | | 1.16 | 20 |
| Propene | 25.0 | 3.09 | 3.52 | 12.4 | 14.1 | 10.0-160 | | | 12.8 | 20 |
| n-Propylbenzene | 25.0 | 25.9 | 26.2 | 104 | 105 | 77.0-124 | | | 1.12 | 20 |
| Styrene | 25.0 | 26.1 | 26.5 | 104 | 106 | 73.0-130 | | | 1.60 | 20 |
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.1 | 25.2 | 101 | 101 | 75.0-125 | | | 0.137 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 26.6 | 26.2 | 106 | 105 | 65.0-130 | | | 1.66 | 20 |
| Tetrachloroethene | 25.0 | 24.6 | 24.8 | 98.6 | 99.2 | 72.0-132 | | | 0.623 | 20 |
| Toluene | 25.0 | 22.4 | 22.7 | 89.8 | 90.8 | 79.0-120 | | | 1.11 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 25.0 | 22.6 | 24.1 | 90.5 | 96.2 | 69.0-132 | | | 6.19 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 23.1 | 23.6 | 92.2 | 94.3 | 50.0-138 | | | 2.23 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 23.1 | 24.1 | 92.5 | 96.3 | 57.0-137 | | | 4.08 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.6 | 24.7 | 94.3 | 98.8 | 73.0-124 | | | 4.66 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 25.5 | 25.6 | 102 | 102 | 80.0-120 | | | 0.467 | 20 |
| Trichloroethene | 25.0 | 24.9 | 25.8 | 99.8 | 103 | 78.0-124 | | | 3.18 | 20 |
| Trichlorofluoromethane | 25.0 | 22.9 | 23.9 | 91.4 | 95.6 | 59.0-147 | | | 4.43 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 28.5 | 27.7 | 114 | 111 | 73.0-130 | | | 3.05 | 20 |
| 1,2,3-Trimethylbenzene | 25.0 | 23.8 | 24.3 | 95.4 | 97.3 | 77.0-120 | | | 1.97 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.8 | 26.5 | 103 | 106 | 76.0-121 | | | 2.64 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 27.3 | 27.8 | 109 | 111 | 76.0-122 | | | 2.03 | 20 |
| Vinyl chloride | 25.0 | 22.2 | 23.5 | 88.8 | 94.2 | 67.0-131 | | | 5.88 | 20 |
| Xylenes, Total | 75.0 | 73.3 | 74.5 | 97.7 | 99.3 | 79.0-123 | | | 1.62 | 20 |
| *(S) Toluene-d8* | | | | *102* | *99.4* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *106* | *105* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *98.4* | *96.7* | *70.0-130* | | | | |

## Method Blank (MB)

(MB) R3388733-3 03/04/19 10:29

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Acetone | U | | 10.0 | 50.0 |
| Acrolein | U | | 8.87 | 50.0 |
| Acrylonitrile | U | | 1.87 | 10.0 |
| Benzene | U | | 0.331 | 1.00 |
| Bromobenzene | U | | 0.352 | 1.00 |
| Bromodichloromethane | U | | 0.380 | 1.00 |
| Bromoform | U | | 0.469 | 1.00 |
| Bromomethane | U | | 0.866 | 5.00 |
| 1,3-Butadiene | U | | 0.330 | 2.00 |
| n-Butylbenzene | U | | 0.361 | 1.00 |
| sec-Butylbenzene | U | | 0.365 | 1.00 |
| tert-Butylbenzene | U | | 0.399 | 1.00 |
| Carbon disulfide | U | | 0.275 | 1.00 |
| Carbon tetrachloride | U | | 0.379 | 1.00 |
| Chlorobenzene | U | | 0.348 | 1.00 |
| Chlorodibromomethane | U | | 0.327 | 1.00 |
| Chloroethane | U | | 0.453 | 5.00 |
| Chloroform | U | | 0.324 | 5.00 |
| Chloromethane | U | | 0.276 | 2.50 |
| Cyclohexane | U | | 0.390 | 1.00 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 |
| 1,2-Dibromoethane | U | | 0.381 | 1.00 |
| Dibromomethane | U | | 0.346 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.274 | 1.00 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 |

## Method Blank (MB)

(MB) R3388733-3 03/04/19 10:29

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dicyclopentadiene | U | | 0.219 | 1.00 |
| Di-isopropyl ether | U | | 0.320 | 1.00 |
| Ethylbenzene | U | | 0.384 | 1.00 |
| 4-Ethyltoluene | U | | 0.172 | 1.00 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 |
| n-Hexane | U | | 0.736 | 10.0 |
| Isopropylbenzene | U | | 0.326 | 1.00 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 |
| 2-Butanone (MEK) | U | | 3.93 | 10.0 |
| Methyl Cyclohexane | U | | 0.380 | 1.00 |
| Methylene Chloride | U | | 1.00 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 |
| Naphthalene | U | | 1.00 | 5.00 |
| Propene | U | | 0.975 | 2.50 |
| n-Propylbenzene | U | | 0.349 | 1.00 |
| Styrene | U | | 0.307 | 1.00 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 |
| Tetrachloroethene | U | | 0.372 | 1.00 |
| Toluene | U | | 0.412 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 |
| Trichloroethene | U | | 0.398 | 1.00 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 |
| 1,2,3-Trichloropropane | U | | 0.807 | 2.50 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 |
| Vinyl chloride | U | | 0.259 | 1.00 |
| Xylenes, Total | U | | 1.06 | 3.00 |
| *(S) Toluene-d8* | *104* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *102* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *99.2* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3388733-1 03/04/19 09:28 • (LCSD) R3388733-2 03/04/19 09:48

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 125 | 173 | 115 | 138 | 91.8 | 19.0-160 | | R7 | 40.3 | 27 |
| Acrolein | 125 | 110 | 71.9 | 88.2 | 57.5 | 10.0-160 | | R7 | 42.1 | 26 |
| Acrylonitrile | 125 | 144 | 125 | 116 | 100 | 55.0-149 | | | 14.2 | 20 |
| Benzene | 25.0 | 22.1 | 21.9 | 88.5 | 87.5 | 70.0-123 | | | 1.17 | 20 |
| Bromobenzene | 25.0 | 23.7 | 25.7 | 94.8 | 103 | 73.0-121 | | | 8.02 | 20 |
| Bromodichloromethane | 25.0 | 24.3 | 24.0 | 97.3 | 95.8 | 75.0-120 | | | 1.48 | 20 |
| Bromoform | 25.0 | 26.4 | 26.4 | 106 | 106 | 68.0-132 | | | 0.0711 | 20 |
| Bromomethane | 25.0 | 20.6 | 20.2 | 82.6 | 80.6 | 10.0-160 | | | 2.41 | 25 |
| 1,3-Butadiene | 25.0 | 12.9 | 13.0 | 51.7 | 52.0 | 45.0-147 | | | 0.547 | 20 |
| n-Butylbenzene | 25.0 | 22.1 | 23.2 | 88.4 | 92.6 | 73.0-125 | | | 4.67 | 20 |
| sec-Butylbenzene | 25.0 | 24.3 | 26.3 | 97.1 | 105 | 75.0-125 | | | 8.08 | 20 |
| tert-Butylbenzene | 25.0 | 25.4 | 27.3 | 102 | 109 | 76.0-124 | | | 7.30 | 20 |
| Carbon disulfide | 25.0 | 19.0 | 18.9 | 76.1 | 75.5 | 61.0-128 | | | 0.889 | 20 |
| Carbon tetrachloride | 25.0 | 24.0 | 24.1 | 95.9 | 96.4 | 68.0-126 | | | 0.570 | 20 |
| Chlorobenzene | 25.0 | 22.8 | 23.3 | 91.3 | 93.1 | 80.0-121 | | | 1.94 | 20 |
| Chlorodibromomethane | 25.0 | 25.1 | 25.6 | 100 | 102 | 77.0-125 | | | 1.91 | 20 |
| Chloroethane | 25.0 | 22.7 | 22.1 | 90.7 | 88.4 | 47.0-150 | | | 2.64 | 20 |
| Chloroform | 25.0 | 23.2 | 22.7 | 93.0 | 90.8 | 73.0-120 | | | 2.42 | 20 |
| Chloromethane | 25.0 | 23.2 | 23.1 | 92.9 | 92.3 | 41.0-142 | | | 0.619 | 20 |
| Cyclohexane | 25.0 | 21.8 | 21.9 | 87.3 | 87.7 | 71.0-124 | | | 0.531 | 20 |
| 2-Chlorotoluene | 25.0 | 24.9 | 26.8 | 99.7 | 107 | 76.0-123 | | | 7.10 | 20 |
| 4-Chlorotoluene | 25.0 | 25.9 | 28.0 | 103 | 112 | 75.0-122 | | | 7.94 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.0 | 23.1 | 96.1 | 92.6 | 58.0-134 | | | 3.75 | 20 |
| 1,2-Dibromoethane | 25.0 | 25.0 | 25.3 | 100 | 101 | 80.0-122 | | | 0.945 | 20 |
| Dibromomethane | 25.0 | 25.0 | 24.1 | 99.9 | 96.5 | 80.0-120 | | | 3.46 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 21.0 | 22.3 | 83.9 | 89.2 | 79.0-121 | | | 6.13 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 21.8 | 23.5 | 87.1 | 94.1 | 79.0-120 | | | 7.69 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 21.1 | 22.6 | 84.4 | 90.2 | 79.0-120 | | | 6.71 | 20 |
| Dichlorodifluoromethane | 25.0 | 22.1 | 23.2 | 88.4 | 92.7 | 51.0-149 | | | 4.80 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.2 | 22.5 | 92.9 | 90.1 | 70.0-126 | | | 3.00 | 20 |
| 1,2-Dichloroethane | 25.0 | 23.1 | 22.4 | 92.4 | 89.6 | 70.0-128 | | | 3.06 | 20 |
| 1,1-Dichloroethene | 25.0 | 21.0 | 20.8 | 84.2 | 83.4 | 71.0-124 | | | 0.960 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 23.7 | 23.0 | 95.0 | 92.1 | 73.0-120 | | | 3.03 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 22.4 | 22.1 | 89.6 | 88.4 | 73.0-120 | | | 1.35 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.2 | 24.2 | 96.8 | 96.6 | 77.0-125 | | | 0.207 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.6 | 23.3 | 94.4 | 93.3 | 74.0-126 | | | 1.22 | 20 |
| 1,3-Dichloropropane | 25.0 | 24.9 | 25.1 | 99.6 | 100 | 80.0-120 | | | 0.868 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 25.0 | 25.1 | 99.8 | 100 | 80.0-123 | | | 0.649 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 24.5 | 25.2 | 98.1 | 101 | 78.0-124 | | | 2.58 | 20 |
| 2,2-Dichloropropane | 25.0 | 24.4 | 25.0 | 97.7 | 100 | 58.0-130 | | | 2.39 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3388733-1 03/04/19 09:28 • (LCSD) R3388733-2 03/04/19 09:48

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Dicyclopentadiene | 25.0 | 23.9 | 25.7 | 95.8 | 103 | 74.0-126 | | | 6.90 | 20 |
| Di-isopropyl ether | 25.0 | 24.2 | 23.9 | 96.9 | 95.7 | 58.0-138 | | | 1.24 | 20 |
| Ethylbenzene | 25.0 | 22.7 | 23.2 | 90.9 | 92.6 | 79.0-123 | | | 1.87 | 20 |
| 4-Ethyltoluene | 25.0 | 25.2 | 27.4 | 101 | 109 | 74.0-127 | | | 8.38 | 20 |
| Hexachloro-1,3-butadiene | 25.0 | 21.0 | 22.3 | 84.1 | 89.1 | 54.0-138 | | | 5.76 | 20 |
| n-Hexane | 25.0 | 22.2 | 21.2 | 88.8 | 84.9 | 57.0-133 | | | 4.47 | 20 |
| Isopropylbenzene | 25.0 | 24.5 | 25.0 | 98.1 | 99.8 | 76.0-127 | | | 1.76 | 20 |
| p-Isopropyltoluene | 25.0 | 23.7 | 25.4 | 95.0 | 101 | 76.0-125 | | | 6.64 | 20 |
| 2-Butanone (MEK) | 125 | 144 | 125 | 115 | 100 | 44.0-160 | | | 13.9 | 20 |
| Methyl Cyclohexane | 25.0 | 20.3 | 20.1 | 81.1 | 80.4 | 68.0-126 | | | 0.896 | 20 |
| Methylene Chloride | 25.0 | 22.2 | 21.5 | 88.6 | 86.1 | 67.0-120 | | | 2.93 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 132 | 126 | 106 | 101 | 68.0-142 | | | 4.51 | 20 |
| Methyl tert-butyl ether | 25.0 | 25.0 | 24.7 | 100 | 99.0 | 68.0-125 | | | 1.12 | 20 |
| Naphthalene | 25.0 | 22.9 | 23.4 | 91.6 | 93.6 | 54.0-135 | | | 2.26 | 20 |
| Propene | 25.0 | 2.85 | 2.89 | 11.4 | 11.6 | 10.0-160 | | | 1.36 | 20 |
| n-Propylbenzene | 25.0 | 24.2 | 26.3 | 96.9 | 105 | 77.0-124 | | | 8.07 | 20 |
| Styrene | 25.0 | 25.2 | 25.6 | 101 | 102 | 73.0-130 | | | 1.46 | 20 |
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.3 | 25.1 | 101 | 100 | 75.0-125 | | | 0.846 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 27.7 | 28.8 | 111 | 115 | 65.0-130 | | | 3.83 | 20 |
| Tetrachloroethene | 25.0 | 23.3 | 24.3 | 93.0 | 97.2 | 72.0-132 | | | 4.43 | 20 |
| Toluene | 25.0 | 21.6 | 22.0 | 86.5 | 88.0 | 79.0-120 | | | 1.76 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 25.0 | 22.3 | 22.6 | 89.0 | 90.3 | 69.0-132 | | | 1.37 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 21.6 | 22.6 | 86.3 | 90.3 | 50.0-138 | | | 4.62 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 22.4 | 23.4 | 89.8 | 93.4 | 57.0-137 | | | 4.03 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.6 | 23.2 | 94.4 | 92.7 | 73.0-124 | | | 1.74 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 24.8 | 24.8 | 99.0 | 99.4 | 80.0-120 | | | 0.338 | 20 |
| Trichloroethene | 25.0 | 22.9 | 22.9 | 91.6 | 91.4 | 78.0-124 | | | 0.155 | 20 |
| Trichlorofluoromethane | 25.0 | 22.7 | 22.8 | 90.9 | 91.1 | 59.0-147 | | | 0.239 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 26.7 | 28.1 | 107 | 113 | 73.0-130 | | | 5.27 | 20 |
| 1,2,3-Trimethylbenzene | 25.0 | 22.7 | 23.9 | 91.0 | 95.6 | 77.0-120 | | | 5.01 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 24.4 | 26.3 | 97.4 | 105 | 76.0-121 | | | 7.83 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.9 | 27.9 | 103 | 112 | 76.0-122 | | | 7.71 | 20 |
| Vinyl chloride | 25.0 | 22.1 | 22.2 | 88.3 | 88.7 | 67.0-131 | | | 0.440 | 20 |
| Xylenes, Total | 75.0 | 71.9 | 72.3 | 95.9 | 96.4 | 79.0-123 | | | 0.555 | 20 |
| *(S) Toluene-d8* | | | | *101* | *100* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *106* | *104* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *102* | *104* | *70.0-130* | | | | |

## Method Blank (MB)

(MB) R3390228-3 03/09/19 09:42

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Trichloroethene | U | | 0.398 | 1.00 |
| *(S) Toluene-d8* | *103* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *104* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *103* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390228-1 03/09/19 08:41 • (LCSD) R3390228-2 03/09/19 09:01

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene | 25.0 | 25.5 | 26.3 | 102 | 105 | 78.0-124 | | | 3.15 | 20 |
| *(S) Toluene-d8* | | | | *101* | *101* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *103* | *104* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *97.7* | *99.1* | *70.0-130* | | | | |

## Instrument: VOCMS35 • File ID: 0303_28

03/03/19 22:28

| Sample ID | File ID | 8260-FLUOROBENZENE Response | 8260-CHLOROBENZENE-D5 Response | 8260-1,4-DICHLOROBENZENE-D4 Response |
|---|---|---|---|---|
| Standard | 0303_28 | 66975 | 66975 | 91231 |
| Upper Limit | | 133950 | 133950 | 182462 |
| Lower Limit | | 33488 | 33488 | 45616 |
| LCS R3390066-1 WG1244697 1x | 0303_29 | 68440 | 68440 | 91295 |
| LCSD R3390066-2 WG1244697 1x | 0303_30 | 70607 | 70607 | 94984 |
| BLANK R3390066-3 WG1244697 1x | 0303_33 | 62690 | 62690 | 81896 |
| L1075087-07 WG1244697 1x | 0303_34 | 62078 | 62078 | 82242 |
| L1075087-02 WG1244697 1x | 0303_41 | 60808 | 60808 | 81059 |
| L1075087-03 WG1244697 1x | 0303_42 | 60525 | 60525 | 78999 |
| L1075087-04 WG1244697 1x | 0303_43 | 60844 | 60844 | 81423 |
| L1075087-05 WG1244697 1x | 0303_44 | 61092 | 61092 | 81304 |
| L1075087-06 WG1244697 1x | 0303_45 | 61412 | 61412 | 81138 |

## Instrument: VOCMS35 • File ID: 0304_02

03/04/19 09:28

| Sample ID | File ID | 8260-FLUOROBENZENE Response | 8260-CHLOROBENZENE-D5 Response | 8260-1,4-DICHLOROBENZENE-D4 Response |
|---|---|---|---|---|
| Standard | 0304_02 | 68991 | 68991 | 96633 |
| Upper Limit | | 137982 | 137982 | 193266 |
| Lower Limit | | 34496 | 34496 | 48317 |
| LCS R3388733-1 WG1244881 1x | 0304_02LCS | 68991 | 68991 | 96633 |
| LCSD R3388733-2 WG1244881 1x | 0304_03 | 70399 | 70399 | 91643 |
| BLANK R3388733-3 WG1244881 1x | 0304_05 | 62217 | 62217 | 81674 |
| L1075087-01 WG1244881 1x | 0304_11 | 60258 | 60258 | 78093 |

## Instrument: VOCMS35 • File ID: 0309_02

03/09/19 08:41

| Sample ID | File ID | 8260-FLUOROBENZENE Response | 8260-CHLOROBENZENE-D5 Response | 8260-1,4-DICHLOROBENZENE-D4 Response |
|---|---|---|---|---|
| Standard | 0309_02 | 66481 | 66481 | 86047 |
| Upper Limit | | 132962 | 132962 | 172094 |
| Lower Limit | | 33241 | 33241 | 43024 |

# INTERNAL STANDARD SUMMARY





## Instrument: VOCMS35 • File ID: 0309_02

03/09/19 08:41

| Sample ID | File ID | 8260-FLUOROBENZENE | 8260-CHLOROBENZENE-D5 | 8260-1,4-DICHLOROBENZENE-D4 |
|---|---|---|---|---|
| | | Response | Response | Response |
| LCS R3390228-1 WG1247471 1x | 0309_02LCSC | 66481 | 66481 | 86047 |
| LCSD R3390228-2 WG1247471 1x | 0309_03C | 66829 | 66829 | 85736 |
| BLANK R3390228-3 WG1247471 1x | 0309_05C | 65633 | 65633 | 85171 |
| L1075087-05 WG1247471 1x | 0309_08 | 62941 | 62941 | 83079 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|
| R7 | LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria. |

# ACCREDITATIONS & LOCATIONS



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

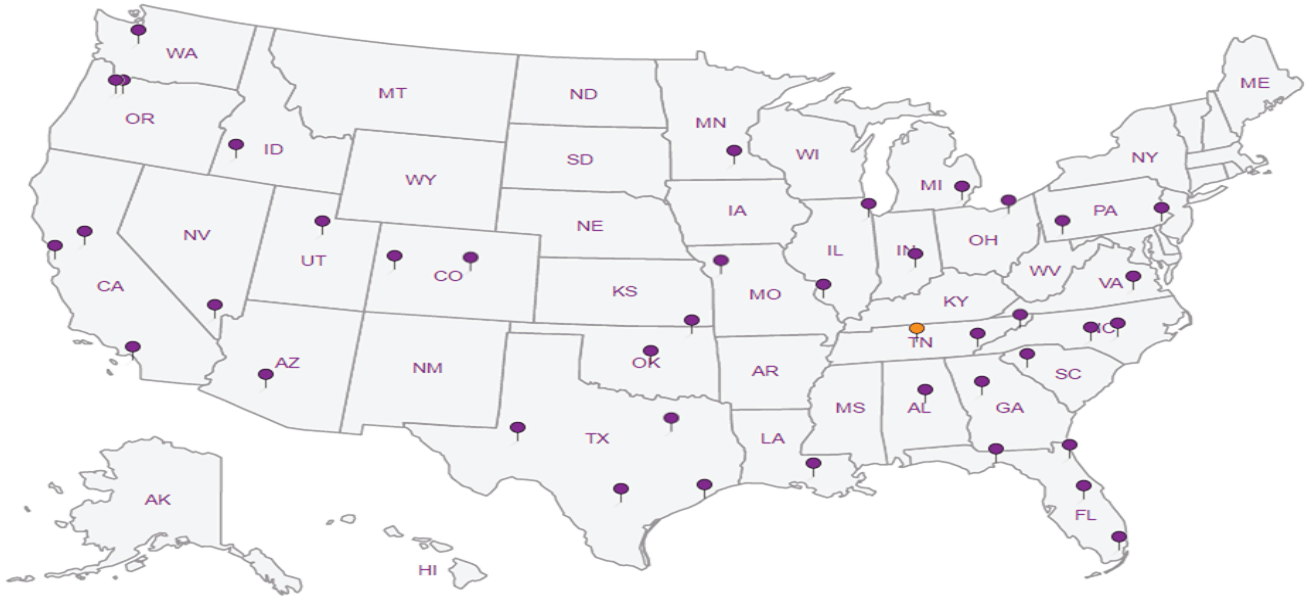
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Pace Analytical®

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**ALL SHADED AREAS are for LAB USE ONLY**

| | |
|---|---|
| Company: Wood E&IS | Billing Information: Wood E&IS- Attn: Samantha Sargent |
| Address: 4600 E Washington St Suite 600 Phoenix, AZ 85034 | |
| Report To: samantha.sargent@woodplc.com | Email To: samantha.sargent@woodplc.com |
| Copy To: emily.lodolce@woodplc.com | Site Collection Info/Address: Cave Creek Landfill |
| Customer Project Name/Number: Cave Creek Landfill 1420192004.****.021 | State: AZ County/City: /Phoenix Time Zone Collected: [ ] PT [✓] MT [ ] CT [ ] ET |
| Phone: 602-733-6000 Email: samantha.sargent@woodplc.com | Site/Facility ID #: Compliance Monitoring? [ ] Yes [✓] No |
| Collected By (print): Jasmine Ramirez | Purchase Order #: Quote #: DW PWS ID #: DW Location Code: |
| Collected By (signature): | Turnaround Date Required: SSD TAT Immediately Packed on Ice: [✓] Yes [ ] No |
| Sample Disposal: [✓] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold: ____ | Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) Field Filtered (if applicable): [ ] Yes [✓] No Analysis: ____ |

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3 | 1 | U | U | U | U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Lab Project Manager:

| Customer Sample ID | Matrix * | Comp / Grab | Collected (or Composite Start) Date | Collected (or Composite Start) Time | Composite End Date | Composite End Time | Res Cl | # of Ctns | 8260B VOCs | 6020 Metals (See List) | 300.0 General Chemistry (See List) | 300.0 Nitrate/Nitrite | SM2320B Alkalinity | SM2450C (TDS), SM210 B (Specific Conductivity), SM4500 (pH) | | | | | | Lab Sample # / Comments: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EW01-713-022719 | W | Grab | 2/27/19 | 0830 | | | | 2 | X | | | | | | | | | | | L1075687 -01 |
| DUP02-030119 | W | Grab | 3/1/19 | 1415 | | | | 2 | X | | | | | | | | | | | -02 |
| DUP03-022819 | W | Grab | 2/28/19 | 1500 | | | | 2 | X | | | | | | | | | | | -03 |
| DUP04-030119 | W | Grab | 3/1/19 | 1130 | | | | 2 | X | | | | | | | | | | | -04 |
| TSSV07-743-030119 | W | Grab | 3/1/19 | 1340 | | | | 2 | X | | | | | | | | | | | -05 |
| PDB BLANK-022719 | W | Grab | 2/27/19 | 1315 | | | | 2 | X | | | | | | | | | | | -06 |
| TRIP BLANK-022719 | W | Grab | 2/27/19 | 1315 | | | | 2 | X | | | | | | | | | | | -07 |

Lab Profile/Line:

Lab Sample Receipt Checklist:

| | | | |
|---|---|---|---|
| Custody Seals Present/Intact | Y | N | NA |
| Custody Signatures Present | Y | N | NA |
| Collector Signature Present | Y | N | NA |
| Bottles Intact | Y | N | NA |
| Correct Bottles | Y | N | NA |
| Sufficient Volume | Y | N | NA |
| Samples Received on Ice | Y | N | NA |
| VOA - Headspace Acceptable | Y | N | NA |
| USDA Regulated Soils | Y | N | NA |
| Samples in Holding Time | Y | N | NA |
| Residual Chlorine Present | Y | N | NA |
| Cl Strips: ____ | | | |
| Sample pH Acceptable | Y | N | NA |
| pH Strips: ____ | | | |
| Sulfide Present | Y | N | NA |
| Lead Acetate Strips: ____ | | | |

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: AM RS
Cooler 1 Temp Upon Receipt: 1.0 oC
Cooler 1 Therm Corr. Factor: -.2 oC
Cooler 1 Corrected Temp: 0.8 oC
Comments:

RAD SCREEN: <0.5 mR/hr

| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
|---|---|---|---|
| Wood | 3-1-19/1512 | Emily Vaz | |
| Emily Vaz | 3/1/19 1800 | SWA | |
| | | | 3/2/19 8:00 |

D130

Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES NO

Page: 2 of: 2

Total 3 [illegible] containers received

# ANALYTICAL REPORT

March 11, 2019

## Wood E&I Solutions Inc. - Phoenix, AZ

| | |
|---|---|
| Sample Delivery Group: | L1075088 |
| Samples Received: | 03/02/2019 |
| Project Number: | 1420192004.****.021 |
| Description: | Cave Creek Landfill |
| Report To: | Samantha Sargent<br>4600 East Washington Street, Ste 600<br>Phoenix, AZ 85034 |

Entire Report Reviewed By:

**[Preliminary Report]**

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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## MW02-714-022719 L1075088-01 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/27/19 09:35 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1244830 | 1 | 03/06/19 12:42 | 03/06/19 14:37 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/06/19 20:10 | 03/06/19 20:10 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 17:40 | 03/06/19 17:40 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1244755 | 1 | 03/04/19 17:00 | 03/04/19 17:00 | JZW | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245154 | 1 | 03/05/19 22:00 | 03/05/19 22:00 | ST | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 22:40 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:03 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 04:30 | 03/04/19 04:30 | JCP | Mt. Juliet, TN |

## MW04-708-022719 L1075088-02 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/27/19 13:00 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1244831 | 1 | 03/06/19 14:40 | 03/06/19 15:22 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/06/19 20:17 | 03/06/19 20:17 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 17:42 | 03/06/19 17:42 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1244755 | 1 | 03/04/19 17:00 | 03/04/19 17:00 | JZW | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 04:06 | 03/07/19 04:06 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 22:42 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:06 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 04:51 | 03/04/19 04:51 | JCP | Mt. Juliet, TN |

## DUP01-022719 L1075088-03 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/27/19 11:30 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1244831 | 1 | 03/06/19 14:40 | 03/06/19 15:22 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/06/19 20:24 | 03/06/19 20:24 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 17:43 | 03/06/19 17:43 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1244755 | 1 | 03/04/19 17:00 | 03/04/19 17:00 | JZW | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 04:21 | 03/07/19 04:21 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 22:50 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:09 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 05:11 | 03/04/19 05:11 | JCP | Mt. Juliet, TN |

## MW05-704-022719 L1075088-04 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/27/19 10:40 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1244831 | 1 | 03/06/19 14:40 | 03/06/19 15:22 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/06/19 20:31 | 03/06/19 20:31 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 17:46 | 03/06/19 17:46 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1244755 | 1 | 03/04/19 17:00 | 03/04/19 17:00 | JZW | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 05:23 | 03/07/19 05:23 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 22:53 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:17 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 05:31 | 03/04/19 05:31 | JCP | Mt. Juliet, TN |

## MW06-720-022819 L1075088-05 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/28/19 12:30 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1245407 | 1 | 03/07/19 00:10 | 03/07/19 01:01 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/06/19 20:38 | 03/06/19 20:38 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 17:49 | 03/06/19 17:49 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1244755 | 1 | 03/04/19 17:00 | 03/04/19 17:00 | JZW | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 05:38 | 03/07/19 05:38 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 22:55 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:19 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 05:51 | 03/04/19 05:51 | JCP | Mt. Juliet, TN |

## MW07-718-022819 L1075088-06 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/28/19 10:40 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1245408 | 1 | 03/07/19 17:14 | 03/07/19 18:16 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/06/19 20:47 | 03/06/19 20:47 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 17:57 | 03/06/19 17:57 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1245130 | 1 | 03/05/19 11:55 | 03/05/19 11:55 | TH | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 05:53 | 03/07/19 05:53 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 22:58 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:22 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 06:11 | 03/04/19 06:11 | JCP | Mt. Juliet, TN |

## MW08-742-022719 L1075088-07 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/27/19 11:30 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1244831 | 1 | 03/06/19 14:40 | 03/06/19 15:22 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/07/19 12:45 | 03/07/19 12:45 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 17:58 | 03/06/19 17:58 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1245130 | 1 | 03/05/19 11:55 | 03/05/19 11:55 | TH | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 06:40 | 03/07/19 06:40 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 23:01 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:25 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 06:32 | 03/04/19 06:32 | JCP | Mt. Juliet, TN |

## PW-734-022819 L1075088-08 GW

Collected by: Jasmine Ramirez | Collected date/time: 02/28/19 08:45 | Received date/time: 03/02/19 08:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1245408 | 1 | 03/07/19 17:14 | 03/07/19 18:16 | MMF | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1245376 | 1 | 03/07/19 12:53 | 03/07/19 12:53 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246146 | 1 | 03/06/19 18:00 | 03/06/19 18:00 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9040C | WG1245130 | 1 | 03/05/19 11:55 | 03/05/19 11:55 | TH | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1244566 | 1 | 03/04/19 01:33 | 03/04/19 01:33 | TCC | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 06:55 | 03/07/19 06:55 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1244553 | 1 | 03/05/19 14:44 | 03/06/19 23:03 | CCE | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1246964 | 1 | 03/08/19 14:17 | 03/09/19 09:28 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1244697 | 1 | 03/04/19 06:52 | 03/04/19 06:52 | JCP | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

**[Preliminary Report]**

Daphne Richards
Project Manager

## Sample Handling and Receiving

**The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.**

| Lab Sample ID | Project Sample ID | Method |
|---|---|---|
| L1075088-01 | MW02-714-022719 | 9040C |
| L1075088-02 | MW04-708-022719 | 9040C |
| L1075088-03 | DUP01-022719 | 9040C |
| L1075088-04 | MW05-704-022719 | 9040C |
| L1075088-05 | MW06-720-022819 | 9040C |
| L1075088-06 | MW07-718-022819 | 9040C |
| L1075088-07 | MW08-742-022719 | 9040C |
| L1075088-08 | PW-734-022819 | 9040C |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 398000 | | 10000 | 1 | 03/06/2019 14:37 | WG1244830 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 380000 | | 20000 | 1 | 03/06/2019 20:10 | WG1245376 |

Sample Narrative:

L1075088-01 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/06/2019 17:40 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 7.54 | | 1 | 03/04/2019 17:00 | WG1244755 |

Sample Narrative:

L1075088-01 WG1244755: 7.54 at 15.2C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 650 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 18200 | | 1000 | 1 | 03/05/2019 22:00 | WG1245154 |
| Fluoride | 164 | | 100 | 1 | 03/05/2019 22:00 | WG1245154 |
| Sulfate | ND | | 5000 | 1 | 03/05/2019 22:00 | WG1245154 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Arsenic | 10.9 | | 10.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Barium | 41.4 | | 5.00 | 1 | 03/06/2019 22:40 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 22:40 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 22:40 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Copper | ND | | 10.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Lead | ND | | 5.00 | 1 | 03/06/2019 22:40 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:03 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 22:40 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Vanadium | ND | | 20.0 | 1 | 03/06/2019 22:40 | WG1244553 |
| Zinc | 201 | | 50.0 | 1 | 03/06/2019 22:40 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 04:30 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 04:30 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 04:30 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 04:30 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1-Dichloroethane | 3.14 | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1-Dichloroethene | 2.64 | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| cis-1,2-Dichloroethene | 3.63 | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 04:30 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 04:30 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 04:30 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 04:30 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Tetrachloroethene | 4.63 | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Trichloroethene | 92.5 | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 04:30 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 04:30* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *103* | | *77.0-126* | | *03/04/2019 04:30* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/04/2019 04:30* | WG1244697 |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 310000 | | 10000 | 1 | 03/06/2019 15:22 | WG1244831 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 223000 | | 20000 | 1 | 03/06/2019 20:17 | WG1245376 |

Sample Narrative:

L1075088-02 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/06/2019 17:42 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 7.48 | | 1 | 03/04/2019 17:00 | WG1244755 |

Sample Narrative:

L1075088-02 WG1244755: 7.48 at 15.9C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 445 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 22800 | | 1000 | 1 | 03/07/2019 04:06 | WG1245704 |
| Fluoride | 303 | | 100 | 1 | 03/07/2019 04:06 | WG1245704 |
| Sulfate | 6880 | | 5000 | 1 | 03/07/2019 04:06 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Arsenic | ND | | 10.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Barium | 17.6 | | 5.00 | 1 | 03/06/2019 22:42 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 22:42 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 22:42 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Copper | ND | | 10.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Lead | 6.29 | | 5.00 | 1 | 03/06/2019 22:42 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:06 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 22:42 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Vanadium | 28.6 | B1 | 20.0 | 1 | 03/06/2019 22:42 | WG1244553 |
| Zinc | 68.6 | | 50.0 | 1 | 03/06/2019 22:42 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 04:51 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 04:51 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 04:51 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 04:51 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 04:51 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 04:51 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 04:51 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 04:51 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Trichloroethene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 04:51 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 04:51* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 04:51* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/04/2019 04:51* | WG1244697 |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 150000 | | 10000 | 1 | 03/06/2019 15:22 | WG1244831 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 120000 | | 20000 | 1 | 03/06/2019 20:24 | WG1245376 |

Sample Narrative:

L1075088-03 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/06/2019 17:43 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 8.92 | | 1 | 03/04/2019 17:00 | WG1244755 |

Sample Narrative:

L1075088-03 WG1244755: 8.92 at 16.3C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 265 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 20000 | | 1000 | 1 | 03/07/2019 04:21 | WG1245704 |
| Fluoride | 388 | | 100 | 1 | 03/07/2019 04:21 | WG1245704 |
| Sulfate | ND | | 5000 | 1 | 03/07/2019 04:21 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Arsenic | ND | | 10.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Barium | 16.3 | | 5.00 | 1 | 03/06/2019 22:50 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 22:50 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 22:50 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Copper | ND | | 10.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Lead | ND | | 5.00 | 1 | 03/06/2019 22:50 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:09 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 22:50 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Vanadium | ND | | 20.0 | 1 | 03/06/2019 22:50 | WG1244553 |
| Zinc | 91.7 | | 50.0 | 1 | 03/06/2019 22:50 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 05:11 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 05:11 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 05:11 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 05:11 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1-Dichloroethene | 4.65 | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 05:11 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 05:11 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 05:11 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 05:11 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Tetrachloroethene | 1.52 | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Trichloroethene | 75.8 | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 05:11 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 05:11* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *101* | | *77.0-126* | | *03/04/2019 05:11* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *98.0* | | *70.0-130* | | *03/04/2019 05:11* | WG1244697 |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 292000 | | 10000 | 1 | 03/06/2019 15:22 | WG1244831 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 220000 | | 20000 | 1 | 03/06/2019 20:31 | WG1245376 |

Sample Narrative:

L1075088-04 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/06/2019 17:46 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 7.79 | | 1 | 03/04/2019 17:00 | WG1244755 |

Sample Narrative:

L1075088-04 WG1244755: 7.79 at 15.2C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 425 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 20300 | | 1000 | 1 | 03/07/2019 05:23 | WG1245704 |
| Fluoride | 634 | | 100 | 1 | 03/07/2019 05:23 | WG1245704 |
| Sulfate | 8280 | | 5000 | 1 | 03/07/2019 05:23 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Arsenic | ND | | 10.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Barium | 20.7 | | 5.00 | 1 | 03/06/2019 22:53 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 22:53 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 22:53 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Copper | ND | | 10.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Lead | ND | | 5.00 | 1 | 03/06/2019 22:53 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:17 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 22:53 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Vanadium | ND | | 20.0 | 1 | 03/06/2019 22:53 | WG1244553 |
| Zinc | 172 | | 50.0 | 1 | 03/06/2019 22:53 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 05:31 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 05:31 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 05:31 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 05:31 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 05:31 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 05:31 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 05:31 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 05:31 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Trichloroethene | 42.9 | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 05:31 | WG1244697 |
| *(S) Toluene-d8* | *105* | | *80.0-120* | | *03/04/2019 05:31* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 05:31* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *100* | | *70.0-130* | | *03/04/2019 05:31* | WG1244697 |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 293000 | | 10000 | 1 | 03/07/2019 01:01 | WG1245407 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 233000 | | 20000 | 1 | 03/06/2019 20:38 | WG1245376 |

Sample Narrative:

L1075088-05 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/06/2019 17:49 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 9.15 | | 1 | 03/04/2019 17:00 | WG1244755 |

Sample Narrative:

L1075088-05 WG1244755: 9.15 at 15.5C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 443 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 16900 | | 1000 | 1 | 03/07/2019 05:38 | WG1245704 |
| Fluoride | 217 | | 100 | 1 | 03/07/2019 05:38 | WG1245704 |
| Sulfate | 9790 | | 5000 | 1 | 03/07/2019 05:38 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Arsenic | ND | | 10.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Barium | 9.26 | | 5.00 | 1 | 03/06/2019 22:55 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 22:55 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 22:55 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Copper | 26.0 | | 10.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Lead | ND | | 5.00 | 1 | 03/06/2019 22:55 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:19 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 22:55 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Vanadium | ND | | 20.0 | 1 | 03/06/2019 22:55 | WG1244553 |
| Zinc | 2060 | | 50.0 | 1 | 03/06/2019 22:55 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 05:51 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 05:51 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 05:51 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 05:51 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 05:51 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 05:51 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 05:51 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 05:51 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Trichloroethene | 1.27 | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 05:51 | WG1244697 |
| *(S) Toluene-d8* | *102* | | *80.0-120* | | *03/04/2019 05:51* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *103* | | *77.0-126* | | *03/04/2019 05:51* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | *70.0-130* | | *03/04/2019 05:51* | WG1244697 |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 198000 | | 10000 | 1 | 03/07/2019 18:16 | WG1245408 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 168000 | | 20000 | 1 | 03/06/2019 20:47 | WG1245376 |

Sample Narrative:

L1075088-06 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/06/2019 17:57 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 8.28 | | 1 | 03/05/2019 11:55 | WG1245130 |

Sample Narrative:

L1075088-06 WG1245130: 8.28 at 16.3C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 331 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 21500 | | 1000 | 1 | 03/07/2019 05:53 | WG1245704 |
| Fluoride | 296 | | 100 | 1 | 03/07/2019 05:53 | WG1245704 |
| Sulfate | ND | | 5000 | 1 | 03/07/2019 05:53 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Arsenic | 13.0 | | 10.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Barium | 14.0 | | 5.00 | 1 | 03/06/2019 22:58 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 22:58 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 22:58 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Copper | ND | | 10.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Lead | ND | | 5.00 | 1 | 03/06/2019 22:58 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:22 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 22:58 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Vanadium | ND | | 20.0 | 1 | 03/06/2019 22:58 | WG1244553 |
| Zinc | ND | | 50.0 | 1 | 03/06/2019 22:58 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 06:11 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 06:11 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 06:11 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 06:11 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1-Dichloroethene | 1.02 | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 06:11 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 06:11 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 06:11 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 06:11 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Trichloroethene | 29.6 | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 06:11 | WG1244697 |
| *(S) Toluene-d8* | *104* | | *80.0-120* | | *03/04/2019 06:11* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *105* | | *77.0-126* | | *03/04/2019 06:11* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | *70.0-130* | | *03/04/2019 06:11* | WG1244697 |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 148000 | | 10000 | 1 | 03/06/2019 15:22 | WG1244831 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 122000 | | 20000 | 1 | 03/07/2019 12:45 | WG1245376 |

Sample Narrative:

L1075088-07 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/06/2019 17:58 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 8.84 | | 1 | 03/05/2019 11:55 | WG1245130 |

Sample Narrative:

L1075088-07 WG1245130: 8.84 at 11.4C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 262 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 20000 | | 1000 | 1 | 03/07/2019 06:40 | WG1245704 |
| Fluoride | 387 | | 100 | 1 | 03/07/2019 06:40 | WG1245704 |
| Sulfate | ND | | 5000 | 1 | 03/07/2019 06:40 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Arsenic | ND | | 10.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Barium | 16.9 | | 5.00 | 1 | 03/06/2019 23:01 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 23:01 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 23:01 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Copper | ND | | 10.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Lead | ND | | 5.00 | 1 | 03/06/2019 23:01 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:25 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 23:01 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Vanadium | ND | | 20.0 | 1 | 03/06/2019 23:01 | WG1244553 |
| Zinc | 118 | | 50.0 | 1 | 03/06/2019 23:01 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 06:32 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 06:32 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 06:32 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 06:32 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1-Dichloroethene | 4.45 | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 06:32 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 06:32 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 06:32 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 06:32 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Tetrachloroethene | 1.32 | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Trichloroethene | 71.4 | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 06:32 | WG1244697 |
| *(S) Toluene-d8* | *105* | | *80.0-120* | | *03/04/2019 06:32* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/04/2019 06:32* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *100* | | *70.0-130* | | *03/04/2019 06:32* | WG1244697 |

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 327000 | | 10000 | 1 | 03/07/2019 18:16 | WG1245408 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 238000 | | 20000 | 1 | 03/07/2019 12:53 | WG1245376 |

Sample Narrative:

L1075088-08 WG1245376: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | 1280 | | 100 | 1 | 03/06/2019 18:00 | WG1246146 |

## Wet Chemistry by Method 9040C

| Analyte | Result su | Qualifier | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|
| pH | 8.07 | | 1 | 03/05/2019 11:55 | WG1245130 |

Sample Narrative:

L1075088-08 WG1245130: 8.07 at 11.1C

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 475 | | 10.0 | 1 | 03/04/2019 01:33 | WG1244566 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 21200 | | 1000 | 1 | 03/07/2019 06:55 | WG1245704 |
| Fluoride | 329 | | 100 | 1 | 03/07/2019 06:55 | WG1245704 |
| Sulfate | 17600 | | 5000 | 1 | 03/07/2019 06:55 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Arsenic | ND | | 10.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Barium | 6.17 | | 5.00 | 1 | 03/06/2019 23:03 | WG1244553 |
| Beryllium | ND | | 2.00 | 1 | 03/06/2019 23:03 | WG1244553 |
| Cadmium | ND | | 2.00 | 1 | 03/06/2019 23:03 | WG1244553 |
| Chromium | ND | | 10.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Cobalt | ND | | 10.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Copper | ND | | 10.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Lead | ND | | 5.00 | 1 | 03/06/2019 23:03 | WG1244553 |
| Nickel | ND | | 10.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Selenium | ND | | 10.0 | 1 | 03/09/2019 09:28 | WG1246964 |
| Silver | ND | | 5.00 | 1 | 03/06/2019 23:03 | WG1244553 |
| Thallium | ND | | 10.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Vanadium | ND | | 20.0 | 1 | 03/06/2019 23:03 | WG1244553 |
| Zinc | 92.3 | | 50.0 | 1 | 03/06/2019 23:03 | WG1244553 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/04/2019 06:52 | WG1244697 |
| Acrolein | ND | | 50.0 | 1 | 03/04/2019 06:52 | WG1244697 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/04/2019 06:52 | WG1244697 |
| Benzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Bromobenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Bromoform | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Bromomethane | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Chloroethane | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Chloroform | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Chloromethane | ND | | 2.50 | 1 | 03/04/2019 06:52 | WG1244697 |
| Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Dibromomethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| n-Hexane | ND | | 10.0 | 1 | 03/04/2019 06:52 | WG1244697 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/04/2019 06:52 | WG1244697 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/04/2019 06:52 | WG1244697 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Naphthalene | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Propene | ND | | 2.50 | 1 | 03/04/2019 06:52 | WG1244697 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Tetrachloroethene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Toluene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Trichloroethene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/04/2019 06:52 | WG1244697 |
| *(S) Toluene-d8* | *103* | | *80.0-120* | | *03/04/2019 06:52* | WG1244697 |
| *(S) 4-Bromofluorobenzene* | *101* | | *77.0-126* | | *03/04/2019 06:52* | WG1244697 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/04/2019 06:52* | WG1244697 |

## Method Blank (MB)

(MB) R3389679-1 03/06/19 14:37

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dissolved Solids | U | | 2820 | 10000 |

## L1075088-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-01 03/06/19 14:37 • (DUP) R3389679-3 03/06/19 14:37

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Dissolved Solids | 398000 | 397000 | 1 | 0.252 | | 5 |

## Laboratory Control Sample (LCS)

(LCS) R3389679-2 03/06/19 14:37

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Dissolved Solids | 8800000 | 8540000 | 97.0 | 85.0-115 | |

## Method Blank (MB)

(MB) R3389680-1 03/06/19 15:22

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dissolved Solids | U | | 2820 | 10000 |

## L1075088-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-07 03/06/19 15:22 • (DUP) R3389680-3 03/06/19 15:22

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Dissolved Solids | 148000 | 148000 | 1 | 0.000 | | 5 |

## Laboratory Control Sample (LCS)

(LCS) R3389680-2 03/06/19 15:22

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Dissolved Solids | 8800000 | 8690000 | 98.8 | 85.0-115 | |

## Method Blank (MB)

(MB) R3390021-1 03/07/19 01:01

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dissolved Solids | U | | 2820 | 10000 |

## L1075088-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-05 03/07/19 01:01 • (DUP) R3390021-3 03/07/19 01:01

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Dissolved Solids | 293000 | 289000 | 1 | 1.37 | | 5 |

## Laboratory Control Sample (LCS)

(LCS) R3390021-2 03/07/19 01:01

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Dissolved Solids | 8800000 | 8830000 | 100 | 85.0-115 | |

## Method Blank (MB)

(MB) R3390024-1 03/07/19 18:16

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dissolved Solids | U | | 2820 | 10000 |

## L1073205-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1073205-07 03/07/19 18:16 • (DUP) R3390024-3 03/07/19 18:16

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Dissolved Solids | 1230000 | 1110000 | 1 | 10.3 | R8 | 5 |

## Laboratory Control Sample (LCS)

(LCS) R3390024-2 03/07/19 18:16

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Dissolved Solids | 8800000 | 8750000 | 99.4 | 85.0-115 | |

## Method Blank (MB)

(MB) R3389555-1 03/06/19 18:24

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Alkalinity | 3220 | E4 | 2710 | 20000 |

Sample Narrative:

BLANK: Endpoint pH 4.5

## L1074849-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1074849-01 03/06/19 18:30 • (DUP) R3389555-2 03/06/19 18:37

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Alkalinity | 330000 | 332000 | 1 | 0.437 | | 20 |

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

## L1075088-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-08 03/07/19 12:53 • (DUP) R3389555-4 03/07/19 13:00

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Alkalinity | 238000 | 241000 | 1 | 1.10 | | 20 |

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

## Laboratory Control Sample (LCS)

(LCS) R3389555-3 03/06/19 19:34

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Alkalinity | 100000 | 93700 | 93.7 | 85.0-115 | |

Sample Narrative:

LCS: Endpoint pH 4.5

## Method Blank (MB)

(MB) R3389300-1 03/06/19 17:15

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Nitrate-Nitrite | U | | 19.7 | 100 |

## L1074523-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1074523-01 03/06/19 17:22 • (DUP) R3389300-3 03/06/19 17:24

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | 0.000 | 1 | 0.000 | | 20 |

## L1075088-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-03 03/06/19 17:43 • (DUP) R3389300-6 03/06/19 17:45

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | 0.000 | 1 | 0.000 | | 20 |

## Laboratory Control Sample (LCS)

(LCS) R3389300-2 03/06/19 17:16

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Nitrate-Nitrite | 4000 | 3980 | 99.4 | 90.0-110 | |

## L1074886-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1074886-01 03/06/19 17:25 • (MS) R3389300-4 03/06/19 17:27 • (MSD) R3389300-5 03/06/19 17:28

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate-Nitrite | 2500 | 301 | 2890 | 2930 | 103 | 105 | 1 | 90.0-110 | | | 1.51 | 20 |

## L1075088-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075088-04 03/06/19 17:46 • (MS) R3389300-7 03/06/19 17:48

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|---|---|---|---|---|---|---|---|
| Nitrate-Nitrite | 2500 | ND | 2610 | 105 | 1 | 90.0-110 | |

## L1074813-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1074813-02 03/04/19 17:00 • (DUP) R3388665-2 03/04/19 17:00

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| | su | su | | % | | % |
| pH | 7.69 | 7.83 | 1 | 1.80 | R8 | 1 |

Sample Narrative:
OS: 7.69 at 18.3C
DUP: 7.83 at 18.3C

## L1075088-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-05 03/04/19 17:00 • (DUP) R3388665-3 03/04/19 17:00

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| | su | su | | % | | % |
| pH | 9.15 | 9.15 | 1 | 0.000 | | 1 |

Sample Narrative:
OS: 9.15 at 15.5C
DUP: 9.15 at 15.6C

## Laboratory Control Sample (LCS)

(LCS) R3388665-1 03/04/19 17:00

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| | su | su | % | % | |
| pH | 10.0 | 10.0 | 100 | 99.0-101 | |

Sample Narrative:
LCS: 10.01 at 17.9C

## L1075088-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-06 03/05/19 11:55 • (DUP) R3388776-2 03/05/19 11:55

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| | su | su | | % | | % |
| pH | 8.28 | 8.30 | 1 | 0.241 | | 1 |

Sample Narrative:

OS: 8.28 at 16.3C

DUP: 8.3 at 16.3C

## L1075168-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1075168-16 03/05/19 11:55 • (DUP) R3388776-3 03/05/19 11:55

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---|---|---|---|---|---|---|
| | su | su | | % | | % |
| pH | 7.91 | 7.90 | 1 | 0.127 | | 1 |

Sample Narrative:

OS: 7.91 at 13.3C

DUP: 7.9 at 13.3C

## Laboratory Control Sample (LCS)

(LCS) R3388776-1 03/05/19 11:55

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| | su | su | % | % | |
| pH | 10.0 | 10.0 | 100 | 99.0-101 | |

Sample Narrative:

LCS: 10.01 at 16.9C

## Method Blank (MB)

(MB) R3388325-1 03/04/19 01:33

| Analyte | MB Result umhos/cm | MB Qualifier | MB MDL umhos/cm | MB RDL umhos/cm |
|---|---|---|---|---|
| Specific Conductance | U | | 10.0 | 10.0 |

## L1073205-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1073205-04 03/04/19 01:33 • (DUP) R3388325-3 03/04/19 01:33

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Specific Conductance | 1300 | 1300 | 1 | 0.307 | | 20 |

## L1075088-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-08 03/04/19 01:33 • (DUP) R3388325-4 03/04/19 01:33

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Specific Conductance | 475 | 475 | 1 | 0.000 | | 20 |

## Laboratory Control Sample (LCS)

(LCS) R3388325-2 03/04/19 01:33

| Analyte | Spike Amount umhos/cm | LCS Result umhos/cm | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Specific Conductance | 877 | 800 | 91.2 | 90.0-110 | |

## Method Blank (MB)

(MB) R3388992-1 03/05/19 16:09

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Chloride | U | | 51.9 | 1000 |
| Fluoride | U | | 9.90 | 100 |
| Sulfate | U | | 77.4 | 5000 |

## L1075084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-01 03/05/19 16:55 • (DUP) R3388992-3 03/05/19 17:06

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 2730 | 2720 | 1 | 0.506 | | 15 |
| Fluoride | 170 | 169 | 1 | 1.12 | | 15 |
| Sulfate | 11900 | 12100 | 1 | 1.46 | | 15 |

## L1075084-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-14 03/05/19 19:49 • (DUP) R3388992-6 03/05/19 20:00

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 1910 | 1900 | 1 | 0.263 | | 15 |
| Fluoride | 381 | 381 | 1 | 0.0263 | | 15 |
| Sulfate | 5910 | 5900 | 1 | 0.178 | | 15 |

## Laboratory Control Sample (LCS)

(LCS) R3388992-2 03/05/19 16:20

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Chloride | 40000 | 41400 | 103 | 80.0-120 | |
| Fluoride | 8000 | 8380 | 105 | 80.0-120 | |
| Sulfate | 40000 | 42000 | 105 | 80.0-120 | |

## L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/05/19 17:50 • (MS) R3388992-4 03/05/19 18:01 • (MSD) R3388992-5 03/05/19 18:33

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 50000 | 10000 | 60000 | 59900 | 100 | 99.9 | 1 | 80.0-120 | | | 0.182 | 15 |
| Fluoride | 5000 | 220 | 5380 | 5360 | 103 | 103 | 1 | 80.0-120 | | | 0.408 | 15 |
| Sulfate | 50000 | 22200 | 72200 | 71300 | 99.9 | 98.3 | 1 | 80.0-120 | | | 1.14 | 15 |

## L1075084-14 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075084-14 03/05/19 19:49 • (MS) R3388992-7 03/05/19 20:11

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|---|---|---|---|---|---|---|---|
| Chloride | 50000 | 1910 | 51600 | 99.3 | 1 | 80.0-120 | |
| Fluoride | 5000 | 381 | 5500 | 102 | 1 | 80.0-120 | |
| Sulfate | 50000 | 5910 | 55300 | 98.8 | 1 | 80.0-120 | |

## Method Blank (MB)

(MB) R3389593-1 03/07/19 01:35

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Chloride | U | | 51.9 | 1000 |
| Fluoride | U | | 9.90 | 100 |
| Sulfate | U | | 77.4 | 5000 |

## L1075088-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-03 03/07/19 04:21 • (DUP) R3389593-3 03/07/19 04:36

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 20000 | 20000 | 1 | 0.317 | | 15 |
| Fluoride | 388 | 388 | 1 | 0.0774 | | 15 |
| Sulfate | ND | 0.000 | 1 | 0.000 | | 15 |

## L1075713-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075713-01 03/07/19 11:17 • (DUP) R3389593-6 03/07/19 11:33

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 4210 | 4190 | 1 | 0.386 | | 15 |
| Fluoride | ND | 27.2 | 1 | 0.367 | E4 | 15 |
| Sulfate | 10900 | 10800 | 1 | 1.03 | | 15 |

## Laboratory Control Sample (LCS)

(LCS) R3389593-2 03/07/19 01:50

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Chloride | 40000 | 40600 | 102 | 80.0-120 | |
| Fluoride | 8000 | 8310 | 104 | 80.0-120 | |
| Sulfate | 40000 | 41900 | 105 | 80.0-120 | |

## L1075088-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075088-03 03/07/19 04:21 • (MS) R3389593-4 03/07/19 04:52 • (MSD) R3389593-5 03/07/19 05:07

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 50000 | 20000 | 70000 | 69900 | 100 | 99.8 | 1 | 80.0-120 | | | 0.0957 | 15 |
| Fluoride | 5000 | 388 | 5450 | 5530 | 101 | 103 | 1 | 80.0-120 | | | 1.53 | 15 |
| Sulfate | 50000 | ND | 50800 | 50800 | 102 | 102 | 1 | 80.0-120 | | | 0.00728 | 15 |

## L1075713-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075713-01 03/07/19 11:17 • (MS) R3389593-7 03/07/19 11:48

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|---|---|---|---|---|---|---|---|
| Chloride | 50000 | 4210 | 54700 | 101 | 1 | 80.0-120 | |
| Fluoride | 5000 | ND | 5190 | 103 | 1 | 80.0-120 | |
| Sulfate | 50000 | 10900 | 61400 | 101 | 1 | 80.0-120 | |

## Method Blank (MB)

(MB) R3389361-1 03/06/19 21:48

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Antimony | U | | 7.50 | 10.0 |
| Arsenic | U | | 6.50 | 10.0 |
| Barium | U | | 1.70 | 5.00 |
| Beryllium | U | | 0.700 | 2.00 |
| Cadmium | U | | 0.700 | 2.00 |
| Chromium | U | | 1.40 | 10.0 |
| Cobalt | U | | 2.30 | 10.0 |
| Copper | U | | 5.30 | 10.0 |
| Lead | U | | 1.90 | 5.00 |
| Nickel | U | | 4.90 | 10.0 |
| Silver | U | | 2.80 | 5.00 |
| Thallium | U | | 6.50 | 10.0 |
| Vanadium | 5.27 | E4 | 2.40 | 20.0 |
| Zinc | U | | 5.90 | 50.0 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3389361-2 03/06/19 21:51 • (LCSD) R3389361-3 03/06/19 21:53

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 1000 | 948 | 965 | 94.8 | 96.5 | 80.0-120 | | | 1.74 | 20 |
| Arsenic | 1000 | 937 | 942 | 93.7 | 94.2 | 80.0-120 | | | 0.613 | 20 |
| Barium | 1000 | 998 | 1020 | 99.8 | 102 | 80.0-120 | | | 1.85 | 20 |
| Beryllium | 1000 | 947 | 963 | 94.7 | 96.3 | 80.0-120 | | | 1.63 | 20 |
| Cadmium | 1000 | 955 | 973 | 95.5 | 97.3 | 80.0-120 | | | 1.95 | 20 |
| Chromium | 1000 | 978 | 995 | 97.8 | 99.5 | 80.0-120 | | | 1.72 | 20 |
| Cobalt | 1000 | 977 | 994 | 97.7 | 99.4 | 80.0-120 | | | 1.66 | 20 |
| Copper | 1000 | 941 | 959 | 94.1 | 95.9 | 80.0-120 | | | 1.88 | 20 |
| Lead | 1000 | 951 | 966 | 95.1 | 96.6 | 80.0-120 | | | 1.61 | 20 |
| Nickel | 1000 | 971 | 991 | 97.1 | 99.1 | 80.0-120 | | | 2.04 | 20 |
| Silver | 200 | 185 | 188 | 92.6 | 93.8 | 80.0-120 | | | 1.28 | 20 |
| Thallium | 1000 | 947 | 964 | 94.7 | 96.4 | 80.0-120 | | | 1.74 | 20 |
| Vanadium | 1000 | 934 | 940 | 93.4 | 94.0 | 80.0-120 | | | 0.626 | 20 |
| Zinc | 1000 | 969 | 983 | 96.9 | 98.3 | 80.0-120 | | | 1.45 | 20 |

## L1075050-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075050-01 03/06/19 21:56 • (MS) R3389361-5 03/06/19 22:01 • (MSD) R3389361-6 03/06/19 22:03

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 1000 | U | 995 | 1020 | 99.5 | 102 | 1 | 75.0-125 | | | 2.01 | 20 |
| Arsenic | 1000 | 10.9 | 988 | 1000 | 97.7 | 99.4 | 1 | 75.0-125 | | | 1.64 | 20 |
| Barium | 1000 | 16.8 | 1020 | 1040 | 101 | 102 | 1 | 75.0-125 | | | 1.64 | 20 |
| Beryllium | 1000 | U | 976 | 990 | 97.6 | 99.0 | 1 | 75.0-125 | | | 1.43 | 20 |
| Cadmium | 1000 | U | 1000 | 1010 | 100 | 101 | 1 | 75.0-125 | | | 1.45 | 20 |
| Chromium | 1000 | U | 994 | 1010 | 99.4 | 101 | 1 | 75.0-125 | | | 1.15 | 20 |
| Cobalt | 1000 | U | 1010 | 1020 | 101 | 102 | 1 | 75.0-125 | | | 1.12 | 20 |
| Copper | 1000 | U | 963 | 981 | 96.3 | 98.1 | 1 | 75.0-125 | | | 1.86 | 20 |
| Lead | 1000 | U | 970 | 988 | 97.0 | 98.8 | 1 | 75.0-125 | | | 1.87 | 20 |
| Nickel | 1000 | U | 1000 | 1020 | 100 | 102 | 1 | 75.0-125 | | | 1.37 | 20 |
| Silver | 200 | U | 193 | 195 | 96.6 | 97.6 | 1 | 75.0-125 | | | 0.956 | 20 |
| Thallium | 1000 | U | 944 | 968 | 94.4 | 96.8 | 1 | 75.0-125 | | | 2.48 | 20 |
| Vanadium | 1000 | U | 961 | 978 | 96.1 | 97.8 | 1 | 75.0-125 | | | 1.82 | 20 |
| Zinc | 1000 | U | 981 | 994 | 98.1 | 99.4 | 1 | 75.0-125 | | | 1.28 | 20 |

## Method Blank (MB)

(MB) R3390129-1 03/09/19 08:44

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Selenium | U | | 7.40 | 10.0 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390129-2 03/09/19 08:46 • (LCSD) R3390129-3 03/09/19 08:49

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 1000 | 961 | 950 | 96.1 | 95.0 | 80.0-120 | | | 1.06 | 20 |

## L1076115-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1076115-01 03/09/19 08:52 • (MS) R3390129-5 03/09/19 08:57 • (MSD) R3390129-6 03/09/19 09:00

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 1000 | 105 | 1420 | 1630 | 131 | 153 | 1 | 75.0-125 | M1 | M1 | 13.9 | 20 |

## Method Blank (MB)

(MB) R3390066-3 03/04/19 00:08

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Acetone | U | | 10.0 | 50.0 |
| Acrolein | U | | 8.87 | 50.0 |
| Acrylonitrile | U | | 1.87 | 10.0 |
| Benzene | U | | 0.331 | 1.00 |
| Bromobenzene | U | | 0.352 | 1.00 |
| Bromodichloromethane | U | | 0.380 | 1.00 |
| Bromoform | U | | 0.469 | 1.00 |
| Bromomethane | U | | 0.866 | 5.00 |
| 1,3-Butadiene | U | | 0.330 | 2.00 |
| n-Butylbenzene | U | | 0.361 | 1.00 |
| sec-Butylbenzene | U | | 0.365 | 1.00 |
| tert-Butylbenzene | U | | 0.399 | 1.00 |
| Carbon disulfide | U | | 0.275 | 1.00 |
| Carbon tetrachloride | U | | 0.379 | 1.00 |
| Chlorobenzene | U | | 0.348 | 1.00 |
| Chlorodibromomethane | U | | 0.327 | 1.00 |
| Chloroethane | U | | 0.453 | 5.00 |
| Chloroform | U | | 0.324 | 5.00 |
| Chloromethane | U | | 0.276 | 2.50 |
| Cyclohexane | U | | 0.390 | 1.00 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 |
| 1,2-Dibromoethane | U | | 0.381 | 1.00 |
| Dibromomethane | U | | 0.346 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.274 | 1.00 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 |

## Method Blank (MB)

(MB) R3390066-3 03/04/19 00:08

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dicyclopentadiene | U | | 0.219 | 1.00 |
| Di-isopropyl ether | U | | 0.320 | 1.00 |
| Ethylbenzene | U | | 0.384 | 1.00 |
| 4-Ethyltoluene | U | | 0.172 | 1.00 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 |
| n-Hexane | U | | 0.736 | 10.0 |
| Isopropylbenzene | U | | 0.326 | 1.00 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 |
| 2-Butanone (MEK) | U | | 3.93 | 10.0 |
| Methyl Cyclohexane | U | | 0.380 | 1.00 |
| Methylene Chloride | U | | 1.00 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 |
| Naphthalene | U | | 1.00 | 5.00 |
| Propene | U | | 0.975 | 2.50 |
| n-Propylbenzene | U | | 0.349 | 1.00 |
| Styrene | U | | 0.307 | 1.00 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 |
| Tetrachloroethene | U | | 0.372 | 1.00 |
| Toluene | U | | 0.412 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 |
| Trichloroethene | U | | 0.398 | 1.00 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 |
| 1,2,3-Trichloropropane | U | | 0.807 | 2.50 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 |
| Vinyl chloride | U | | 0.259 | 1.00 |
| Xylenes, Total | U | | 1.06 | 3.00 |
| *(S) Toluene-d8* | *103* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *101* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *99.9* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390066-1 03/03/19 22:48 • (LCSD) R3390066-2 03/03/19 23:08

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 125 | 124 | 116 | 99.2 | 93.1 | 19.0-160 | | | 6.31 | 27 |
| Acrolein | 125 | 60.7 | 59.2 | 48.6 | 47.3 | 10.0-160 | | | 2.61 | 26 |
| Acrylonitrile | 125 | 130 | 114 | 104 | 91.5 | 55.0-149 | | | 12.9 | 20 |
| Benzene | 25.0 | 22.4 | 23.1 | 89.7 | 92.4 | 70.0-123 | | | 2.90 | 20 |
| Bromobenzene | 25.0 | 25.6 | 25.4 | 102 | 102 | 73.0-121 | | | 0.647 | 20 |
| Bromodichloromethane | 25.0 | 24.4 | 25.3 | 97.7 | 101 | 75.0-120 | | | 3.40 | 20 |
| Bromoform | 25.0 | 26.9 | 26.8 | 108 | 107 | 68.0-132 | | | 0.395 | 20 |
| Bromomethane | 25.0 | 20.7 | 21.4 | 82.8 | 85.6 | 10.0-160 | | | 3.25 | 25 |
| 1,3-Butadiene | 25.0 | 13.3 | 13.7 | 53.0 | 55.0 | 45.0-147 | | | 3.60 | 20 |
| n-Butylbenzene | 25.0 | 22.7 | 23.3 | 90.8 | 93.3 | 73.0-125 | | | 2.66 | 20 |
| sec-Butylbenzene | 25.0 | 25.8 | 26.8 | 103 | 107 | 75.0-125 | | | 3.83 | 20 |
| tert-Butylbenzene | 25.0 | 27.2 | 28.0 | 109 | 112 | 76.0-124 | | | 2.79 | 20 |
| Carbon disulfide | 25.0 | 19.5 | 20.3 | 77.8 | 81.0 | 61.0-128 | | | 4.07 | 20 |
| Carbon tetrachloride | 25.0 | 24.0 | 24.1 | 96.2 | 96.4 | 68.0-126 | | | 0.249 | 20 |
| Chlorobenzene | 25.0 | 23.7 | 24.0 | 94.8 | 96.0 | 80.0-121 | | | 1.25 | 20 |
| Chlorodibromomethane | 25.0 | 25.8 | 25.8 | 103 | 103 | 77.0-125 | | | 0.119 | 20 |
| Chloroethane | 25.0 | 22.0 | 23.1 | 88.0 | 92.6 | 47.0-150 | | | 5.03 | 20 |
| Chloroform | 25.0 | 23.2 | 24.0 | 92.6 | 96.1 | 73.0-120 | | | 3.69 | 20 |
| Chloromethane | 25.0 | 23.7 | 24.4 | 94.8 | 97.4 | 41.0-142 | | | 2.77 | 20 |
| Cyclohexane | 25.0 | 22.1 | 23.3 | 88.4 | 93.4 | 71.0-124 | | | 5.44 | 20 |
| 2-Chlorotoluene | 25.0 | 26.5 | 26.8 | 106 | 107 | 76.0-123 | | | 1.26 | 20 |
| 4-Chlorotoluene | 25.0 | 27.6 | 27.7 | 111 | 111 | 75.0-122 | | | 0.0884 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.0 | 23.8 | 96.0 | 95.3 | 58.0-134 | | | 0.773 | 20 |
| 1,2-Dibromoethane | 25.0 | 26.4 | 26.2 | 106 | 105 | 80.0-122 | | | 0.794 | 20 |
| Dibromomethane | 25.0 | 24.8 | 25.1 | 99.2 | 100 | 80.0-120 | | | 1.16 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 22.6 | 22.2 | 90.2 | 88.9 | 79.0-121 | | | 1.41 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 23.3 | 23.5 | 93.0 | 93.9 | 79.0-120 | | | 0.916 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 22.9 | 22.6 | 91.5 | 90.5 | 79.0-120 | | | 1.04 | 20 |
| Dichlorodifluoromethane | 25.0 | 23.8 | 25.1 | 95.3 | 100 | 51.0-149 | | | 5.15 | 20 |
| 1,1-Dichloroethane | 25.0 | 23.4 | 24.1 | 93.5 | 96.3 | 70.0-126 | | | 2.98 | 20 |
| 1,2-Dichloroethane | 25.0 | 22.8 | 23.3 | 91.1 | 93.0 | 70.0-128 | | | 2.04 | 20 |
| 1,1-Dichloroethene | 25.0 | 21.8 | 22.6 | 87.2 | 90.3 | 71.0-124 | | | 3.51 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 23.7 | 24.4 | 94.9 | 97.8 | 73.0-120 | | | 2.95 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 22.6 | 23.8 | 90.5 | 95.2 | 73.0-120 | | | 5.06 | 20 |
| 1,2-Dichloropropane | 25.0 | 24.2 | 25.0 | 96.9 | 100 | 77.0-125 | | | 3.32 | 20 |
| 1,1-Dichloropropene | 25.0 | 23.5 | 24.9 | 93.8 | 99.4 | 74.0-126 | | | 5.75 | 20 |
| 1,3-Dichloropropane | 25.0 | 25.5 | 25.7 | 102 | 103 | 80.0-120 | | | 0.762 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 24.6 | 25.3 | 98.5 | 101 | 80.0-123 | | | 2.58 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 24.8 | 24.8 | 99.3 | 99.2 | 78.0-124 | | | 0.158 | 20 |
| 2,2-Dichloropropane | 25.0 | 21.8 | 23.2 | 87.2 | 92.6 | 58.0-130 | | | 6.03 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3390066-1 03/03/19 22:48 • (LCSD) R3390066-2 03/03/19 23:08

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Dicyclopentadiene | 25.0 | 25.6 | 26.3 | 102 | 105 | 74.0-126 | | | 2.49 | 20 |
| Di-isopropyl ether | 25.0 | 24.2 | 24.0 | 96.9 | 96.0 | 58.0-138 | | | 0.906 | 20 |
| Ethylbenzene | 25.0 | 23.6 | 24.1 | 94.2 | 96.2 | 79.0-123 | | | 2.09 | 20 |
| 4-Ethyltoluene | 25.0 | 26.9 | 27.2 | 108 | 109 | 74.0-127 | | | 1.18 | 20 |
| Hexachloro-1,3-butadiene | 25.0 | 22.4 | 23.6 | 89.8 | 94.5 | 54.0-138 | | | 5.11 | 20 |
| n-Hexane | 25.0 | 20.6 | 20.3 | 82.2 | 81.2 | 57.0-133 | | | 1.27 | 20 |
| Isopropylbenzene | 25.0 | 24.9 | 25.6 | 99.7 | 102 | 76.0-127 | | | 2.61 | 20 |
| p-Isopropyltoluene | 25.0 | 24.9 | 25.8 | 99.8 | 103 | 76.0-125 | | | 3.20 | 20 |
| 2-Butanone (MEK) | 125 | 129 | 128 | 103 | 102 | 44.0-160 | | | 0.926 | 20 |
| Methyl Cyclohexane | 25.0 | 19.8 | 21.4 | 79.3 | 85.8 | 68.0-126 | | | 7.87 | 20 |
| Methylene Chloride | 25.0 | 21.7 | 22.3 | 86.8 | 89.0 | 67.0-120 | | | 2.50 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 130 | 127 | 104 | 101 | 68.0-142 | | | 2.34 | 20 |
| Methyl tert-butyl ether | 25.0 | 24.7 | 23.5 | 99.0 | 93.9 | 68.0-125 | | | 5.29 | 20 |
| Naphthalene | 25.0 | 23.7 | 23.9 | 94.6 | 95.7 | 54.0-135 | | | 1.16 | 20 |
| Propene | 25.0 | 3.09 | 3.52 | 12.4 | 14.1 | 10.0-160 | | | 12.8 | 20 |
| n-Propylbenzene | 25.0 | 25.9 | 26.2 | 104 | 105 | 77.0-124 | | | 1.12 | 20 |
| Styrene | 25.0 | 26.1 | 26.5 | 104 | 106 | 73.0-130 | | | 1.60 | 20 |
| 1,1,1,2-Tetrachloroethane | 25.0 | 25.1 | 25.2 | 101 | 101 | 75.0-125 | | | 0.137 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 26.6 | 26.2 | 106 | 105 | 65.0-130 | | | 1.66 | 20 |
| Tetrachloroethene | 25.0 | 24.6 | 24.8 | 98.6 | 99.2 | 72.0-132 | | | 0.623 | 20 |
| Toluene | 25.0 | 22.4 | 22.7 | 89.8 | 90.8 | 79.0-120 | | | 1.11 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 25.0 | 22.6 | 24.1 | 90.5 | 96.2 | 69.0-132 | | | 6.19 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 23.1 | 23.6 | 92.2 | 94.3 | 50.0-138 | | | 2.23 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 23.1 | 24.1 | 92.5 | 96.3 | 57.0-137 | | | 4.08 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 23.6 | 24.7 | 94.3 | 98.8 | 73.0-124 | | | 4.66 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 25.5 | 25.6 | 102 | 102 | 80.0-120 | | | 0.467 | 20 |
| Trichloroethene | 25.0 | 24.9 | 25.8 | 99.8 | 103 | 78.0-124 | | | 3.18 | 20 |
| Trichlorofluoromethane | 25.0 | 22.9 | 23.9 | 91.4 | 95.6 | 59.0-147 | | | 4.43 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 28.5 | 27.7 | 114 | 111 | 73.0-130 | | | 3.05 | 20 |
| 1,2,3-Trimethylbenzene | 25.0 | 23.8 | 24.3 | 95.4 | 97.3 | 77.0-120 | | | 1.97 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 25.8 | 26.5 | 103 | 106 | 76.0-121 | | | 2.64 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 27.3 | 27.8 | 109 | 111 | 76.0-122 | | | 2.03 | 20 |
| Vinyl chloride | 25.0 | 22.2 | 23.5 | 88.8 | 94.2 | 67.0-131 | | | 5.88 | 20 |
| Xylenes, Total | 75.0 | 73.3 | 74.5 | 97.7 | 99.3 | 79.0-123 | | | 1.62 | 20 |
| *(S) Toluene-d8* | | | | *102* | *99.4* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *106* | *105* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *98.4* | *96.7* | *70.0-130* | | | | |

## Instrument: VOCMS35 • File ID: 0303_28

03/03/19 22:28

| Sample ID | File ID | 8260-FLUOROBENZENE Response | 8260-CHLOROBENZENE-D5 Response | 8260-1,4-DICHLOROBENZENE-D4 Response |
|---|---|---|---|---|
| Standard | 0303_28 | 66975 | 66975 | 91231 |
| Upper Limit | | 133950 | 133950 | 182462 |
| Lower Limit | | 33488 | 33488 | 45616 |
| LCS R3390066-1 WG1244697 1x | 0303_29 | 68440 | 68440 | 91295 |
| LCSD R3390066-2 WG1244697 1x | 0303_30 | 70607 | 70607 | 94984 |
| BLANK R3390066-3 WG1244697 1x | 0303_33 | 62690 | 62690 | 81896 |
| L1075088-01 WG1244697 1x | 0303_46 | 60361 | 60361 | 81641 |
| L1075088-02 WG1244697 1x | 0303_47 | 61080 | 61080 | 80934 |
| L1075088-03 WG1244697 1x | 0303_48 | 59992 | 59992 | 76967 |
| L1075088-04 WG1244697 1x | 0303_49 | 61036 | 61036 | 81130 |
| L1075088-05 WG1244697 1x | 0303_50 | 60647 | 60647 | 81633 |
| L1075088-06 WG1244697 1x | 0303_51 | 59876 | 59876 | 81053 |
| L1075088-07 WG1244697 1x | 0303_52 | 60504 | 60504 | 78551 |
| L1075088-08 WG1244697 1x | 0303_53 | 59347 | 59347 | 79049 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|
| B1 | Target analyte detected in method blank at or above the method reporting limit. |
| E4 | Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL. |
| M1 | Matrix spike recovery was high, the method control sample recovery was acceptable. |
| R8 | Sample RPD exceeded the method acceptance limit. |

# ACCREDITATIONS & LOCATIONS

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.



## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

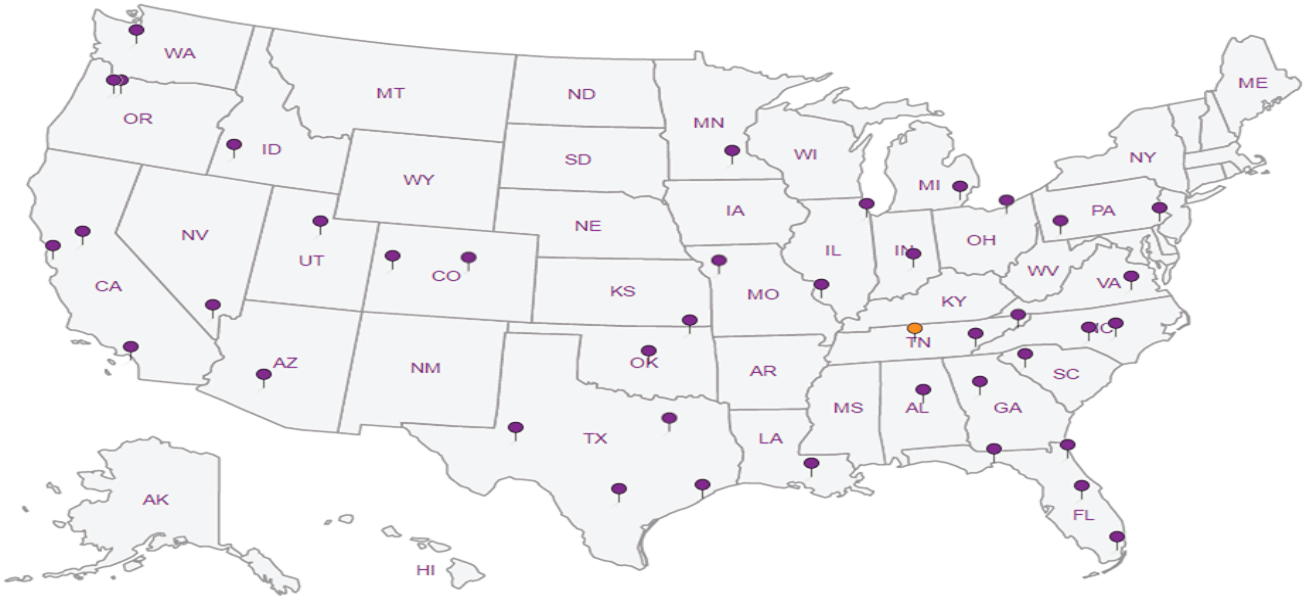
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Pace Analytical®

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

**ALL SHADED AREAS are for LAB USE ONLY**

Company: Maricopa County WR&R

Billing Information: Maricopa County WR&R- Attn: Kathryn Snyder

Address: 2910 W Durango St Phoenix, AZ 85009

Report To: samantha.sargent@woodplc.com

Email To: samantha.sargent@woodplc.com

Copy To: emily.lodolce@woodplc.com

Site Collection Info/Address: Cave Creek Landfill

Customer Project Name/Number: Cave Creek Landfill/1420192004.****.021

State: AZ County/City: /Phoenix

Time Zone Collected: [ ] PT [✓] MT [ ] CT [ ] ET

Phone: 602-733-6000
Email: samantha.sargent@woodplc.com

Site/Facility ID #:

Compliance Monitoring? [✓] Yes [ ] No

Collected By (print): Jasmine Ramirez

Purchase Order #:
Quote #: AMECTAZ012119S

DW PWS ID #:
DW Location Code:

Collected By (signature):

Turnaround Date Required: STD TAT

Immediately Packed on Ice: [✓] Yes [ ] No

Sample Disposal:
[✓] Dispose as appropriate [ ] Return
[ ] Archive: ____
[ ] Hold: ____

Rush:
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [✓] No

Analysis: ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **: 3 | 1 | U | | U | U

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Lab Project Manager:

Analyses

| Customer Sample ID | Matrix * | Comp / Grab | Collected ~~(or Composite Start)~~ Date | Collected ~~(or Composite Start)~~ Time | Composite End Date | Composite End Time | Res Cl | # of Ctns | 8260B VOCs | 6020 Metals (See List) | 300.0 General Chemistry (See List) | 300.0 Nitrate/Nitrite | SM2320B Alkalinity | SM2450C (TDS), SM2510B (Specific Conductivity), SM4500 (pH) | | | | | | | Lab Sample # / Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW02-714-022719 | W | Grab | 2/27/19 | 0935 | | | | 7 | X | X | X | X | X | X | | | | | | | L1075088 -01 |
| ~~MW03-724~~ | ~~W~~ | ~~Grab~~ | | | | | | | X | X | X | X | X | X | | | | | | | |
| MW04-708-022719 | W | Grab | 2/27/19 | 1300 | | | | 7 | X | X | X | X | X | X | | | | | | | -02 |
| DUP01-022719 | W | Grab | 2/27/19 | 1130 | | | | 7 | X | X | X | X | X | X | | | | | | | -03 |
| MW05-704-022719 | W | Grab | 2/27/19 | 1040 | | | | 7 | X | X | X | X | X | X | | | | | | | -04 |
| MW06-720-022819 | W | Grab | 2/28/19 | 1230 | | | | 7 | X | X | X | X | X | X | | | | | | | -05 |
| MW07-718-022819 | W | Grab | 2/28/19 | 1040 | | | | 7 | X | X | X | X | X | X | | | | | | | -06 |
| MW08-742-022719 | W | Grab | 2/27/19 | 1130 | | | | 7 | X | X | X | X | X | X | | | | | | | -07 |
| PW-734-022819 | W | Grab | 2/28/19 | 0845 | | | | 7 | X | X | X | X | X | X | | | | | | | -08 |

Lab Profile/Line:

Lab Sample Receipt Checklist:

| | |
|---|---|
| Custody Seals Present/Intact | Y N NA |
| Custody Signatures Present | Y N NA |
| Collector Signature Present | Y N NA |
| Bottles Intact | Y N NA |
| Correct Bottles | Y N NA |
| Sufficient Volume | Y N NA |
| Samples Received on Ice | Y N NA |
| VOA - Headspace Acceptable | Y N NA |
| USDA Regulated Soils | Y N NA |
| Samples in Holding Time | Y N NA |
| Residual Chlorine Present | Y N NA |
| Cl Strips: ____ | |
| Sample pH Acceptable | Y N NA |
| pH Strips: ____ | |
| Sulfide Present | Y N NA |
| Lead Acetate Strips: ____ | |

LAB USE ONLY:
Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: AM AG
Cooler 1 Temp Upon Receipt: 1.0 oC
Cooler 1 Therm Corr. Factor: -.2 oC
Cooler 1 Corrected Temp: 0.8 oC
Comments:
RAD SCREEN: <0.5 mR/hr

| Relinquished by/Company: (Signature) | Date/Time: | Received by/Company: (Signature) | Date/Time: |
|---|---|---|---|
| Wood | 3-1-19 1513 | Pace National | |
| Pace National | 3/1/19 1800 | SWA | |
| | | | 3/2/19 8:00 |

D131

Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 3 of: 3

total = 56 containers received

Pace Analytical®
National Center for Testing & Innovation

Mt. Juliet, TN 37122
Ph.: (800) 767-5859
Fax: (615) 758-5859
Internet: www.pacenational.com
Quote: AMECTAZ012119S
REP: David Veratti (602) 377-2696 dveratti@pacenational.com
PM: Daphne Richards (615) 773-9662 drichards@pacenational.com

## Wood PLC

Samantha Sargent
4600 East Washington Street, 6th Floor
Phoenix, AZ 85034
Email: samantha.sargent@woodplc.com
Phone: 602-733-6055
Project: Cave Creek Landfill
Matrix: Groundwater
Payment Terms: Net 90 Days

**No Project Specific QAPP or SAP**

Date: January 21, 2019 Quote Exp. Date: January 21, 2020

| Parameter | Method | Est. Quantity | Cost/Sample | Extended Cost |
|---|---|---|---|---|
| VOCs | 8260 | 96 | $50.00 | $4,800.00 |
| Alkalinity | 2320 B | 20 | $15.00 | $300.00 |
| TDS | 2540C | 20 | $10.00 | $200.00 |
| Conductivity | 9050A | 20 | $12.00 | $240.00 |
| Nitrate/Nitrite | 353.2 | 20 | $12.00 | $240.00 |
| Chloride | 9056 | 20 | $10.00 | $200.00 |
| Fluoride | 9056 | 20 | $10.00 | $200.00 |
| Sulfate | 9056 | 20 | $10.00 | $200.00 |
| Metals *(Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Ni, Se, Ag, Tl, V, Zn)* | 6010 | 20 | $60.00 | $1,200.00 |
| | | | **Estimated Cost** | **$7,580.00** |

**Pace National will provide preprinted COCS and labels each event.**

**Prices quoted reflect an 8-working day turnaround and include the following service options:**

* All necessary sampling containers, coolers, and preservatives.
* Pre-printed labels and chain of custody forms.
* Data delivery via email or secure web access. Additional $15.00 per set charge applicable for hard copies.
* Email notification of sample login.
* On-Line Data Management.
* Inbound and outbound transport of samples/supplies.
* Reported trip blanks are billable samples.
* Standard Laboratory Level 2 Deliverable using Laboratory published Report limits and QC Limits. Level 2 report includes sample results, method blank results, Laboratory control Sample results and Sample Duplicate, Matrix Spike and Matrix Spike Duplicate results if appropriate Duplicate/MS/MSD volume is submitted.

**Please reference your job number and/or job name on chain of custody along with the quote number, or attach copy of this quote with chain of custody upon submittal of samples to laboratory.** **AMECTAZ012119S**

If you have any technical questions, or would like to place an order for bottles, please contact your Project Manager, **Daphne Richards (615) 773-9662 drichards@pacenational.com**

**RUSH Turnaround Multipliers: (from receipt of sample)**
**1 Working Day x 2**
**2 Working Days x 1.5**
**3 to 4 Working Days x 1.25**
**5 Working Days/Firm Due Date x 1.1**

**Pace National Terms & Conditions are now available on our website! Please visit www.pacenational.com and click on the "Technical" section under Documents & Forms. If you have any questions, please feel free to contact sales_service@pacenational.com**

# ANALYTICAL REPORT

March 14, 2019

## Wood E&I Solutions Inc. - Phoenix, AZ

| | |
|---|---|
| Sample Delivery Group: | L1075330 |
| Samples Received: | 03/05/2019 |
| Project Number: | 1420192004.****.021 |
| Description: | Cave Creek Landfill |
| Report To: | Samantha Sargent<br>4600 East Washington Street, Ste 600<br>Phoenix, AZ 85034 |

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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## MW03-724-030419 L1075330-01 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/04/19 12:10 | 03/05/19 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Gravimetric Analysis by Method 2540 C-2011 | WG1246566 | 1 | 03/08/19 16:27 | 03/08/19 18:29 | AEC | Mt. Juliet, TN |
| Wet Chemistry by Method 2320 B-2011 | WG1248195 | 1 | 03/11/19 16:00 | 03/11/19 16:00 | GB | Mt. Juliet, TN |
| Wet Chemistry by Method 353.2 | WG1246347 | 1 | 03/11/19 12:01 | 03/11/19 12:01 | BRJ | Mt. Juliet, TN |
| Wet Chemistry by Method 9050A | WG1245736 | 1 | 03/07/19 12:26 | 03/07/19 12:26 | BAM | Mt. Juliet, TN |
| Wet Chemistry by Method 9056A | WG1245704 | 1 | 03/07/19 07:57 | 03/07/19 07:57 | ELN | Mt. Juliet, TN |
| Metals (ICP) by Method 6010C | WG1245990 | 1 | 03/06/19 14:27 | 03/07/19 09:59 | TRB | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1245080 | 1 | 03/05/19 20:47 | 03/05/19 20:47 | DWR | Mt. Juliet, TN |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

## Gravimetric Analysis by Method 2540 C-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Dissolved Solids | 162000 | | 10000 | 1 | 03/08/2019 18:29 | WG1246566 |

## Wet Chemistry by Method 2320 B-2011

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Alkalinity | 138000 | | 20000 | 1 | 03/11/2019 16:00 | WG1248195 |

**Sample Narrative:**

L1075330-01 WG1248195: Endpoint pH 4.5 headspace

## Wet Chemistry by Method 353.2

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | ND | | 100 | 1 | 03/11/2019 12:01 | WG1246347 |

## Wet Chemistry by Method 9050A

| Analyte | Result umhos/cm | Qualifier | RDL umhos/cm | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Specific Conductance | 310 | | 10.0 | 1 | 03/07/2019 12:26 | WG1245736 |

## Wet Chemistry by Method 9056A

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Chloride | 18700 | | 1000 | 1 | 03/07/2019 07:57 | WG1245704 |
| Fluoride | 290 | | 100 | 1 | 03/07/2019 07:57 | WG1245704 |
| Sulfate | ND | | 5000 | 1 | 03/07/2019 07:57 | WG1245704 |

## Metals (ICP) by Method 6010C

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Antimony | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Arsenic | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Barium | 16.5 | | 5.00 | 1 | 03/07/2019 09:59 | WG1245990 |
| Beryllium | ND | | 2.00 | 1 | 03/07/2019 09:59 | WG1245990 |
| Cadmium | ND | | 2.00 | 1 | 03/07/2019 09:59 | WG1245990 |
| Chromium | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Cobalt | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Copper | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Lead | ND | | 5.00 | 1 | 03/07/2019 09:59 | WG1245990 |
| Nickel | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Selenium | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Silver | ND | | 5.00 | 1 | 03/07/2019 09:59 | WG1245990 |
| Thallium | ND | | 10.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Vanadium | ND | | 20.0 | 1 | 03/07/2019 09:59 | WG1245990 |
| Zinc | 478 | | 50.0 | 1 | 03/07/2019 09:59 | WG1245990 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 50.0 | 1 | 03/05/2019 20:47 | WG1245080 |
| Acrolein | ND | | 50.0 | 1 | 03/05/2019 20:47 | WG1245080 |
| Acrylonitrile | ND | | 10.0 | 1 | 03/05/2019 20:47 | WG1245080 |
| Benzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Bromobenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Bromodichloromethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Bromoform | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Bromomethane | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,3-Butadiene | ND | | 2.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| n-Butylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| sec-Butylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| tert-Butylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Carbon tetrachloride | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Carbon disulfide | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Chlorobenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Chlorodibromomethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Chloroethane | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Chloroform | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Chloromethane | ND | | 2.50 | 1 | 03/05/2019 20:47 | WG1245080 |
| Cyclohexane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 2-Chlorotoluene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 4-Chlorotoluene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2-Dibromo-3-Chloropropane | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2-Dibromoethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Dibromomethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2-Dichlorobenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,3-Dichlorobenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,4-Dichlorobenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Dichlorodifluoromethane | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1-Dichloroethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2-Dichloroethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1-Dichloroethene | 1.38 | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| cis-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| trans-1,2-Dichloroethene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2-Dichloropropane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1-Dichloropropene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,3-Dichloropropane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| cis-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| trans-1,3-Dichloropropene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 2,2-Dichloropropane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Dicyclopentadiene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Di-isopropyl ether | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Ethylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 4-Ethyltoluene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Hexachloro-1,3-butadiene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| n-Hexane | ND | | 10.0 | 1 | 03/05/2019 20:47 | WG1245080 |
| Isopropylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| p-Isopropyltoluene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 2-Butanone (MEK) | ND | | 10.0 | 1 | 03/05/2019 20:47 | WG1245080 |
| Methyl Cyclohexane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Methylene Chloride | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 10.0 | 1 | 03/05/2019 20:47 | WG1245080 |
| Methyl tert-butyl ether | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Naphthalene | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Propene | ND | | 2.50 | 1 | 03/05/2019 20:47 | WG1245080 |
| n-Propylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Styrene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1,1,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result ug/l | Qualifier | RDL ug/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Tetrachloroethene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Toluene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2,3-Trichlorobenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2,4-Trichlorobenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1,1-Trichloroethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,1,2-Trichloroethane | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Trichloroethene | 2.73 | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Trichlorofluoromethane | ND | | 5.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2,3-Trichloropropane | ND | | 2.50 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2,4-Trimethylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,2,3-Trimethylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| 1,3,5-Trimethylbenzene | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Vinyl chloride | ND | | 1.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| Xylenes, Total | ND | | 3.00 | 1 | 03/05/2019 20:47 | WG1245080 |
| *(S) Toluene-d8* | *107* | | *80.0-120* | | *03/05/2019 20:47* | WG1245080 |
| *(S) 4-Bromofluorobenzene* | *103* | | *77.0-126* | | *03/05/2019 20:47* | WG1245080 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/05/2019 20:47* | WG1245080 |

## Method Blank (MB)

(MB) R3390174-1 03/08/19 18:29

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Dissolved Solids | U | | 2820 | 10000 |

## L1075323-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075323-01 03/08/19 18:29 • (DUP) R3390174-3 03/08/19 18:29

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Dissolved Solids | 1190000 | 1190000 | 1 | 0.336 | | 5 |

## Laboratory Control Sample (LCS)

(LCS) R3390174-2 03/08/19 18:29

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Dissolved Solids | 8800000 | 8560000 | 97.3 | 85.0-115 | |

## Method Blank (MB)

(MB) R3390814-1 03/11/19 15:09

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Alkalinity | 3550 | E4 | 2710 | 20000 |

Sample Narrative:

BLANK: Endpoint pH 4.5

## L1075286-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075286-01 03/11/19 15:16 • (DUP) R3390814-3 03/11/19 15:25

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Alkalinity | 97800 | 97100 | 1 | 0.802 | | 20 |

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

## L1075713-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075713-01 03/11/19 18:03 • (DUP) R3390814-6 03/11/19 18:09

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Alkalinity | 82500 | 82400 | 1 | 0.0748 | | 20 |

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

## Laboratory Control Sample (LCS)

(LCS) R3390814-5 03/11/19 16:32

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Alkalinity | 100000 | 106000 | 106 | 85.0-115 | |

Sample Narrative:

LCS: Endpoint pH 4.5

## Method Blank (MB)

(MB) R3390454-1 03/11/19 11:10

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Nitrate-Nitrite | U | | 19.7 | 100 |

## L1075084-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-01 03/11/19 11:13 • (DUP) R3390454-3 03/11/19 11:14

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | 204 | 204 | 1 | 0.000 | | 20 |

## L1075084-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1075084-20 03/11/19 11:55 • (DUP) R3390454-6 03/11/19 11:56

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Nitrate-Nitrite | 2830 | 2750 | 1 | 2.65 | | 20 |

## Laboratory Control Sample (LCS)

(LCS) R3390454-2 03/11/19 11:11

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Nitrate-Nitrite | 4000 | 4000 | 100 | 90.0-110 | |

## L1075084-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075084-05 03/11/19 11:20 • (MS) R3390454-4 03/11/19 11:22 • (MSD) R3390454-5 03/11/19 11:23

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate-Nitrite | 2500 | 1550 | 3640 | 3780 | 83.4 | 89.1 | 1 | 90.0-110 | M2 | M2 | 3.86 | 20 |

## L1075084-21 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075084-21 03/11/19 11:58 • (MS) R3390454-7 03/11/19 11:59

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|---|---|---|---|---|---|---|---|
| Nitrate-Nitrite | 2500 | 6080 | 8980 | 116 | 1 | 90.0-110 | E1 M1 |

## Method Blank (MB)

(MB) R3389528-1 03/07/19 12:26

| Analyte | MB Result umhos/cm | MB Qualifier | MB MDL umhos/cm | MB RDL umhos/cm |
|---|---|---|---|---|
| Specific Conductance | U | | 10.0 | 10.0 |

## L1075286-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075286-01 03/07/19 12:26 • (DUP) R3389528-3 03/07/19 12:26

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Specific Conductance | 303 | 301 | 1 | 0.662 | | 20 |

## L1075603-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1075603-04 03/07/19 12:26 • (DUP) R3389528-4 03/07/19 12:26

| Analyte | Original Result umhos/cm | DUP Result umhos/cm | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Specific Conductance | 338 | 339 | 1 | 0.295 | | 20 |

## Laboratory Control Sample (LCS)

(LCS) R3389528-2 03/07/19 12:26

| Analyte | Spike Amount umhos/cm | LCS Result umhos/cm | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Specific Conductance | 877 | 880 | 100 | 90.0-110 | |

## Method Blank (MB)

(MB) R3389593-1 03/07/19 01:35

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Chloride | U | | 51.9 | 1000 |
| Fluoride | U | | 9.90 | 100 |
| Sulfate | U | | 77.4 | 5000 |

## L1075088-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1075088-03 03/07/19 04:21 • (DUP) R3389593-3 03/07/19 04:36

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 20000 | 20000 | 1 | 0.317 | | 15 |
| Fluoride | 388 | 388 | 1 | 0.0774 | | 15 |
| Sulfate | ND | 0.000 | 1 | 0.000 | | 15 |

## L1075713-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1075713-01 03/07/19 11:17 • (DUP) R3389593-6 03/07/19 11:33

| Analyte | Original Result ug/l | DUP Result ug/l | Dilution | DUP RPD % | DUP Qualifier | DUP RPD Limits % |
|---|---|---|---|---|---|---|
| Chloride | 4210 | 4190 | 1 | 0.386 | | 15 |
| Fluoride | ND | 27.2 | 1 | 0.367 | E4 | 15 |
| Sulfate | 10900 | 10800 | 1 | 1.03 | | 15 |

## Laboratory Control Sample (LCS)

(LCS) R3389593-2 03/07/19 01:50

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|---|---|---|---|---|---|
| Chloride | 40000 | 40600 | 102 | 80.0-120 | |
| Fluoride | 8000 | 8310 | 104 | 80.0-120 | |
| Sulfate | 40000 | 41900 | 105 | 80.0-120 | |

## L1075088-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075088-03 03/07/19 04:21 • (MS) R3389593-4 03/07/19 04:52 • (MSD) R3389593-5 03/07/19 05:07

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 50000 | 20000 | 70000 | 69900 | 100 | 99.8 | 1 | 80.0-120 | | | 0.0957 | 15 |
| Fluoride | 5000 | 388 | 5450 | 5530 | 101 | 103 | 1 | 80.0-120 | | | 1.53 | 15 |
| Sulfate | 50000 | ND | 50800 | 50800 | 102 | 102 | 1 | 80.0-120 | | | 0.00728 | 15 |

## L1075713-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1075713-01 03/07/19 11:17 • (MS) R3389593-7 03/07/19 11:48

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|---|---|---|---|---|---|---|---|
| Chloride | 50000 | 4210 | 54700 | 101 | 1 | 80.0-120 | |
| Fluoride | 5000 | ND | 5190 | 103 | 1 | 80.0-120 | |
| Sulfate | 50000 | 10900 | 61400 | 101 | 1 | 80.0-120 | |

## Method Blank (MB)

(MB) R3389624-1 03/07/19 09:10

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Antimony | U | | 7.50 | 10.0 |
| Arsenic | U | | 6.50 | 10.0 |
| Barium | U | | 1.70 | 5.00 |
| Beryllium | U | | 0.700 | 2.00 |
| Cadmium | U | | 0.700 | 2.00 |
| Chromium | U | | 1.40 | 10.0 |
| Cobalt | U | | 2.30 | 10.0 |
| Copper | U | | 5.30 | 10.0 |
| Lead | 2.13 | E4 | 1.90 | 5.00 |
| Nickel | U | | 4.90 | 10.0 |
| Selenium | U | | 7.40 | 10.0 |
| Silver | U | | 2.80 | 5.00 |
| Thallium | U | | 6.50 | 10.0 |
| Vanadium | U | | 2.40 | 20.0 |
| Zinc | U | | 5.90 | 50.0 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3389624-2 03/07/19 09:13 • (LCSD) R3389624-3 03/07/19 09:15

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 1000 | 950 | 965 | 95.0 | 96.5 | 80.0-120 | | | 1.56 | 20 |
| Arsenic | 1000 | 916 | 932 | 91.6 | 93.2 | 80.0-120 | | | 1.73 | 20 |
| Barium | 1000 | 986 | 997 | 98.6 | 99.7 | 80.0-120 | | | 1.14 | 20 |
| Beryllium | 1000 | 963 | 978 | 96.3 | 97.8 | 80.0-120 | | | 1.57 | 20 |
| Cadmium | 1000 | 949 | 961 | 94.9 | 96.1 | 80.0-120 | | | 1.32 | 20 |
| Chromium | 1000 | 951 | 961 | 95.1 | 96.1 | 80.0-120 | | | 1.04 | 20 |
| Cobalt | 1000 | 971 | 983 | 97.1 | 98.3 | 80.0-120 | | | 1.21 | 20 |
| Copper | 1000 | 955 | 963 | 95.5 | 96.3 | 80.0-120 | | | 0.777 | 20 |
| Lead | 1000 | 941 | 955 | 94.1 | 95.5 | 80.0-120 | | | 1.48 | 20 |
| Nickel | 1000 | 957 | 969 | 95.7 | 96.9 | 80.0-120 | | | 1.26 | 20 |
| Selenium | 1000 | 938 | 951 | 93.8 | 95.1 | 80.0-120 | | | 1.41 | 20 |
| Silver | 200 | 180 | 181 | 90.2 | 90.6 | 80.0-120 | | | 0.448 | 20 |
| Thallium | 1000 | 944 | 961 | 94.4 | 96.1 | 80.0-120 | | | 1.79 | 20 |
| Vanadium | 1000 | 962 | 990 | 96.2 | 99.0 | 80.0-120 | | | 2.80 | 20 |
| Zinc | 1000 | 940 | 955 | 94.0 | 95.5 | 80.0-120 | | | 1.62 | 20 |

## L1075315-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1075315-01 03/07/19 09:18 • (MS) R3389624-5 03/07/19 09:23 • (MSD) R3389624-6 03/07/19 09:25

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 1000 | ND | 980 | 973 | 98.0 | 97.3 | 1 | 75.0-125 | | | 0.657 | 20 |
| Arsenic | 1000 | ND | 937 | 942 | 93.7 | 94.2 | 1 | 75.0-125 | | | 0.524 | 20 |
| Barium | 1000 | 18.0 | 1020 | 1020 | 101 | 99.9 | 1 | 75.0-125 | | | 0.662 | 20 |
| Beryllium | 1000 | ND | 983 | 981 | 98.3 | 98.1 | 1 | 75.0-125 | | | 0.207 | 20 |
| Cadmium | 1000 | ND | 969 | 964 | 96.9 | 96.4 | 1 | 75.0-125 | | | 0.538 | 20 |
| Chromium | 1000 | ND | 979 | 971 | 97.5 | 96.7 | 1 | 75.0-125 | | | 0.809 | 20 |
| Cobalt | 1000 | ND | 1000 | 993 | 100 | 99.3 | 1 | 75.0-125 | | | 1.12 | 20 |
| Copper | 1000 | 81.6 | 1050 | 1050 | 97.1 | 97.1 | 1 | 75.0-125 | | | 0.00760 | 20 |
| Lead | 1000 | ND | 972 | 970 | 96.9 | 96.7 | 1 | 75.0-125 | | | 0.230 | 20 |
| Nickel | 1000 | ND | 989 | 983 | 98.9 | 98.3 | 1 | 75.0-125 | | | 0.592 | 20 |
| Selenium | 1000 | ND | 962 | 963 | 96.2 | 96.3 | 1 | 75.0-125 | | | 0.107 | 20 |
| Silver | 200 | ND | 183 | 183 | 91.7 | 91.5 | 1 | 75.0-125 | | | 0.192 | 20 |
| Thallium | 1000 | ND | 970 | 966 | 97.0 | 96.6 | 1 | 75.0-125 | | | 0.393 | 20 |
| Vanadium | 1000 | ND | 980 | 978 | 97.8 | 97.5 | 1 | 75.0-125 | | | 0.225 | 20 |
| Zinc | 1000 | ND | 962 | 956 | 96.2 | 95.6 | 1 | 75.0-125 | | | 0.687 | 20 |

## Method Blank (MB)

(MB) R3389114-5 03/05/19 16:52

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Acetone | U | | 10.0 | 50.0 |
| Acrolein | U | | 8.87 | 50.0 |
| Acrylonitrile | U | | 1.87 | 10.0 |
| Benzene | U | | 0.331 | 1.00 |
| Bromobenzene | U | | 0.352 | 1.00 |
| Bromodichloromethane | U | | 0.380 | 1.00 |
| Bromoform | U | | 0.469 | 1.00 |
| Bromomethane | U | | 0.866 | 5.00 |
| n-Butylbenzene | U | | 0.361 | 1.00 |
| 1,3-Butadiene | U | | 0.330 | 2.00 |
| sec-Butylbenzene | U | | 0.365 | 1.00 |
| tert-Butylbenzene | U | | 0.399 | 1.00 |
| Carbon tetrachloride | U | | 0.379 | 1.00 |
| Carbon disulfide | U | | 0.275 | 1.00 |
| Chlorobenzene | U | | 0.348 | 1.00 |
| Chlorodibromomethane | U | | 0.327 | 1.00 |
| Chloroethane | U | | 0.453 | 5.00 |
| Chloroform | U | | 0.324 | 5.00 |
| Chloromethane | U | | 0.276 | 2.50 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 |
| Cyclohexane | U | | 0.390 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 |
| 1,2-Dibromoethane | U | | 0.381 | 1.00 |
| Dibromomethane | U | | 0.346 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.274 | 1.00 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 |

## Method Blank (MB)

(MB) R3389114-5 03/05/19 16:52

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Di-isopropyl ether | U | | 0.320 | 1.00 |
| Dicyclopentadiene | U | | 0.219 | 1.00 |
| Ethylbenzene | U | | 0.384 | 1.00 |
| 4-Ethyltoluene | U | | 0.172 | 1.00 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 |
| Isopropylbenzene | U | | 0.326 | 1.00 |
| n-Hexane | U | | 0.736 | 10.0 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 |
| 2-Butanone (MEK) | U | | 3.93 | 10.0 |
| Methylene Chloride | U | | 1.00 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 |
| Methyl Cyclohexane | U | | 0.380 | 1.00 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 |
| Naphthalene | 1.70 | E4 | 1.00 | 5.00 |
| n-Propylbenzene | U | | 0.349 | 1.00 |
| Propene | U | | 0.975 | 2.50 |
| Styrene | U | | 0.307 | 1.00 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 |
| Tetrachloroethene | U | | 0.372 | 1.00 |
| Toluene | U | | 0.412 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 |
| Trichloroethene | U | | 0.398 | 1.00 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 |
| 1,2,3-Trichloropropane | U | | 0.807 | 2.50 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 |
| Vinyl chloride | U | | 0.259 | 1.00 |
| Xylenes, Total | U | | 1.06 | 3.00 |
| *(S) Toluene-d8* | *107* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *105* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *102* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3389114-1 03/05/19 15:15 • (LCSD) R3389114-2 03/05/19 15:35

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 125 | 111 | 117 | 89.0 | 93.5 | 19.0-160 | | | 5.03 | 27 |
| Acrylonitrile | 125 | 121 | 126 | 96.9 | 100 | 55.0-149 | | | 3.64 | 20 |
| Benzene | 25.0 | 26.5 | 26.3 | 106 | 105 | 70.0-123 | | | 0.657 | 20 |
| Bromobenzene | 25.0 | 25.6 | 25.4 | 103 | 102 | 73.0-121 | | | 0.754 | 20 |
| Bromodichloromethane | 25.0 | 26.9 | 27.3 | 108 | 109 | 75.0-120 | | | 1.42 | 20 |
| Bromoform | 25.0 | 24.2 | 25.3 | 96.8 | 101 | 68.0-132 | | | 4.30 | 20 |
| Bromomethane | 25.0 | 26.4 | 24.7 | 106 | 98.8 | 10.0-160 | | | 6.66 | 25 |
| n-Butylbenzene | 25.0 | 25.6 | 25.7 | 102 | 103 | 73.0-125 | | | 0.375 | 20 |
| sec-Butylbenzene | 25.0 | 25.5 | 25.4 | 102 | 102 | 75.0-125 | | | 0.378 | 20 |
| tert-Butylbenzene | 25.0 | 26.8 | 26.7 | 107 | 107 | 76.0-124 | | | 0.349 | 20 |
| Acrolein | 125 | 107 | 102 | 85.8 | 81.7 | 10.0-160 | | | 4.88 | 26 |
| Carbon tetrachloride | 25.0 | 28.0 | 28.4 | 112 | 114 | 68.0-126 | | | 1.26 | 20 |
| Chlorobenzene | 25.0 | 25.4 | 26.1 | 102 | 104 | 80.0-121 | | | 2.62 | 20 |
| Chlorodibromomethane | 25.0 | 27.3 | 28.1 | 109 | 113 | 77.0-125 | | | 3.10 | 20 |
| Chloroethane | 25.0 | 21.5 | 20.8 | 86.1 | 83.2 | 47.0-150 | | | 3.40 | 20 |
| Chloroform | 25.0 | 27.7 | 27.9 | 111 | 112 | 73.0-120 | | | 0.783 | 20 |
| Chloromethane | 25.0 | 23.1 | 23.6 | 92.3 | 94.3 | 41.0-142 | | | 2.19 | 20 |
| 1,3-Butadiene | 25.0 | 13.4 | 12.9 | 53.5 | 51.7 | 45.0-147 | | | 3.37 | 20 |
| 2-Chlorotoluene | 25.0 | 25.0 | 26.1 | 99.9 | 104 | 76.0-123 | | | 4.25 | 20 |
| 4-Chlorotoluene | 25.0 | 26.5 | 27.1 | 106 | 108 | 75.0-122 | | | 2.23 | 20 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 17.6 | 18.5 | 70.4 | 74.0 | 58.0-134 | | | 4.95 | 20 |
| 1,2-Dibromoethane | 25.0 | 26.8 | 28.0 | 107 | 112 | 80.0-122 | | | 4.48 | 20 |
| Carbon disulfide | 25.0 | 20.5 | 20.8 | 82.2 | 83.3 | 61.0-128 | | | 1.34 | 20 |
| Dibromomethane | 25.0 | 28.8 | 28.7 | 115 | 115 | 80.0-120 | | | 0.370 | 20 |
| 1,2-Dichlorobenzene | 25.0 | 26.4 | 26.7 | 106 | 107 | 79.0-121 | | | 0.847 | 20 |
| 1,3-Dichlorobenzene | 25.0 | 25.7 | 25.9 | 103 | 103 | 79.0-120 | | | 0.797 | 20 |
| 1,4-Dichlorobenzene | 25.0 | 25.9 | 25.7 | 104 | 103 | 79.0-120 | | | 0.813 | 20 |
| Dichlorodifluoromethane | 25.0 | 21.0 | 21.5 | 84.1 | 86.0 | 51.0-149 | | | 2.23 | 20 |
| 1,1-Dichloroethane | 25.0 | 26.3 | 26.4 | 105 | 106 | 70.0-126 | | | 0.275 | 20 |
| 1,2-Dichloroethane | 25.0 | 26.5 | 26.5 | 106 | 106 | 70.0-128 | | | 0.218 | 20 |
| Cyclohexane | 25.0 | 25.2 | 25.1 | 101 | 100 | 71.0-124 | | | 0.562 | 20 |
| 1,1-Dichloroethene | 25.0 | 24.0 | 24.4 | 95.9 | 97.6 | 71.0-124 | | | 1.72 | 20 |
| cis-1,2-Dichloroethene | 25.0 | 26.9 | 28.2 | 108 | 113 | 73.0-120 | | | 4.53 | 20 |
| trans-1,2-Dichloroethene | 25.0 | 27.1 | 26.9 | 108 | 108 | 73.0-120 | | | 0.808 | 20 |
| 1,2-Dichloropropane | 25.0 | 26.0 | 25.7 | 104 | 103 | 77.0-125 | | | 1.04 | 20 |
| 1,1-Dichloropropene | 25.0 | 26.8 | 26.5 | 107 | 106 | 74.0-126 | | | 1.15 | 20 |
| 1,3-Dichloropropane | 25.0 | 26.4 | 27.1 | 106 | 108 | 80.0-120 | | | 2.43 | 20 |
| cis-1,3-Dichloropropene | 25.0 | 27.1 | 27.4 | 108 | 110 | 80.0-123 | | | 1.09 | 20 |
| trans-1,3-Dichloropropene | 25.0 | 26.7 | 27.4 | 107 | 110 | 78.0-124 | | | 2.62 | 20 |
| 2,2-Dichloropropane | 25.0 | 23.4 | 24.3 | 93.5 | 97.0 | 58.0-130 | | | 3.75 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3389114-1 03/05/19 15:15 • (LCSD) R3389114-2 03/05/19 15:35

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Di-isopropyl ether | 25.0 | 26.2 | 26.2 | 105 | 105 | 58.0-138 | | | 0.208 | 20 |
| Ethylbenzene | 25.0 | 26.9 | 27.5 | 108 | 110 | 79.0-123 | | | 2.40 | 20 |
| Hexachloro-1,3-butadiene | 25.0 | 23.2 | 24.5 | 92.8 | 97.8 | 54.0-138 | | | 5.25 | 20 |
| Isopropylbenzene | 25.0 | 25.8 | 26.4 | 103 | 106 | 76.0-127 | | | 2.49 | 20 |
| p-Isopropyltoluene | 25.0 | 27.3 | 27.5 | 109 | 110 | 76.0-125 | | | 0.847 | 20 |
| 2-Butanone (MEK) | 125 | 115 | 119 | 92.4 | 94.9 | 44.0-160 | | | 2.71 | 20 |
| Methylene Chloride | 25.0 | 25.9 | 26.0 | 103 | 104 | 67.0-120 | | | 0.554 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 120 | 126 | 96.0 | 100 | 68.0-142 | | | 4.57 | 20 |
| Dicyclopentadiene | 25.0 | 24.7 | 25.3 | 99.0 | 101 | 74.0-126 | | | 2.32 | 20 |
| Methyl tert-butyl ether | 25.0 | 27.7 | 28.1 | 111 | 112 | 68.0-125 | | | 1.55 | 20 |
| 4-Ethyltoluene | 25.0 | 27.0 | 27.1 | 108 | 108 | 74.0-127 | | | 0.179 | 20 |
| Naphthalene | 25.0 | 15.0 | 16.8 | 60.2 | 67.1 | 54.0-135 | | | 10.8 | 20 |
| n-Propylbenzene | 25.0 | 26.4 | 26.4 | 106 | 106 | 77.0-124 | | | 0.140 | 20 |
| n-Hexane | 25.0 | 20.3 | 20.5 | 81.1 | 82.1 | 57.0-133 | | | 1.20 | 20 |
| Styrene | 25.0 | 26.1 | 26.7 | 104 | 107 | 73.0-130 | | | 2.36 | 20 |
| 1,1,1,2-Tetrachloroethane | 25.0 | 27.1 | 28.6 | 108 | 114 | 75.0-125 | | | 5.43 | 20 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.5 | 25.1 | 102 | 101 | 65.0-130 | | | 1.55 | 20 |
| Tetrachloroethene | 25.0 | 26.2 | 26.8 | 105 | 107 | 72.0-132 | | | 2.18 | 20 |
| Toluene | 25.0 | 24.8 | 25.3 | 99.1 | 101 | 79.0-120 | | | 2.20 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 25.0 | 24.4 | 24.3 | 97.6 | 97.4 | 69.0-132 | | | 0.196 | 20 |
| Methyl Cyclohexane | 25.0 | 24.1 | 23.5 | 96.3 | 94.2 | 68.0-126 | | | 2.16 | 20 |
| 1,2,3-Trichlorobenzene | 25.0 | 15.5 | 18.4 | 62.0 | 73.7 | 50.0-138 | | | 17.2 | 20 |
| 1,2,4-Trichlorobenzene | 25.0 | 18.2 | 20.1 | 73.0 | 80.3 | 57.0-137 | | | 9.54 | 20 |
| 1,1,1-Trichloroethane | 25.0 | 27.1 | 27.7 | 109 | 111 | 73.0-124 | | | 2.13 | 20 |
| 1,1,2-Trichloroethane | 25.0 | 26.5 | 27.0 | 106 | 108 | 80.0-120 | | | 1.78 | 20 |
| Trichloroethene | 25.0 | 27.9 | 28.4 | 112 | 114 | 78.0-124 | | | 1.93 | 20 |
| Trichlorofluoromethane | 25.0 | 27.5 | 27.6 | 110 | 110 | 59.0-147 | | | 0.292 | 20 |
| 1,2,3-Trichloropropane | 25.0 | 25.5 | 26.6 | 102 | 106 | 73.0-130 | | | 4.10 | 20 |
| Propene | 25.0 | 2.77 | 2.80 | 11.1 | 11.2 | 10.0-160 | | | 0.936 | 20 |
| 1,2,3-Trimethylbenzene | 25.0 | 27.2 | 27.3 | 109 | 109 | 77.0-120 | | | 0.475 | 20 |
| 1,2,4-Trimethylbenzene | 25.0 | 27.3 | 27.4 | 109 | 110 | 76.0-121 | | | 0.651 | 20 |
| 1,3,5-Trimethylbenzene | 25.0 | 25.8 | 25.9 | 103 | 104 | 76.0-122 | | | 0.252 | 20 |
| Vinyl chloride | 25.0 | 23.1 | 22.7 | 92.4 | 90.6 | 67.0-131 | | | 1.95 | 20 |
| Xylenes, Total | 75.0 | 78.7 | 81.0 | 105 | 108 | 79.0-123 | | | 2.88 | 20 |
| *(S) Toluene-d8* | | | | *98.9* | *98.6* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *98.7* | *101* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *111* | *113* | *70.0-130* | | | | |

## Instrument: VOCMS6 • File ID: 0305_15

03/05/19 15:15

| Sample ID | File ID | 8260-FLUOROBENZENE Response | 8260-CHLOROBENZENE-D5 Response | 8260-1,4-DICHLOROBENZENE-D4 Response |
|---|---|---|---|---|
| Standard | 0305_15 | 61168 | 61168 | 53375 |
| Upper Limit | | 122336 | 122336 | 106750 |
| Lower Limit | | 30584 | 30584 | 26688 |
| LCS R3389114-1 WG1245080 1x | 0305_15LCS | 61168 | 61168 | 53375 |
| LCSD R3389114-2 WG1245080 1x | 0305_16 | 59277 | 59277 | 52914 |
| BLANK R3389114-5 WG1245080 1x | 0305_20 | 53800 | 53800 | 43530 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|
| E1 | Concentration estimated. Analyte exceeded calibration range. Reanalysis not possible due to insufficient sample. |
| E4 | Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL. |
| M1 | Matrix spike recovery was high, the method control sample recovery was acceptable. |
| M2 | Matrix spike recovery was low, the method control sample recovery was acceptable. |

# ACCREDITATIONS & LOCATIONS



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

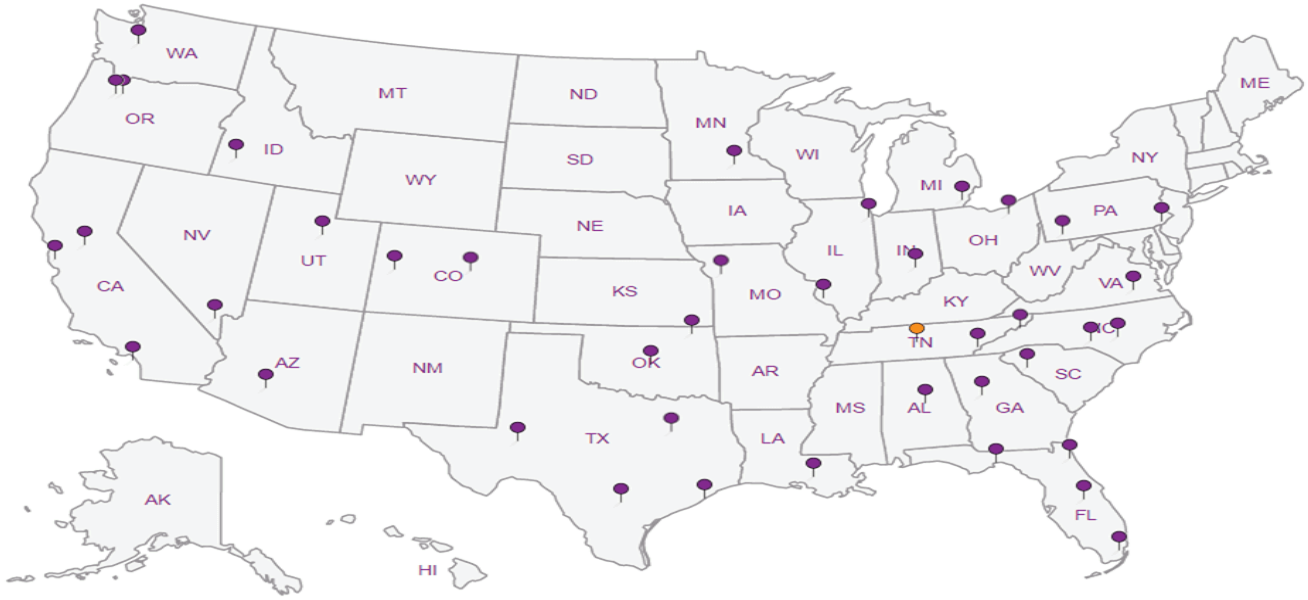
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



~~Wood~~ Maricopa County WR&R
~~4600 E. Washington St~~ 2910 W Durango St
~~Suite 600~~
~~Phoenix, AZ 85034~~ Phoenix, AZ 85009

Billing Information: Maricopa County WR&R - Attn: Kathryn Snyder

Report to: **Samantha Sargent**

Email To: **Samantha.sargent@woodplc.com**

Project Description: **Cave Creek landfill**

City/State Collected:

Phone: **602-733-6110**
Fax:

Client Project # 1420192004.~~****~~.021

Lab Project #

Collected by (print): Jasmine Ramirez

Site/Facility ID #

P.O. # **C014102663**

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

***Rush?*** (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote # **AMECTAZ012119S**

Date Results Needed: STD TAT

Analysis / Container / Preservative

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cnts | VOCs 8260B/ 40mL amber/ HCl | ALK2320 B/ 250mL HDPE/ No Pres | TDS 2540C, Conductivity 9050A/ 250mL | Metals* 6010/ 250mL HDPE/HNO3 ✓ | NO2/NO3 by 353.2/ 250mL HDPE/ H2SO4 ✓ | Chloride, Fluoride, Sulfate 9056/ 250mL | | | | Remarks | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW03-724-030419 | Grab | GW | 724 | 3-4-19 | 1210 | 7 | X | X | X | X | X | X | | | | | -01 |

Pres Chk

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1075330
Tabl 1014
Acctnum: **AMECTAZ**
Template:
Prelogin:
TSR: **Daphne Richards**
PB:
Shipped Via:

* Matrix:
**SS** - Soil **AIR** - Air **F** - Filter
**GW** - Groundwater **B** - Bioassay
**WW** - WasteWater
**DW** - Drinking Water
**OT** - Other_____

**Remarks:**
***Metals=Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Ni, Se, Ag, Tl ,V, Zn**

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N

| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Trip Blank Received: Yes / No HCL / MeoH TBR |
|---|---|---|---|---|
| | 3-4-19 | 1335 | | |
| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Temp: °C Bottles Received: |
| | 3/4/19 | 1800 | SWA | 0.5±0 7 |
| Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: Time: |
| | | | Malpk | 3/5 8:45 |

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ESCAZ

# ANALYTICAL REPORT

March 06, 2019

## Wood E&I Solutions Inc. - Phoenix, AZ

| | |
|---|---|
| Sample Delivery Group: | L1075345 |
| Samples Received: | 03/05/2019 |
| Project Number: | 1420192004.****.021 |
| Description: | Cave Creek Landfill |
| Report To: | Samantha Sargent<br>4600 East Washington Street, Ste 600<br>Phoenix, AZ 85034 |

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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## MW12-729-030419 L1075345-01 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/04/19 08:20 | 03/05/19 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1245080 | 1 | 03/05/19 21:07 | 03/05/19 21:07 | DWR | Mt. Juliet, TN |

## TSSV05-760-030419 L1075345-02 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/04/19 09:00 | 03/05/19 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1245080 | 1 | 03/05/19 21:27 | 03/05/19 21:27 | DWR | Mt. Juliet, TN |

## TSSV06-729-030419 L1075345-03 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/04/19 10:10 | 03/05/19 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1245080 | 1 | 03/05/19 21:47 | 03/05/19 21:47 | DWR | Mt. Juliet, TN |

## TSSV02-733-030419 L1075345-04 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/04/19 10:50 | 03/05/19 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1245080 | 1 | 03/05/19 22:06 | 03/05/19 22:06 | DWR | Mt. Juliet, TN |

## TRIP BLANK-030419 L1075345-05 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| Jasmine Ramirez | 03/04/19 13:39 | 03/05/19 08:45 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260B | WG1245080 | 1 | 03/05/19 18:30 | 03/05/19 18:30 | DWR | Mt. Juliet, TN |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 0.0500 | 1 | 03/05/2019 21:07 | WG1245080 |
| Acrolein | ND | | 0.0500 | 1 | 03/05/2019 21:07 | WG1245080 |
| Acrylonitrile | ND | | 0.0100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Benzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Bromobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Bromodichloromethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Bromoform | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Bromomethane | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,3-Butadiene | ND | | 0.00200 | 1 | 03/05/2019 21:07 | WG1245080 |
| n-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| sec-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| tert-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Carbon tetrachloride | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Carbon disulfide | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Chlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Chlorodibromomethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Chloroethane | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| Chloroform | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| Chloromethane | ND | | 0.00250 | 1 | 03/05/2019 21:07 | WG1245080 |
| Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 2-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 4-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2-Dibromoethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Dibromomethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,3-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,4-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Dichlorodifluoromethane | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| cis-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| trans-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,3-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| cis-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| trans-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 2,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Dicyclopentadiene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Di-isopropyl ether | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Ethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 4-Ethyltoluene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Hexachloro-1,3-butadiene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| n-Hexane | ND | | 0.0100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Isopropylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| p-Isopropyltoluene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 2-Butanone (MEK) | ND | | 0.0100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Methyl Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Methylene Chloride | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.0100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Methyl tert-butyl ether | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Naphthalene | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| Propene | ND | | 0.00250 | 1 | 03/05/2019 21:07 | WG1245080 |
| n-Propylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Tetrachloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Toluene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2,3-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2,4-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1,1-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,1,2-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Trichloroethene | 0.00193 | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Trichlorofluoromethane | ND | | 0.00500 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2,3-Trichloropropane | ND | | 0.00250 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2,4-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,2,3-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| 1,3,5-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Vinyl chloride | ND | | 0.00100 | 1 | 03/05/2019 21:07 | WG1245080 |
| Xylenes, Total | ND | | 0.00300 | 1 | 03/05/2019 21:07 | WG1245080 |
| *(S) Toluene-d8* | *106* | | *80.0-120* | | *03/05/2019 21:07* | WG1245080 |
| *(S) 4-Bromofluorobenzene* | *101* | | *77.0-126* | | *03/05/2019 21:07* | WG1245080 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | *70.0-130* | | *03/05/2019 21:07* | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 0.0500 | 1 | 03/05/2019 21:27 | WG1245080 |
| Acrolein | ND | | 0.0500 | 1 | 03/05/2019 21:27 | WG1245080 |
| Acrylonitrile | ND | | 0.0100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Benzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Bromobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Bromodichloromethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Bromoform | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Bromomethane | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,3-Butadiene | ND | | 0.00200 | 1 | 03/05/2019 21:27 | WG1245080 |
| n-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| sec-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| tert-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Carbon tetrachloride | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Carbon disulfide | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Chlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Chlorodibromomethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Chloroethane | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| Chloroform | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| Chloromethane | ND | | 0.00250 | 1 | 03/05/2019 21:27 | WG1245080 |
| Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 2-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 4-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2-Dibromoethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Dibromomethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,3-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,4-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Dichlorodifluoromethane | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| cis-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| trans-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,3-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| cis-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| trans-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 2,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Dicyclopentadiene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Di-isopropyl ether | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Ethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 4-Ethyltoluene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Hexachloro-1,3-butadiene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| n-Hexane | ND | | 0.0100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Isopropylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| p-Isopropyltoluene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 2-Butanone (MEK) | ND | | 0.0100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Methyl Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Methylene Chloride | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.0100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Methyl tert-butyl ether | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Naphthalene | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| Propene | ND | | 0.00250 | 1 | 03/05/2019 21:27 | WG1245080 |
| n-Propylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Tetrachloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Toluene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2,3-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2,4-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1,1-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,1,2-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Trichloroethene | 0.00476 | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Trichlorofluoromethane | ND | | 0.00500 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2,3-Trichloropropane | ND | | 0.00250 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2,4-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,2,3-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| 1,3,5-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Vinyl chloride | ND | | 0.00100 | 1 | 03/05/2019 21:27 | WG1245080 |
| Xylenes, Total | ND | | 0.00300 | 1 | 03/05/2019 21:27 | WG1245080 |
| *(S) Toluene-d8* | *107* | | *80.0-120* | | *03/05/2019 21:27* | WG1245080 |
| *(S) 4-Bromofluorobenzene* | *104* | | *77.0-126* | | *03/05/2019 21:27* | WG1245080 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | *70.0-130* | | *03/05/2019 21:27* | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 0.0500 | 1 | 03/05/2019 21:47 | WG1245080 |
| Acrolein | ND | | 0.0500 | 1 | 03/05/2019 21:47 | WG1245080 |
| Acrylonitrile | ND | | 0.0100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Benzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Bromobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Bromodichloromethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Bromoform | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Bromomethane | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,3-Butadiene | ND | | 0.00200 | 1 | 03/05/2019 21:47 | WG1245080 |
| n-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| sec-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| tert-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Carbon tetrachloride | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Carbon disulfide | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Chlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Chlorodibromomethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Chloroethane | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| Chloroform | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| Chloromethane | ND | | 0.00250 | 1 | 03/05/2019 21:47 | WG1245080 |
| Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 2-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 4-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2-Dibromoethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Dibromomethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,3-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,4-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Dichlorodifluoromethane | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1-Dichloroethene | 0.00132 | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| cis-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| trans-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,3-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| cis-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| trans-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 2,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Dicyclopentadiene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Di-isopropyl ether | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Ethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 4-Ethyltoluene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Hexachloro-1,3-butadiene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| n-Hexane | ND | | 0.0100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Isopropylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| p-Isopropyltoluene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 2-Butanone (MEK) | ND | | 0.0100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Methyl Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Methylene Chloride | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.0100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Methyl tert-butyl ether | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Naphthalene | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| Propene | ND | | 0.00250 | 1 | 03/05/2019 21:47 | WG1245080 |
| n-Propylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Tetrachloroethene | 0.00243 | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Toluene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2,3-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2,4-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1,1-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,1,2-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Trichloroethene | 0.0136 | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Trichlorofluoromethane | ND | | 0.00500 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2,3-Trichloropropane | ND | | 0.00250 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2,4-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,2,3-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| 1,3,5-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Vinyl chloride | ND | | 0.00100 | 1 | 03/05/2019 21:47 | WG1245080 |
| Xylenes, Total | ND | | 0.00300 | 1 | 03/05/2019 21:47 | WG1245080 |
| *(S) Toluene-d8* | *107* | | *80.0-120* | | *03/05/2019 21:47* | WG1245080 |
| *(S) 4-Bromofluorobenzene* | *103* | | *77.0-126* | | *03/05/2019 21:47* | WG1245080 |
| *(S) 1,2-Dichloroethane-d4* | *104* | | *70.0-130* | | *03/05/2019 21:47* | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 0.0500 | 1 | 03/05/2019 22:06 | WG1245080 |
| Acrolein | ND | | 0.0500 | 1 | 03/05/2019 22:06 | WG1245080 |
| Acrylonitrile | ND | | 0.0100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Benzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Bromobenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Bromodichloromethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Bromoform | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Bromomethane | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,3-Butadiene | ND | | 0.00200 | 1 | 03/05/2019 22:06 | WG1245080 |
| n-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| sec-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| tert-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Carbon tetrachloride | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Carbon disulfide | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Chlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Chlorodibromomethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Chloroethane | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| Chloroform | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| Chloromethane | ND | | 0.00250 | 1 | 03/05/2019 22:06 | WG1245080 |
| Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 2-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 4-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2-Dibromoethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Dibromomethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,3-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,4-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Dichlorodifluoromethane | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| cis-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| trans-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,3-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| cis-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| trans-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 2,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Dicyclopentadiene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Di-isopropyl ether | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Ethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 4-Ethyltoluene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Hexachloro-1,3-butadiene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| n-Hexane | ND | | 0.0100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Isopropylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| p-Isopropyltoluene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 2-Butanone (MEK) | ND | | 0.0100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Methyl Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Methylene Chloride | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.0100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Methyl tert-butyl ether | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Naphthalene | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| Propene | ND | | 0.00250 | 1 | 03/05/2019 22:06 | WG1245080 |
| n-Propylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Tetrachloroethene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Toluene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2,3-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2,4-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1,1-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,1,2-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Trichloroethene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Trichlorofluoromethane | ND | | 0.00500 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2,3-Trichloropropane | ND | | 0.00250 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2,4-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,2,3-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| 1,3,5-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Vinyl chloride | ND | | 0.00100 | 1 | 03/05/2019 22:06 | WG1245080 |
| Xylenes, Total | ND | | 0.00300 | 1 | 03/05/2019 22:06 | WG1245080 |
| *(S) Toluene-d8* | *109* | | *80.0-120* | | *03/05/2019 22:06* | WG1245080 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/05/2019 22:06* | WG1245080 |
| *(S) 1,2-Dichloroethane-d4* | *98.8* | | *70.0-130* | | *03/05/2019 22:06* | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Acetone | ND | | 0.0500 | 1 | 03/05/2019 18:30 | WG1245080 |
| Acrolein | ND | | 0.0500 | 1 | 03/05/2019 18:30 | WG1245080 |
| Acrylonitrile | ND | | 0.0100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Benzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Bromobenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Bromodichloromethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Bromoform | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Bromomethane | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,3-Butadiene | ND | | 0.00200 | 1 | 03/05/2019 18:30 | WG1245080 |
| n-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| sec-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| tert-Butylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Carbon tetrachloride | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Carbon disulfide | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Chlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Chlorodibromomethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Chloroethane | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| Chloroform | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| Chloromethane | ND | | 0.00250 | 1 | 03/05/2019 18:30 | WG1245080 |
| Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 2-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 4-Chlorotoluene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2-Dibromo-3-Chloropropane | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2-Dibromoethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Dibromomethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,3-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,4-Dichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Dichlorodifluoromethane | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2-Dichloroethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| cis-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| trans-1,2-Dichloroethene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,3-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| cis-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| trans-1,3-Dichloropropene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 2,2-Dichloropropane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Dicyclopentadiene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Di-isopropyl ether | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Ethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 4-Ethyltoluene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Hexachloro-1,3-butadiene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| n-Hexane | ND | | 0.0100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Isopropylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| p-Isopropyltoluene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 2-Butanone (MEK) | ND | | 0.0100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Methyl Cyclohexane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Methylene Chloride | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 0.0100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Methyl tert-butyl ether | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Naphthalene | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| Propene | ND | | 0.00250 | 1 | 03/05/2019 18:30 | WG1245080 |
| n-Propylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |

## Volatile Organic Compounds (GC/MS) by Method 8260B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Dilution | Analysis date / time | Batch |
|---|---|---|---|---|---|---|
| Styrene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1,2-Trichlorotrifluoroethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Tetrachloroethene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Toluene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2,3-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2,4-Trichlorobenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1,1-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,1,2-Trichloroethane | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Trichloroethene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Trichlorofluoromethane | ND | | 0.00500 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2,3-Trichloropropane | ND | | 0.00250 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2,4-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,2,3-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| 1,3,5-Trimethylbenzene | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Vinyl chloride | ND | | 0.00100 | 1 | 03/05/2019 18:30 | WG1245080 |
| Xylenes, Total | ND | | 0.00300 | 1 | 03/05/2019 18:30 | WG1245080 |
| *(S) Toluene-d8* | *105* | | *80.0-120* | | *03/05/2019 18:30* | WG1245080 |
| *(S) 4-Bromofluorobenzene* | *102* | | *77.0-126* | | *03/05/2019 18:30* | WG1245080 |
| *(S) 1,2-Dichloroethane-d4* | *102* | | *70.0-130* | | *03/05/2019 18:30* | WG1245080 |

## Method Blank (MB)

(MB) R3389114-5 03/05/19 16:52

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---|---|---|---|---|
| Acetone | U | | 0.0100 | 0.0500 |
| Acrolein | U | | 0.00887 | 0.0500 |
| Acrylonitrile | U | | 0.00187 | 0.0100 |
| Benzene | U | | 0.000331 | 0.00100 |
| Bromobenzene | U | | 0.000352 | 0.00100 |
| Bromodichloromethane | U | | 0.000380 | 0.00100 |
| Bromoform | U | | 0.000469 | 0.00100 |
| Bromomethane | U | | 0.000866 | 0.00500 |
| n-Butylbenzene | U | | 0.000361 | 0.00100 |
| 1,3-Butadiene | U | | 0.000330 | 0.00200 |
| sec-Butylbenzene | U | | 0.000365 | 0.00100 |
| tert-Butylbenzene | U | | 0.000399 | 0.00100 |
| Carbon tetrachloride | U | | 0.000379 | 0.00100 |
| Carbon disulfide | U | | 0.000275 | 0.00100 |
| Chlorobenzene | U | | 0.000348 | 0.00100 |
| Chlorodibromomethane | U | | 0.000327 | 0.00100 |
| Chloroethane | U | | 0.000453 | 0.00500 |
| Chloroform | U | | 0.000324 | 0.00500 |
| Chloromethane | U | | 0.000276 | 0.00250 |
| 2-Chlorotoluene | U | | 0.000375 | 0.00100 |
| 4-Chlorotoluene | U | | 0.000351 | 0.00100 |
| Cyclohexane | U | | 0.000390 | 0.00100 |
| 1,2-Dibromo-3-Chloropropane | U | | 0.00133 | 0.00500 |
| 1,2-Dibromoethane | U | | 0.000381 | 0.00100 |
| Dibromomethane | U | | 0.000346 | 0.00100 |
| 1,2-Dichlorobenzene | U | | 0.000349 | 0.00100 |
| 1,3-Dichlorobenzene | U | | 0.000220 | 0.00100 |
| 1,4-Dichlorobenzene | U | | 0.000274 | 0.00100 |
| Dichlorodifluoromethane | U | | 0.000551 | 0.00500 |
| 1,1-Dichloroethane | U | | 0.000259 | 0.00100 |
| 1,2-Dichloroethane | U | | 0.000361 | 0.00100 |
| 1,1-Dichloroethene | U | | 0.000398 | 0.00100 |
| cis-1,2-Dichloroethene | U | | 0.000260 | 0.00100 |
| trans-1,2-Dichloroethene | U | | 0.000396 | 0.00100 |
| 1,2-Dichloropropane | U | | 0.000306 | 0.00100 |
| 1,1-Dichloropropene | U | | 0.000352 | 0.00100 |
| 1,3-Dichloropropane | U | | 0.000366 | 0.00100 |
| cis-1,3-Dichloropropene | U | | 0.000418 | 0.00100 |
| trans-1,3-Dichloropropene | U | | 0.000419 | 0.00100 |
| 2,2-Dichloropropane | U | | 0.000321 | 0.00100 |

## Method Blank (MB)

(MB) R3389114-5 03/05/19 16:52

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|---|---|---|---|---|
| Di-isopropyl ether | U | | 0.000320 | 0.00100 |
| Dicyclopentadiene | U | | 0.000219 | 0.00100 |
| Ethylbenzene | U | | 0.000384 | 0.00100 |
| 4-Ethyltoluene | U | | 0.000172 | 0.00100 |
| Hexachloro-1,3-butadiene | U | | 0.000256 | 0.00100 |
| Isopropylbenzene | U | | 0.000326 | 0.00100 |
| n-Hexane | U | | 0.000736 | 0.0100 |
| p-Isopropyltoluene | U | | 0.000350 | 0.00100 |
| 2-Butanone (MEK) | U | | 0.00393 | 0.0100 |
| Methylene Chloride | U | | 0.00100 | 0.00500 |
| 4-Methyl-2-pentanone (MIBK) | U | | 0.00214 | 0.0100 |
| Methyl Cyclohexane | U | | 0.000380 | 0.00100 |
| Methyl tert-butyl ether | U | | 0.000367 | 0.00100 |
| Naphthalene | 0.00170 | E4 | 0.00100 | 0.00500 |
| n-Propylbenzene | U | | 0.000349 | 0.00100 |
| Propene | U | | 0.000975 | 0.00250 |
| Styrene | U | | 0.000307 | 0.00100 |
| 1,1,1,2-Tetrachloroethane | U | | 0.000385 | 0.00100 |
| 1,1,2,2-Tetrachloroethane | U | | 0.000130 | 0.00100 |
| Tetrachloroethene | U | | 0.000372 | 0.00100 |
| Toluene | U | | 0.000412 | 0.00100 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.000303 | 0.00100 |
| 1,2,3-Trichlorobenzene | U | | 0.000230 | 0.00100 |
| 1,2,4-Trichlorobenzene | U | | 0.000355 | 0.00100 |
| 1,1,1-Trichloroethane | U | | 0.000319 | 0.00100 |
| 1,1,2-Trichloroethane | U | | 0.000383 | 0.00100 |
| Trichloroethene | U | | 0.000398 | 0.00100 |
| Trichlorofluoromethane | U | | 0.00120 | 0.00500 |
| 1,2,3-Trichloropropane | U | | 0.000807 | 0.00250 |
| 1,2,3-Trimethylbenzene | U | | 0.000321 | 0.00100 |
| 1,2,4-Trimethylbenzene | U | | 0.000373 | 0.00100 |
| 1,3,5-Trimethylbenzene | U | | 0.000387 | 0.00100 |
| Vinyl chloride | U | | 0.000259 | 0.00100 |
| Xylenes, Total | U | | 0.00106 | 0.00300 |
| *(S) Toluene-d8* | *107* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *105* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *102* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3389114-1 03/05/19 15:15 • (LCSD) R3389114-2 03/05/19 15:35

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 0.125 | 0.111 | 0.117 | 89.0 | 93.5 | 19.0-160 | | | 5.03 | 27 |
| Acrylonitrile | 0.125 | 0.121 | 0.126 | 96.9 | 100 | 55.0-149 | | | 3.64 | 20 |
| Benzene | 0.0250 | 0.0265 | 0.0263 | 106 | 105 | 70.0-123 | | | 0.657 | 20 |
| Bromobenzene | 0.0250 | 0.0256 | 0.0254 | 103 | 102 | 73.0-121 | | | 0.754 | 20 |
| Bromodichloromethane | 0.0250 | 0.0269 | 0.0273 | 108 | 109 | 75.0-120 | | | 1.42 | 20 |
| Bromoform | 0.0250 | 0.0242 | 0.0253 | 96.8 | 101 | 68.0-132 | | | 4.30 | 20 |
| Bromomethane | 0.0250 | 0.0264 | 0.0247 | 106 | 98.8 | 10.0-160 | | | 6.66 | 25 |
| n-Butylbenzene | 0.0250 | 0.0256 | 0.0257 | 102 | 103 | 73.0-125 | | | 0.375 | 20 |
| sec-Butylbenzene | 0.0250 | 0.0255 | 0.0254 | 102 | 102 | 75.0-125 | | | 0.378 | 20 |
| tert-Butylbenzene | 0.0250 | 0.0268 | 0.0267 | 107 | 107 | 76.0-124 | | | 0.349 | 20 |
| Acrolein | 0.125 | 0.107 | 0.102 | 85.8 | 81.7 | 10.0-160 | | | 4.88 | 26 |
| Carbon tetrachloride | 0.0250 | 0.0280 | 0.0284 | 112 | 114 | 68.0-126 | | | 1.26 | 20 |
| Chlorobenzene | 0.0250 | 0.0254 | 0.0261 | 102 | 104 | 80.0-121 | | | 2.62 | 20 |
| Chlorodibromomethane | 0.0250 | 0.0273 | 0.0281 | 109 | 113 | 77.0-125 | | | 3.10 | 20 |
| Chloroethane | 0.0250 | 0.0215 | 0.0208 | 86.1 | 83.2 | 47.0-150 | | | 3.40 | 20 |
| Chloroform | 0.0250 | 0.0277 | 0.0279 | 111 | 112 | 73.0-120 | | | 0.783 | 20 |
| Chloromethane | 0.0250 | 0.0231 | 0.0236 | 92.3 | 94.3 | 41.0-142 | | | 2.19 | 20 |
| 1,3-Butadiene | 0.0250 | 0.0134 | 0.0129 | 53.5 | 51.7 | 45.0-147 | | | 3.37 | 20 |
| 2-Chlorotoluene | 0.0250 | 0.0250 | 0.0261 | 99.9 | 104 | 76.0-123 | | | 4.25 | 20 |
| 4-Chlorotoluene | 0.0250 | 0.0265 | 0.0271 | 106 | 108 | 75.0-122 | | | 2.23 | 20 |
| 1,2-Dibromo-3-Chloropropane | 0.0250 | 0.0176 | 0.0185 | 70.4 | 74.0 | 58.0-134 | | | 4.95 | 20 |
| 1,2-Dibromoethane | 0.0250 | 0.0268 | 0.0280 | 107 | 112 | 80.0-122 | | | 4.48 | 20 |
| Carbon disulfide | 0.0250 | 0.0205 | 0.0208 | 82.2 | 83.3 | 61.0-128 | | | 1.34 | 20 |
| Dibromomethane | 0.0250 | 0.0288 | 0.0287 | 115 | 115 | 80.0-120 | | | 0.370 | 20 |
| 1,2-Dichlorobenzene | 0.0250 | 0.0264 | 0.0267 | 106 | 107 | 79.0-121 | | | 0.847 | 20 |
| 1,3-Dichlorobenzene | 0.0250 | 0.0257 | 0.0259 | 103 | 103 | 79.0-120 | | | 0.797 | 20 |
| 1,4-Dichlorobenzene | 0.0250 | 0.0259 | 0.0257 | 104 | 103 | 79.0-120 | | | 0.813 | 20 |
| Dichlorodifluoromethane | 0.0250 | 0.0210 | 0.0215 | 84.1 | 86.0 | 51.0-149 | | | 2.23 | 20 |
| 1,1-Dichloroethane | 0.0250 | 0.0263 | 0.0264 | 105 | 106 | 70.0-126 | | | 0.275 | 20 |
| 1,2-Dichloroethane | 0.0250 | 0.0265 | 0.0265 | 106 | 106 | 70.0-128 | | | 0.218 | 20 |
| Cyclohexane | 0.0250 | 0.0252 | 0.0251 | 101 | 100 | 71.0-124 | | | 0.562 | 20 |
| 1,1-Dichloroethene | 0.0250 | 0.0240 | 0.0244 | 95.9 | 97.6 | 71.0-124 | | | 1.72 | 20 |
| cis-1,2-Dichloroethene | 0.0250 | 0.0269 | 0.0282 | 108 | 113 | 73.0-120 | | | 4.53 | 20 |
| trans-1,2-Dichloroethene | 0.0250 | 0.0271 | 0.0269 | 108 | 108 | 73.0-120 | | | 0.808 | 20 |
| 1,2-Dichloropropane | 0.0250 | 0.0260 | 0.0257 | 104 | 103 | 77.0-125 | | | 1.04 | 20 |
| 1,1-Dichloropropene | 0.0250 | 0.0268 | 0.0265 | 107 | 106 | 74.0-126 | | | 1.15 | 20 |
| 1,3-Dichloropropane | 0.0250 | 0.0264 | 0.0271 | 106 | 108 | 80.0-120 | | | 2.43 | 20 |
| cis-1,3-Dichloropropene | 0.0250 | 0.0271 | 0.0274 | 108 | 110 | 80.0-123 | | | 1.09 | 20 |
| trans-1,3-Dichloropropene | 0.0250 | 0.0267 | 0.0274 | 107 | 110 | 78.0-124 | | | 2.62 | 20 |
| 2,2-Dichloropropane | 0.0250 | 0.0234 | 0.0243 | 93.5 | 97.0 | 58.0-130 | | | 3.75 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3389114-1 03/05/19 15:15 • (LCSD) R3389114-2 03/05/19 15:35

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Di-isopropyl ether | 0.0250 | 0.0262 | 0.0262 | 105 | 105 | 58.0-138 | | | 0.208 | 20 |
| Ethylbenzene | 0.0250 | 0.0269 | 0.0275 | 108 | 110 | 79.0-123 | | | 2.40 | 20 |
| Hexachloro-1,3-butadiene | 0.0250 | 0.0232 | 0.0245 | 92.8 | 97.8 | 54.0-138 | | | 5.25 | 20 |
| Isopropylbenzene | 0.0250 | 0.0258 | 0.0264 | 103 | 106 | 76.0-127 | | | 2.49 | 20 |
| p-Isopropyltoluene | 0.0250 | 0.0273 | 0.0275 | 109 | 110 | 76.0-125 | | | 0.847 | 20 |
| 2-Butanone (MEK) | 0.125 | 0.115 | 0.119 | 92.4 | 94.9 | 44.0-160 | | | 2.71 | 20 |
| Methylene Chloride | 0.0250 | 0.0259 | 0.0260 | 103 | 104 | 67.0-120 | | | 0.554 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 0.125 | 0.120 | 0.126 | 96.0 | 100 | 68.0-142 | | | 4.57 | 20 |
| Dicyclopentadiene | 0.0250 | 0.0247 | 0.0253 | 99.0 | 101 | 74.0-126 | | | 2.32 | 20 |
| Methyl tert-butyl ether | 0.0250 | 0.0277 | 0.0281 | 111 | 112 | 68.0-125 | | | 1.55 | 20 |
| 4-Ethyltoluene | 0.0250 | 0.0270 | 0.0271 | 108 | 108 | 74.0-127 | | | 0.179 | 20 |
| Naphthalene | 0.0250 | 0.0150 | 0.0168 | 60.2 | 67.1 | 54.0-135 | | | 10.8 | 20 |
| n-Propylbenzene | 0.0250 | 0.0264 | 0.0264 | 106 | 106 | 77.0-124 | | | 0.140 | 20 |
| n-Hexane | 0.0250 | 0.0203 | 0.0205 | 81.1 | 82.1 | 57.0-133 | | | 1.20 | 20 |
| Styrene | 0.0250 | 0.0261 | 0.0267 | 104 | 107 | 73.0-130 | | | 2.36 | 20 |
| 1,1,1,2-Tetrachloroethane | 0.0250 | 0.0271 | 0.0286 | 108 | 114 | 75.0-125 | | | 5.43 | 20 |
| 1,1,2,2-Tetrachloroethane | 0.0250 | 0.0255 | 0.0251 | 102 | 101 | 65.0-130 | | | 1.55 | 20 |
| Tetrachloroethene | 0.0250 | 0.0262 | 0.0268 | 105 | 107 | 72.0-132 | | | 2.18 | 20 |
| Toluene | 0.0250 | 0.0248 | 0.0253 | 99.1 | 101 | 79.0-120 | | | 2.20 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 0.0250 | 0.0244 | 0.0243 | 97.6 | 97.4 | 69.0-132 | | | 0.196 | 20 |
| Methyl Cyclohexane | 0.0250 | 0.0241 | 0.0235 | 96.3 | 94.2 | 68.0-126 | | | 2.16 | 20 |
| 1,2,3-Trichlorobenzene | 0.0250 | 0.0155 | 0.0184 | 62.0 | 73.7 | 50.0-138 | | | 17.2 | 20 |
| 1,2,4-Trichlorobenzene | 0.0250 | 0.0182 | 0.0201 | 73.0 | 80.3 | 57.0-137 | | | 9.54 | 20 |
| 1,1,1-Trichloroethane | 0.0250 | 0.0271 | 0.0277 | 109 | 111 | 73.0-124 | | | 2.13 | 20 |
| 1,1,2-Trichloroethane | 0.0250 | 0.0265 | 0.0270 | 106 | 108 | 80.0-120 | | | 1.78 | 20 |
| Trichloroethene | 0.0250 | 0.0279 | 0.0284 | 112 | 114 | 78.0-124 | | | 1.93 | 20 |
| Trichlorofluoromethane | 0.0250 | 0.0275 | 0.0276 | 110 | 110 | 59.0-147 | | | 0.292 | 20 |
| 1,2,3-Trichloropropane | 0.0250 | 0.0255 | 0.0266 | 102 | 106 | 73.0-130 | | | 4.10 | 20 |
| Propene | 0.0250 | 0.00277 | 0.00280 | 11.1 | 11.2 | 10.0-160 | | | 0.936 | 20 |
| 1,2,3-Trimethylbenzene | 0.0250 | 0.0272 | 0.0273 | 109 | 109 | 77.0-120 | | | 0.475 | 20 |
| 1,2,4-Trimethylbenzene | 0.0250 | 0.0273 | 0.0274 | 109 | 110 | 76.0-121 | | | 0.651 | 20 |
| 1,3,5-Trimethylbenzene | 0.0250 | 0.0258 | 0.0259 | 103 | 104 | 76.0-122 | | | 0.252 | 20 |
| Vinyl chloride | 0.0250 | 0.0231 | 0.0227 | 92.4 | 90.6 | 67.0-131 | | | 1.95 | 20 |
| Xylenes, Total | 0.0750 | 0.0787 | 0.0810 | 105 | 108 | 79.0-123 | | | 2.88 | 20 |
| *(S) Toluene-d8* | | | | *98.9* | *98.6* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *98.7* | *101* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *111* | *113* | *70.0-130* | | | | |

## Instrument: VOCMS6 • File ID: 0305_15

03/05/19 15:15

| Sample ID | File ID | 8260-FLUOROBENZENE Response | 8260-CHLOROBENZENE-D5 Response | 8260-1,4-DICHLOROBENZENE-D4 Response |
|---|---|---|---|---|
| Standard | 0305_15 | 61168 | 61168 | 53375 |
| Upper Limit | | 122336 | 122336 | 106750 |
| Lower Limit | | 30584 | 30584 | 26688 |
| LCS R3389114-1 WG1245080 1x | 0305_15LCS | 61168 | 61168 | 53375 |
| LCSD R3389114-2 WG1245080 1x | 0305_16 | 59277 | 59277 | 52914 |
| BLANK R3389114-5 WG1245080 1x | 0305_20 | 53800 | 53800 | 43530 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Is
8 Gl
9 Al
10 Sc

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|
| E4 | Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL. |

# ACCREDITATIONS & LOCATIONS



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

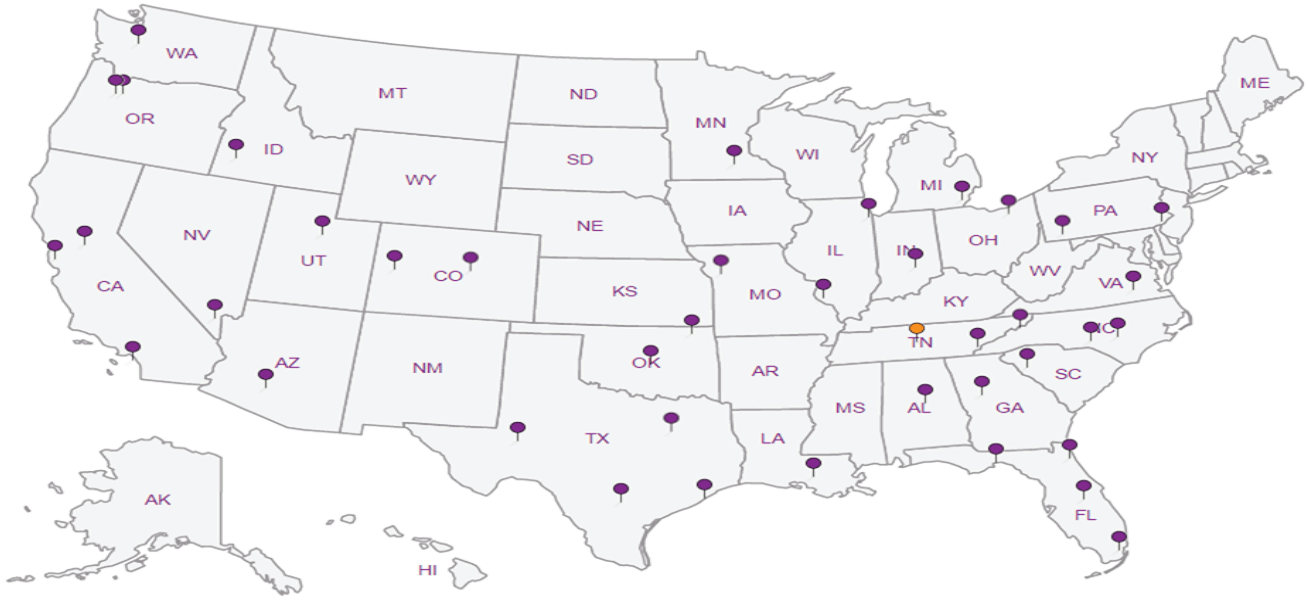
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



**Wood**
**4600 E. Washington St**
**Suite 600**
**Phoenix, AZ 85034**

Billing Information: Wood – Attn: Samantha Sargent

Pres Chk

Report to: **Samantha Sargent**

Email To: **Samantha.sargent@woodplc.com**

Project Description: **Cave Creek landfill**

City/State Collected: Phoenix, AZ

Phone: **602-733-6110**
Fax:

Client Project # 1420A2004.****.021

Lab Project #

Collected by (print): Jasmine Ramirez

Site/Facility ID #

P.O. # **C014102663**

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

***Rush?*** (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote # **AMECTAZ012119S**

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1075345
1012

Acctnum: **AMECTAZ**
Template:
Prelogin:
TSR: **Daphne Richards**
PB:
Shipped Via:

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | VOCs 8260B/ 40mL amber/ HCl | ALK2320 B/ 250mL HDPE/ No Pres | TDS 2540C,Conductivity 9050A/ 250mL | Metals* 6010/ 250mL HDPE/HNO3 | NO2/NO3 by 353.2/ 250mL HDPE/ H2SO4 | Chloride, Fluoride, Sulfate 9056/ 250mL | Remarks | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW12-729-030419 | Grab | GW | 729 | 3-4-19 | 0820 | 2 | X | | | | | | | -01 |
| TSSV05-760-030419 | Grab | GW | 760 | 3-4-19 | 0900 | 2 | X | | | | | | | -02 |
| TSSV06-729-030419 | Grab | GW | 729 | 3-4-19 | 1010 | 2 | X | | | | | | | -03 |
| TSSV02-733-030419 | Grab | GW | 733 | 3-4-19 | 1050 | 2 | X | | | | | | | -04 |
| ~~MW03-724-030419~~ | ~~Grab~~ | ~~GW~~ | ~~724~~ | ~~3-4-19~~ | ~~1210~~ | ~~7~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | | |
| TRIP BLANK-030419 | | | | 3-4-19 | 1339 | 1 | X | | | | | | | -05 |

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

**Remarks:**
***Metals=Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Ni, Se, Ag, Tl ,V, Zn**

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: __Y __N

| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Trip Blank Received: Yes / No HCl / MeoH TBR |
|---|---|---|---|---|
| | 3-4-19 | 1338 | | 1 |
| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Temp: °C Bottles Received: |
| | 3/4/19 | 1800 | SWA | 0.5±0.1 8 + TB |
| Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: Time: |
| | | | Malik T. | 3/5 8:45 |

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ESCAZ

# Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888


Date: April 2, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C016 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/19/2019 |

Dear Client:

Airtech Environmental Laboratories received seventeen (17) 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: April 2, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C016 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/19/2019 |

## SAMPLE SUMMARY

| LAB ID | CLIENT ID | METHOD | SAMPLE DATE | SAMPLE TIME |
|---|---|---|---|---|
| 19C016-01 | MW-09-SG-031419 | TO-15 | 3/14/2019 | 951 |
| 19C016-02 | MW-09S-SG-031419 | TO-15 | 3/14/2019 | 1017 |
| 19C016-03 | DUP01-031419 | TO-15 | 3/14/2019 | 1022 |
| 19C016-04 | MW-09D-SG-031419 | TO-15 | 3/14/2019 | 1106 |
| 19C016-05 | MW-10S-SG-031419 | TO-15 | 3/14/2019 | 1304 |
| 19C016-06 | MW-10D-SG-031419 | TO-15 | 3/14/2019 | 1341 |
| 19C016-07 | TSSV-6S-SG-031419 | TO-15 | 3/14/2019 | 1416 |
| 19C016-08 | TSSV-6M-SG-031419 | TO-15 | 3/14/2019 | 1441 |
| 19C016-09 | TSSV-6D-SG-031419 | TO-15 | 3/14/2019 | 1511 |
| 19C016-10 | TSSV-7M-SG-031819 | TO-15 | 3/18/2019 | 1121 |
| 19C016-11 | TSSV-7D-SG-031819 | TO-15 | 3/18/2019 | 1146 |
| 19C016-12 | DUP02-131819 | TO-15 | 3/18/2019 | 1155 |
| 19C016-13 | TSSV-7PZ-SG-031819 | TO-15 | 3/18/2019 | 1251 |
| 19C016-14 | TSSV-1S-SG-031819 | TO-15 | 3/18/2019 | 1411 |
| 19C016-15 | TSSV-1M-SG-031819 | TO-15 | 3/18/2019 | 1433 |
| 19C016-16 | DUP03-031819 | TO-15 | 3/18/2019 | 1440 |
| 19C016-17 | TSSV-1D-SG-031819 | TO-15 | 3/18/2019 | 1501 |

**Airtech Environmental Laboratories (AEL)**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: April 2, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C016 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 03/19/19 |

## 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.

T4: Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | N/A |
| **Lab ID:** | Kits QC | **Matrix:** | Air |

| | | Canister | | | | Grab Sampler | |
|---|---|---|---|---|---|---|---|
| | | Type | | Vacuum | Pressure | Type | |
| | Client | 1.0 liter | | before sampled | after sampled | 1 minute-fill 1.0L canister | |
| AEL# | ID | SN# | Clean Batch# | Hg inch | psia | SN# | Clean Batch# |
| 19C016-01 | MW-09-SG-031419 | E2282 | 1903-07 | 29.0 | 13.82 | 104 | 1901-01 |
| 19C016-02 | MW-09S-SG-031419 | E2395 | 1903-05 | 29.0 | 14.05 | 074 | 1901-01 |
| 19C016-03 | DUP01-031419 | E2392 | 1903-05 | 29.0 | 14.00 | 171 | 1901-01 |
| 19C016-04 | MW-09D-SG-031419 | 1860 | 1903-05 | 29.0 | 13.69 | 031 | 1901-01 |
| 19C016-05 | MW-10S-SG-031419 | E2087 | 1903-05 | 29.0 | 13.55 | 152 | 1812-03 |
| 19C016-06 | MW-10D-SG-031419 | E2397 | 1903-05 | 29.0 | 13.52 | 135 | 1901-01 |
| 19C016-07 | TSSV-6S-SG-031419 | E2354 | 1903-05 | 29.0 | 13.69 | 085 | 1901-01 |
| 19C016-08 | TSSV-6M-SG-031419 | 1813 | 1903-05 | 29.0 | 13.68 | 150 | 1901-01 |
| 19C016-09 | TSSV-6D-SG-031419 | 1871 | 1903-05 | 29.0 | 13.59 | 047 | 1812-03 |
| 19C016-10 | TSSV-7M-SG-031819 | 1888 | 1903-06 | 29.0 | 13.23 | 022 | 1901-01 |
| 19C016-11 | TSSV-7D-SG-031819 | 1851 | 1903-06 | 29.0 | 13.23 | 086 | 1901-01 |
| 19C016-12 | DUP02-131819 | 1847 | 1903-06 | 29.0 | 13.26 | 190 | 1901-01 |
| 19C016-13 | TSSV-7PZ-SG-031819 | E2413 | 1903-06 | 29.0 | 13.16 | 028 | 1901-01 |
| 19C016-14 | TSSV-1S-SG-031819 | E2372 | 1903-06 | 29.0 | 13.23 | 001 | 1901-01 |
| 19C016-15 | TSSV-1M-SG-031819 | E2090 | 1903-06 | 29.0 | 13.33 | 037 | 1901-01 |
| 19C016-16 | DUP03-031819 | 1844 | 1903-06 | 29.0 | 13.35 | 046 | 1901-01 |
| 19C016-17 | TSSV-1D-SG-031819 | E2364 | 1903-06 | 29.0 | 13.28 | 107 | 1901-01 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-09-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 01 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/25/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **600** | **500** | **2,380** | **1,990** | | 1,000 | 3/25/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 500 | 500 | < 3,010 | 3,010 | | 1,000 | 3/25/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/25/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5,000 | 5,000 | < 14,800 | 14,800 | | 1,000 | 3/25/2019 | 78-93-3 |
| Acetone | < 5,000 | 5,000 | < 11,900 | 11,900 | | 1,000 | 3/25/2019 | 67-64-1 |
| Benzene | < 500 | 500 | < 1,600 | 1,600 | | 1,000 | 3/25/2019 | 71-43-2 |
| Chlorobenzene | < 500 | 500 | < 2,300 | 2,300 | | 1,000 | 3/25/2019 | 108-90-7 |
| Chloroform | < 500 | 500 | < 2,440 | 2,440 | | 1,000 | 3/25/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/25/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1,000 | 1,000 | < 4,950 | 4,950 | | 1,000 | 3/25/2019 | 75-71-8 |
| Ethylbenzene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/25/2019 | 100-41-4 |
| m&p-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 1,000 | 3/25/2019 | 179601-23-1 |
| Methylene chloride | < 2,000 | 2,000 | < 6,940 | 6,940 | | 1,000 | 3/25/2019 | 75-09-2 |
| o-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/25/2019 | 95-47-6 |
| Tetrachloroethene | < 1,000 | 1,000 | < 6,780 | 6,780 | | 1,000 | 3/25/2019 | 127-18-4 |
| Tetrahydrofuran | < 2,000 | 2,000 | < 5,900 | 5,900 | | 1,000 | 3/25/2019 | 109-99-9 |
| Toluene | < 500 | 500 | < 1,890 | 1,890 | | 1,000 | 3/25/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/25/2019 | 156-60-5 |
| **Trichloroethene** | **15,500** | **500** | **83,200** | **2,690** | | 1,000 | 3/25/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 500 | 500 | < 2,810 | 2,810 | | 1,000 | 3/25/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **1,050** | **500** | **8,040** | **3,830** | | 1,000 | 3/25/2019 | 76-13-1 |
| Vinyl chloride | < 500 | 500 | < 1,280 | 1,280 | | 1,000 | 3/25/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10,000 | 10,000 | ppbv | | T4 | 1,000 | 3/25/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-09S-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 02 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/25/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **5.0** | **2.5** | **19.7** | **9.93** | | 5 | 3/25/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 3/25/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/25/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 3/25/2019 | 78-93-3 |
| Acetone | < 25 | 25 | < 59.5 | 59.5 | | 5 | 3/25/2019 | 67-64-1 |
| Benzene | < 2.5 | 2.5 | < 7.98 | 7.98 | | 5 | 3/25/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 3/25/2019 | 108-90-7 |
| Chloroform | < 2.5 | 2.5 | < 12.2 | 12.2 | | 5 | 3/25/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **8.9** | **5.0** | **43.8** | **24.8** | | 5 | 3/25/2019 | 75-71-8 |
| Ethylbenzene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 100-41-4 |
| m&p-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 5 | 3/25/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 3/25/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 95-47-6 |
| **Tetrachloroethene** | **38** | **5.0** | **261** | **33.9** | | 5 | 3/25/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 3/25/2019 | 109-99-9 |
| **Toluene** | **3.8** | **2.5** | **14.3** | **9.43** | | 5 | 3/25/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-60-5 |
| **Trichloroethene** | **163** | **2.5** | **874** | **13.4** | | 5 | 3/25/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **8.2** | **2.5** | **46.1** | **14.1** | | 5 | 3/25/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **12** | **2.5** | **90.0** | **19.2** | | 5 | 3/25/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 3/25/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 3/25/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | DUP01-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 03 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/25/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **5.0** | **2.5** | **19.9** | **9.93** | | 5 | 3/25/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 3/25/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/25/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 3/25/2019 | 78-93-3 |
| Acetone | < 25 | 25 | < 59.5 | 59.5 | | 5 | 3/25/2019 | 67-64-1 |
| Benzene | < 2.5 | 2.5 | < 7.98 | 7.98 | | 5 | 3/25/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 3/25/2019 | 108-90-7 |
| Chloroform | < 2.5 | 2.5 | < 12.2 | 12.2 | | 5 | 3/25/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **8.9** | **5.0** | **43.8** | **24.8** | | 5 | 3/25/2019 | 75-71-8 |
| Ethylbenzene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 100-41-4 |
| m&p-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 5 | 3/25/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 3/25/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 95-47-6 |
| **Tetrachloroethene** | **32** | **5.0** | **217** | **33.9** | | 5 | 3/25/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 3/25/2019 | 109-99-9 |
| **Toluene** | **3.3** | **2.5** | **12.3** | **9.43** | | 5 | 3/25/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-60-5 |
| **Trichloroethene** | **151** | **2.5** | **810** | **13.4** | | 5 | 3/25/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **7.9** | **2.5** | **44.4** | **14.1** | | 5 | 3/25/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **13** | **2.5** | **96.1** | **19.2** | | 5 | 3/25/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 3/25/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 103 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 3/25/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-09D-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 04 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| **1,1-Dichloroethane** | **3.4** | **2.5** | **13.6** | **10.1** | | 5 | 3/25/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 2.5 | 2.5 | < 9.93 | 9.93 | | 5 | 3/25/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 3/25/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/25/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 3/25/2019 | 78-93-3 |
| Acetone | < 25 | 25 | < 59.5 | 59.5 | | 5 | 3/25/2019 | 67-64-1 |
| Benzene | < 2.5 | 2.5 | < 7.98 | 7.98 | | 5 | 3/25/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 3/25/2019 | 108-90-7 |
| Chloroform | < 2.5 | 2.5 | < 12.2 | 12.2 | | 5 | 3/25/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **32** | **5.0** | **160** | **24.8** | | 5 | 3/25/2019 | 75-71-8 |
| Ethylbenzene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 100-41-4 |
| m&p-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 5 | 3/25/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 3/25/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 95-47-6 |
| **Tetrachloroethene** | **25** | **5.0** | **172** | **33.9** | | 5 | 3/25/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 3/25/2019 | 109-99-9 |
| Toluene | < 2.5 | 2.5 | < 9.43 | 9.43 | | 5 | 3/25/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-60-5 |
| **Trichloroethene** | **163** | **2.5** | **876** | **13.4** | | 5 | 3/25/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **16** | **2.5** | **89.9** | **14.1** | | 5 | 3/25/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **67** | **2.5** | **517** | **19.2** | | 5 | 3/25/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 3/25/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 108 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | T4 | 5 | 3/25/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-10S-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 05 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| **1,1-Dichloroethane** | **20** | **2.5** | **80.8** | **10.1** | | 5 | 3/25/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 2.5 | 2.5 | < 9.9 | 9.9 | | 5 | 3/25/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 3/25/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/25/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 3/25/2019 | 78-93-3 |
| Acetone | < 25 | 25 | < 59.5 | 59.5 | | 5 | 3/25/2019 | 67-64-1 |
| Benzene | < 2.5 | 2.5 | < 7.98 | 7.98 | | 5 | 3/25/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 3/25/2019 | 108-90-7 |
| **Chloroform** | **2.7** | **2.5** | **12.9** | **12.2** | | 5 | 3/25/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,630** | **100** | **8,070** | **495** | | 100 | 3/25/2019 | 75-71-8 |
| Ethylbenzene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 100-41-4 |
| m&p-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 5 | 3/25/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 3/25/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/25/2019 | 95-47-6 |
| **Tetrachloroethene** | **197** | **5.0** | **1,330** | **33.9** | | 5 | 3/25/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 3/25/2019 | 109-99-9 |
| Toluene | < 2.5 | 2.5 | < 9.43 | 9.43 | | 5 | 3/25/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/25/2019 | 156-60-5 |
| **Trichloroethene** | **9.1** | **2.5** | **48.9** | **13.4** | | 5 | 3/25/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **406** | **50** | **2,280** | **281** | | 100 | 3/25/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **73** | **2.5** | **559** | **19.2** | | 5 | 3/25/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 3/25/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 106 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 3/25/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-10D-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 06 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| **1,1-Dichloroethane** | **1,910** | **100** | **7,740** | **405** | | 200 | 3/26/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **260** | **100** | **1,030** | **397** | | 200 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/26/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/26/2019 | 67-64-1 |
| **Benzene** | **188** | **100** | **600** | **319** | | 200 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 100 | 100 | < 460 | 460 | | 200 | 3/26/2019 | 108-90-7 |
| Chloroform | < 100 | 100 | < 488 | 488 | | 200 | 3/26/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/26/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **4,360** | **200** | **21,600** | **990** | | 200 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/26/2019 | 179601-23-1 |
| **Methylene chloride** | **424** | **400** | **1,470** | **1,390** | | 200 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **528** | **200** | **3,580** | **1,360** | | 200 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/26/2019 | 109-99-9 |
| **Toluene** | **710** | **100** | **2,680** | **377** | | 200 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **416** | **100** | **2,230** | **537** | | 200 | 3/26/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **1,250** | **100** | **7,030** | **562** | | 200 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **174** | **100** | **1,330** | **766** | | 200 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 100 | 100 | < 256 | 256 | | 200 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 91.1 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 2,000 | 2,000 | ppbv | | T4 | 200 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-6S-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 07 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/26/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 10 | 10 | < 39.7 | 39.7 | | 20 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/26/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/26/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 3/26/2019 | 108-90-7 |
| **Chloroform** | **20** | **10** | **95.6** | **48.8** | | 20 | 3/26/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 20 | 20 | < 99.0 | 99.0 | | 20 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **88** | **20** | **597** | **136** | | 20 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/26/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **768** | **10** | **4,120** | **53.7** | | 20 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 10 | 10 | < 56.2 | 56.2 | | 20 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **105** | **10** | **804** | **76.6** | | 20 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-6M-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 08 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/26/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 2.5 | 2.5 | < 9.93 | 9.93 | | 5 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 3/26/2019 | 78-93-3 |
| Acetone | < 25 | 25 | < 59.5 | 59.5 | | 5 | 3/26/2019 | 67-64-1 |
| **Benzene** | **7.7** | **2.5** | **24.6** | **7.98** | | 5 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 3/26/2019 | 108-90-7 |
| Chloroform | < 2.5 | 2.5 | < 12.2 | 12.2 | | 5 | 3/26/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 5.0 | 5.0 | < 24.8 | 24.8 | | 5 | 3/26/2019 | 75-71-8 |
| **Ethylbenzene** | **5.1** | **2.5** | **21.9** | **10.9** | | 5 | 3/26/2019 | 100-41-4 |
| **m&p-Xylene** | **17** | **5.0** | **74.4** | **21.7** | | 5 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 3/26/2019 | 75-09-2 |
| **o-Xylene** | **3.1** | **2.5** | **13.5** | **10.9** | | 5 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **16** | **5.0** | **106** | **33.9** | | 5 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 3/26/2019 | 109-99-9 |
| **Toluene** | **34** | **2.5** | **129** | **9.43** | | 5 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **86** | **2.5** | **460** | **13.4** | | 5 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 2.5 | 2.5 | < 14.1 | 14.1 | | 5 | 3/26/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 2.5 | 2.5 | < 19.2 | 19.2 | | 5 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 95.7 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-6D-SG-031419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/14/2019 |
| **Lab ID:** | 09 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/26/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 10 | 10 | < 39.7 | 39.7 | | 20 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/26/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/26/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 3/26/2019 | 71-43-2 |
| **Chlorobenzene** | **20** | **10** | **93.8** | **46.0** | | 20 | 3/26/2019 | 108-90-7 |
| **Chloroform** | **108** | **10** | **529** | **48.8** | | 20 | 3/26/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **289** | **10** | **1,150** | **39.6** | | 20 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 20 | 20 | < 99.0 | 99.0 | | 20 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **127** | **20** | **860** | **136** | | 20 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/26/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **905** | **50** | **4,860** | **269** | | 100 | 3/27/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 10 | 10 | < 56.2 | 56.2 | | 20 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **49** | **10** | **374** | **76.6** | | 20 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 94.6 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-7M-SG-031819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 10 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/26/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **91** | **10** | **362** | **39.7** | | 20 | 3/26/2019 | 75-35-4 |
| **1,2-Dichlorobenzene** | **10** | **10** | **61.3** | **60.1** | | 20 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/26/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/26/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 3/26/2019 | 71-43-2 |
| **Chlorobenzene** | **178** | **10** | **821** | **46.0** | | 20 | 3/26/2019 | 108-90-7 |
| Chloroform | < 10 | 10 | < 48.8 | 48.8 | | 20 | 3/26/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **78** | **10** | **310** | **39.6** | | 20 | 3/26/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **419** | **20** | **2,080** | **99.0** | | 20 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/26/2019 | 179601-23-1 |
| **Methylene chloride** | **72** | **40** | **248** | **139** | | 20 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **76** | **20** | **513** | **136** | | 20 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/26/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **296** | **10** | **1,590** | **53.7** | | 20 | 3/26/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **73** | **10** | **413** | **56.2** | | 20 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **18** | **10** | **138** | **76.6** | | 20 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-7D-SG-031819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 11 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/26/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **13,000** | **500** | **51,600** | **1,990** | | 1,000 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 500 | 500 | < 3,010 | 3,010 | | 1,000 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5,000 | 5,000 | < 14,800 | 14,800 | | 1,000 | 3/26/2019 | 78-93-3 |
| Acetone | < 5,000 | 5,000 | < 11,900 | 11,900 | | 1,000 | 3/26/2019 | 67-64-1 |
| Benzene | < 500 | 500 | < 1,600 | 1,600 | | 1,000 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 500 | 500 | < 2,300 | 2,300 | | 1,000 | 3/26/2019 | 108-90-7 |
| Chloroform | < 500 | 500 | < 2,440 | 2,440 | | 1,000 | 3/26/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **1,370** | **500** | **5,430** | **1,980** | | 1,000 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1,000 | 1,000 | < 4,950 | 4,950 | | 1,000 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 1,000 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 2,000 | 2,000 | < 6,940 | 6,940 | | 1,000 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/26/2019 | 95-47-6 |
| Tetrachloroethene | < 1,000 | 1,000 | < 6,780 | 6,780 | | 1,000 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 2,000 | 2,000 | < 5,900 | 5,900 | | 1,000 | 3/26/2019 | 109-99-9 |
| Toluene | < 500 | 500 | < 1,890 | 1,890 | | 1,000 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **29,500** | **500** | **158,000** | **2,690** | | 1,000 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 500 | 500 | < 2,810 | 2,810 | | 1,000 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **3,200** | **500** | **24,500** | **3,830** | | 1,000 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 500 | 500 | < 1,280 | 1,280 | | 1,000 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 93.6 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10,000 | 10,000 | ppbv | T4 | 1,000 | 3/26/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | DUP02-131819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 12 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 3/26/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **10,400** | **1,000** | **41,300** | **3,970** | | 2,000 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1,000 | 1,000 | < 6,010 | 6,010 | | 2,000 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10,000 | 10,000 | < 29,500 | 29,500 | | 2,000 | 3/26/2019 | 78-93-3 |
| Acetone | < 10,000 | 10,000 | < 23,800 | 23,800 | | 2,000 | 3/26/2019 | 67-64-1 |
| Benzene | < 1,000 | 1,000 | < 3,190 | 3,190 | | 2,000 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 1,000 | 1,000 | < 4,600 | 4,600 | | 2,000 | 3/26/2019 | 108-90-7 |
| Chloroform | < 1,000 | 1,000 | < 4,880 | 4,880 | | 2,000 | 3/26/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **1,080** | **1,000** | **4,280** | **3,960** | | 2,000 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2,000 | 2,000 | < 9,900 | 9,900 | | 2,000 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 2,000 | 2,000 | < 8,680 | 8,680 | | 2,000 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 4,000 | 4,000 | < 13,900 | 13,900 | | 2,000 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 3/26/2019 | 95-47-6 |
| Tetrachloroethene | < 2,000 | 2,000 | < 13,600 | 13,600 | | 2,000 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 4,000 | 4,000 | < 11,800 | 11,800 | | 2,000 | 3/26/2019 | 109-99-9 |
| Toluene | < 1,000 | 1,000 | < 3,770 | 3,770 | | 2,000 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1,000 | 1,000 | < 3,960 | 3,960 | | 2,000 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **23,300** | **1,000** | **125,000** | **5,370** | | 2,000 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1,000 | 1,000 | < 5,620 | 5,620 | | 2,000 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **2,740** | **1,000** | **21,000** | **7,660** | | 2,000 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 1,000 | 1,000 | < 2,560 | 2,560 | | 2,000 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20,000 | 20,000 | ppbv | | T4 | 2,000 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-7PZ-SG-031819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 13 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| **1,1-Dichloroethane** | **335** | **250** | **1,360** | **1,010** | | 500 | 3/26/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **21,200** | **250** | **84,200** | **993** | | 500 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 250 | 250 | < 1,500 | 1,500 | | 500 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 250 | 250 | < 1,010 | 1,010 | | 500 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 2,500 | 2,500 | < 7,380 | 7,380 | | 500 | 3/26/2019 | 78-93-3 |
| Acetone | < 2,500 | 2,500 | < 5,950 | 5,950 | | 500 | 3/26/2019 | 67-64-1 |
| Benzene | < 250 | 250 | < 798 | 798 | | 500 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 250 | 250 | < 1,150 | 1,150 | | 500 | 3/26/2019 | 108-90-7 |
| Chloroform | < 250 | 250 | < 1,220 | 1,220 | | 500 | 3/26/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **9,450** | **250** | **37,400** | **990** | | 500 | 3/26/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **750** | **500** | **3,710** | **2,480** | | 500 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 500 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 1,000 | 1,000 | < 3,470 | 3,470 | | 500 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **3,300** | **500** | **22,400** | **3,390** | | 500 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 1,000 | 1,000 | < 2,950 | 2,950 | | 500 | 3/26/2019 | 109-99-9 |
| Toluene | < 250 | 250 | < 943 | 943 | | 500 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 250 | 250 | < 990 | 990 | | 500 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **19,100** | **250** | **103,000** | **1,340** | | 500 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 250 | 250 | < 1,410 | 1,410 | | 500 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **7,080** | **250** | **54,200** | **1,920** | | 500 | 3/26/2019 | 76-13-1 |
| **Vinyl chloride** | **1,360** | **250** | **3,480** | **640** | | 500 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 96.6 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 5,000 | 5,000 | ppbv | | T4 | 500 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-1S-SG-031819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 14 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/26/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 100 | 100 | < 397 | 397 | | 200 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/26/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/26/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 100 | 100 | < 460 | 460 | | 200 | 3/26/2019 | 108-90-7 |
| Chloroform | < 100 | 100 | < 488 | 488 | | 200 | 3/26/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 200 | 200 | < 990 | 990 | | 200 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 400 | 400 | < 1,390 | 1,390 | | 200 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **232** | **200** | **1,570** | **1,360** | | 200 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/26/2019 | 109-99-9 |
| Toluene | < 100 | 100 | < 377 | 377 | | 200 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **2,780** | **100** | **14,900** | **537** | | 200 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | < 562 | 562 | | 200 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **156** | **100** | **1,200** | **766** | | 200 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 100 | 100 | < 256 | 256 | | 200 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 95.9 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 2,000 | 2,000 | ppbv | T4 | 200 | 3/26/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-1M-SG-031819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 15 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/27/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 100 | 100 | < 397 | 397 | | 200 | 3/27/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 3/27/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/27/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/27/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/27/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 3/27/2019 | 71-43-2 |
| **Chlorobenzene** | **2,600** | **100** | **12,000** | **460** | | 200 | 3/27/2019 | 108-90-7 |
| **Chloroform** | **270** | **100** | **1,320** | **488** | | 200 | 3/27/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **130** | **100** | **515** | **396** | | 200 | 3/27/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 200 | 200 | < 990 | 990 | | 200 | 3/27/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/27/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/27/2019 | 179601-23-1 |
| Methylene chloride | < 400 | 400 | < 1,390 | 1,390 | | 200 | 3/27/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/27/2019 | 95-47-6 |
| **Tetrachloroethene** | **484** | **200** | **3,280** | **1,360** | | 200 | 3/27/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/27/2019 | 109-99-9 |
| Toluene | < 100 | 100 | < 377 | 377 | | 200 | 3/27/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/27/2019 | 156-60-5 |
| **Trichloroethene** | **5,290** | **100** | **28,400** | **537** | | 200 | 3/27/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | < 562 | 562 | | 200 | 3/27/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **114** | **100** | **873** | **766** | | 200 | 3/27/2019 | 76-13-1 |
| Vinyl chloride | < 100 | 100 | < 256 | 256 | | 200 | 3/27/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 97.9 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 2,000 | 2,000 | ppbv | | T4 | 200 | 3/27/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | DUP03-031819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 16 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/26/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 100 | 100 | < 397 | 397 | | 200 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/26/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/26/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 3/26/2019 | 71-43-2 |
| **Chlorobenzene** | **2,780** | **100** | **12,800** | **460** | | 200 | 3/26/2019 | 108-90-7 |
| **Chloroform** | **282** | **100** | **1,380** | **488** | | 200 | 3/26/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **132** | **100** | **523** | **396** | | 200 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 200 | 200 | < 990 | 990 | | 200 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 400 | 400 | < 1,390 | 1,390 | | 200 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **508** | **200** | **3,440** | **1,360** | | 200 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/26/2019 | 109-99-9 |
| Toluene | < 100 | 100 | < 377 | 377 | | 200 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **5,360** | **100** | **28,800** | **537** | | 200 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | < 562 | 562 | | 200 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **108** | **100** | **827** | **766** | | 200 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 100 | 100 | < 256 | 256 | | 200 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 97.9 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 2,000 | 2,000 | ppbv | | T4 | 200 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-1D-SG-031819 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | 3/18/2019 |
| **Lab ID:** | 17 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/26/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **158** | **100** | **627** | **397** | | 200 | 3/26/2019 | 75-35-4 |
| **1,2-Dichlorobenzene** | **282** | **100** | **1,700** | **601** | | 200 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/26/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/26/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 3/26/2019 | 71-43-2 |
| **Chlorobenzene** | **588** | **100** | **2,710** | **460** | | 200 | 3/26/2019 | 108-90-7 |
| **Chloroform** | **328** | **100** | **1,600** | **488** | | 200 | 3/26/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **1,260** | **100** | **4,990** | **396** | | 200 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 200 | 200 | < 990 | 990 | | 200 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/26/2019 | 179601-23-1 |
| **Methylene chloride** | **458** | **400** | **1,590** | **1,390** | | 200 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/26/2019 | 95-47-6 |
| **Tetrachloroethene** | **620** | **200** | **4,200** | **1,360** | | 200 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/26/2019 | 109-99-9 |
| Toluene | < 100 | 100 | < 377 | 377 | | 200 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/26/2019 | 156-60-5 |
| **Trichloroethene** | **8,800** | **100** | **47,300** | **537** | | 200 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | < 562 | 562 | | 200 | 3/26/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **492** | **100** | **3,770** | **766** | | 200 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 100 | 100 | < 256 | 256 | | 200 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 98.2 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 2,000 | 2,000 | ppbv | T4 | 200 | 3/26/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010325 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/25/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/25/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/25/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/25/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/25/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/25/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/25/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/25/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/25/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/25/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/25/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/25/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/25/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/25/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/25/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/25/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/25/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/25/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/25/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/25/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/25/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/25/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/25/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10 | 10 | ppbv | | T4 | 1 | 3/25/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/25/2019 Batch: MS010325 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 12.2 | 122 | 12.3 | 123 | 10.0 | 0.9 | ppbv | | | |
| Vinyl Chloride | 10.2 | 102 | 10.3 | 103 | 10.0 | 1.1 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 12.0 | 120 | 12.0 | 120 | 10.0 | 0.3 | ppbv | | | |
| Acetone | 10.2 | 102 | 10.6 | 106 | 10.0 | 3.5 | ppbv | | | |
| 1,1-Dichloroethene | 12.5 | 125 | 12.3 | 123 | 10.0 | 1.6 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 10.9 | 108.6 | 10.8 | 108 | 10.0 | 0.4 | ppbv | | | |
| Methylene Chloride | 11.9 | 119 | 11.9 | 119 | 10.0 | 0.3 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.9 | 98.8 | 10.6 | 106 | 10.0 | 6.7 | ppbv | | | |
| 1,1-Dichloroethane | 11.7 | 117 | 12.0 | 120 | 10.0 | 1.9 | ppbv | | | |
| 2-Butanone (MEK) | 10.5 | 105 | 10.6 | 106 | 10.0 | 1.2 | ppbv | | | |
| cis-1,2-Dichloroethene | 10.5 | 105 | 10.6 | 106 | 10.0 | 0.3 | ppbv | | | |
| Chloroform | 11.2 | 112 | 11.3 | 113 | 10.0 | 1.0 | ppbv | | | |
| Tetrahydrofuran | 12.5 | 125 | 12.7 | 127 | 10.0 | 2.0 | ppbv | | | |
| 1,2-Dichloroethane | 12.4 | 124 | 12.6 | 126 | 10.0 | 1.3 | ppbv | | | |
| Benzene | 10.7 | 107 | 10.9 | 109 | 10.0 | 1.3 | ppbv | | | |
| Trichloroethene | 9.3 | 92.5 | 9.3 | 93.1 | 10.0 | 0.6 | ppbv | | | |
| Toluene | 10.9 | 109 | 11.0 | 110 | 10.0 | 1.1 | ppbv | | | |
| Tetrachloroethene | 8.8 | 88.2 | 9.1 | 90.8 | 10.0 | 2.9 | ppbv | | | |
| Chlorobenzene | 9.8 | 97.7 | 9.9 | 99.0 | 10.0 | 1.3 | ppbv | | | |
| Ethylbenzene | 10.6 | 106 | 10.8 | 108 | 10.0 | 2.2 | ppbv | | | |
| m&p-Xylene | 21.2 | 106 | 21.5 | 107 | 20.0 | 1.2 | ppbv | | | |
| o-Xylene | 9.9 | 98.5 | 10.0 | 100 | 10.0 | 1.8 | ppbv | | | |
| 1,2-Dichlorobenzene | 9.8 | 97.6 | 9.8 | 97.8 | 10.0 | 0.2 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 12.1 | 121 | 11.7 | 117 | | | %REC | | | |
| | | 70-130% | | 70-130% | | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010326 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/26/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/26/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/26/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/26/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/26/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/26/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/26/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/26/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/26/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/26/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/26/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/26/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/26/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/26/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/26/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/26/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/26/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/26/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/26/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/26/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/26/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/26/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/26/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 92.5 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10 | 10 | ppbv | | T4 | 1 | 3/26/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/26/2019 Batch: MS010326 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 10.6 | 106 | 10.0 | 100 | 10.0 | 5.3 | ppbv | | | |
| Vinyl Chloride | 9.2 | 92.0 | 8.5 | 85.0 | 10.0 | 7.9 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 9.7 | 97.4 | 9.6 | 96.3 | 10.0 | 1.1 | ppbv | | | |
| Acetone | 9.5 | 95.0 | 9.7 | 96.9 | 10.0 | 2.0 | ppbv | | | |
| 1,1-Dichloroethene | 10.0 | 100 | 10.1 | 101 | 10.0 | 1.1 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 9.6 | 96.3 | 9.4 | 93.7 | 10.0 | 2.7 | ppbv | | | |
| Methylene Chloride | 9.8 | 98.0 | 9.7 | 97.4 | 10.0 | 0.6 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.3 | 93.0 | 9.3 | 92.7 | 10.0 | 0.3 | ppbv | | | |
| 1,1-Dichloroethane | 10.0 | 100 | 9.9 | 99.1 | 10.0 | 1.0 | ppbv | | | |
| 2-Butanone (MEK) | 9.2 | 91.6 | 10.0 | 100 | 10.0 | 8.8 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.8 | 97.7 | 9.7 | 96.6 | 10.0 | 1.1 | ppbv | | | |
| Chloroform | 9.7 | 97.2 | 9.6 | 96.2 | 10.0 | 1.0 | ppbv | | | |
| Tetrahydrofuran | 10.5 | 105 | 10.4 | 104 | 10.0 | 1.1 | ppbv | | | |
| 1,2-Dichloroethane | 9.8 | 98.2 | 10.0 | 100 | 10.0 | 1.4 | ppbv | | | |
| Benzene | 9.8 | 97.9 | 9.6 | 95.9 | 10.0 | 2.1 | ppbv | | | |
| Trichloroethene | 9.6 | 96.1 | 9.4 | 94.1 | 10.0 | 2.1 | ppbv | | | |
| Toluene | 9.9 | 98.6 | 10.1 | 101 | 10.0 | 2.4 | ppbv | | | |
| Tetrachloroethene | 9.4 | 94.2 | 9.5 | 95.1 | 10.0 | 1.0 | ppbv | | | |
| Chlorobenzene | 9.4 | 93.9 | 9.5 | 95.1 | 10.0 | 1.3 | ppbv | | | |
| Ethylbenzene | 10.1 | 101 | 10.4 | 104 | 10.0 | 3.5 | ppbv | | | |
| m&p-Xylene | 19.6 | 97.9 | 20.7 | 103 | 20.0 | 5.5 | ppbv | | | |
| o-Xylene | 9.4 | 93.6 | 9.7 | 97.2 | 10.0 | 3.8 | ppbv | | | |
| 1,2-Dichlorobenzene | 9.3 | 92.8 | 9.4 | 94.3 | 10.0 | 1.6 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 10.5 | 105 | 10.5 | 105 | | | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | NA |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C016 | **Collection:** | NA |
| **Lab ID:** | Standards | **Matrix:** | Nitrogen |

| AEL ID# | STD Name | Vendor | SGI Order# | Description | CONC. | Accuracy | Exp.Date |
|---|---|---|---|---|---|---|---|
| S-180620-03 | Stock | Spectra Gases | 116447993 | TO-14 39 Analytes | 1.0 ppmv | ± 5% | 6/25/2019 |
| S-180620-02 | Stock | Spectra Gases | 116447993 | TO-15 25 Analytes | 1.0 ppmv | ± 5% | 6/22/2019 |
| S-180620-01 | Stock | Spectra Gases | 116447993 | 15 Additional Compounds | 1.0 ppmv | ± 5% | 6/20/2019 |
| S-181011-01 | Stock | Spectra Gases | 116849616 | TO-15 IS 4 Compounds | 1.0 ppmv | ± 5% | 10/11/2019 |
| A-190312-02 | Working Std | AEL Dilution | | TO-15 74 Analytes | 10 ppbv | ± 5% | 6/12/2019 |
| A-190312-01 | Working IS | AEL Dilution | | TO-15 IS 4 Compounds | 50 ppbv | ± 5% | 6/12/2019 |

# 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: Wood | Page 1 of 2 | | AEL Lab # |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C016 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: Natalie.Chrisman@woodplc.com | P.O. Number: | | |
| Phone: 602.733-6000 Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: | E-Mail Results: (Y) N | | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes____ No____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes____ No____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | X Standard 10 Working Days | S: soil vapor |
| | | W: water |

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 ~~full list~~ (Short List) | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | E2282 | 104 | 6 (1) bag | (1) 2 5 | MW-09-SG-031419 | 3.14.19 | 951 | S | 1 | X | | | | | | | | | X |
| 02 | E2395 | 074 | 6 (1) bag | (1) 2 5 | MW-09S-SG-031419 | | 1017 | | | X | | | | | | | | | X |
| 03 | E2392 | 171 | 6 (1) bag | (1) 2 5 | DUP01-031419 | | 1022 | | | X | | | | | | | | | X |
| 04 | 1860 | 031 | 6 (1) bag | (1) 2 5 | MW-09D-SG-031419 | | 1106 | | | X | | | | | | | | | X |
| 05 | E2087 | 152 | 6 (1) bag | (1) 2 5 | MW-10S-SG-031419 | | 1304 | | | X | | | | | | | | | X |
| 06 | E2397 | 135 | 6 (1) bag | (1) 2 5 | MW-10D-SG-031419 | | 1341 | | | X | | | | | | | | | X |
| 07 | E2354 | 085 | 6 (1) bag | (1) 2 5 | TSSV-6S-SG-031419 | | 1416 | | | X | | | | | | | | | X |
| 08 | 1813 | 150 | 6 (1) bag | (1) 2 5 | TSSV-6M-SG-031419 | | 1441 | | | X | | | | | | | | | X |
| 09 | 1871 | 047 | 6 (1) bag | (1) 2 5 | TSSV-6D-SG-031419 | | 1511 | | | X | | | | | | | | | X |
| 10 | 1888 | 022 | 6 (1) bag | (1) 2 5 | TSSV-7M-SG-031819 | 3.18.19 | 1121 | | | X | | | | | | | | | X |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.19.19 | 755 | E. Miller | [illegible] |
| | | | |
| | | | |

# 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: Wood | Page 2 of 2 | | AEL Lab # |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C016 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: Natalie Chrisman@woodplc.com | P.O. Number: | | |
| Phone: 602.733-6000 Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: | E-Mail Results: Y N | | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes_____ No_____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes_____ No_____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | X Standard 10 Working Days | S: soil vapor |
| | | W: water |

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 full list (SHORT LIST) | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 1851 | 086 | 6 1 bag | 1 2 5 | TSSV-7D-S6-031819 | 3.18.19 | 1146 | S | 1 | X | | | | | | | | | X |
| 12 | 1847 | 190 | 6 1 bag | 1 2 5 | DUP02-031819 | ↓ | 1155 | ↓ | ↓ | X | | | | | | | | | X |
| 13 | E2413 | 028 | 6 1 bag | 1 2 5 | TSSV-7DZ-S6-031819 | ↓ | 1251 | ↓ | ↓ | X | | | | | | | | | X |
| 14 | E2372 | 001 | 6 1 bag | 1 2 5 | TSSV-1S-S6-031819 | ↓ | 1411 | ↓ | ↓ | X | | | | | | | | | X |
| 15 | E2090 | 037 | 6 1 bag | 1 2 5 | TSSV-1M-S6-031819 | ↓ | 1433 | ↓ | ↓ | X | | | | | | | | | X |
| 16 | 1844 | 046 | 6 1 bag | 1 2 5 | DUP03-031819 | ↓ | 1440 | ↓ | ↓ | X | | | | | | | | | X |
| 17 | E2364 | 107 | 6 1 bag | 1 2 5 | TSSV-1D-S6-031819 | ↓ | 1501 | ↓ | ↓ | X | | | | | | | | | X |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.19.19 | 755 | E. Miller | [signature] |
| | | | |
| | | | |

**Airtech Environmental Laboratories (AEL)**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: April 3, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C023 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/20/2019 |

Dear Client:

Airtech Environmental Laboratories received fifteen (15) 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: April 3, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C023 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/20/2019 |

## SAMPLE SUMMARY

| LAB ID | CLIENT ID | METHOD | SAMPLE DATE | SAMPLE TIME |
|---|---|---|---|---|
| 19C023-01 | MW-13-SG-031919 | TO-15 | 3/19/2019 | 1056 |
| 19C023-02 | MW-13S-SG-031919 | TO-15 | 3/19/2019 | 1114 |
| 19C023-03 | MW-13M-SG-031919 | TO-15 | 3/19/2019 | 1136 |
| 19C023-04 | MW-13D-SG-031919 | TO-15 | 3/19/2019 | 1154 |
| 19C023-05 | MW-12-SG-031919 | TO-15 | 3/19/2019 | 1351 |
| 19C023-06 | MW-12S-SG-031919 | TO-15 | 3/19/2019 | 1407 |
| 19C023-07 | MW-12M-SG-031919 | TO-15 | 3/19/2019 | 1431 |
| 19C023-08 | MW-12D-SG-031919 | TO-15 | 3/19/2019 | 1451 |
| 19C023-09 | TSSV-3S-SG-032019 | TO-15 | 3/20/2019 | 1038 |
| 19C023-10 | TSSV-3M-SG-032019 | TO-15 | 3/20/2019 | 1101 |
| 19C023-11 | TSSV-3PZ-SG-032019 | TO-15 | 3/20/2019 | 1201 |
| 19C023-12 | TSSV-5S-SG-032019 | TO-15 | 3/20/2019 | 1231 |
| 19C023-13 | TSSV-5D-SG-032019 | TO-15 | 3/20/2019 | 1316 |
| 19C023-14 | TSSV-5PZ-SG-032019 | TO-15 | 3/20/2019 | 1416 |
| 19C023-15 | DUP04-032019 | TO-15 | 3/20/2019 | 1430 |

**Airtech Environmental Laboratories (AEL)**
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Date: April 3, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C023 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 03/20/19 |

## 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.

T4: Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | N/A |
| **Lab ID:** | Kits QC | **Matrix:** | Air |

| | | Canister | | | | Grab Sampler | |
|---|---|---|---|---|---|---|---|
| | | Type | | Vacuum | Pressure | Type | |
| | Client | 1.0 liter | | before sampled | after sampled | 1 minute-fill 1.0L canister | |
| AEL# | ID | SN# | Clean Batch# | Hg inch | psia | SN# | Clean Batch# |
| 19C023-01 | MW-13-SG-031919 | 1826 | 1903-06 | 29.0 | 13.53 | 092 | 1901-01 |
| 19C023-02 | MW-13S-SG-031919 | E2365 | 1903-11 | 29.0 | 13.52 | 201 | 1902-03 |
| 19C023-03 | MW-13M-SG-031919 | 1796 | 1903-11 | 29.0 | 13.53 | 013 | 1812-03 |
| 19C023-04 | MW-13D-SG-031919 | E2408 | 1903-07 | 29.0 | 13.38 | 048 | 1903-04 |
| 19C023-05 | MW-12-SG-031919 | 1834 | 1903-07 | 29.0 | 13.25 | 075 | 1902-03 |
| 19C023-06 | MW-12S-SG-031919 | E2355 | 1903-07 | 29.0 | 13.28 | 030 | 1902-03 |
| 19C023-07 | MW-12M-SG-031919 | 1886 | 1903-07 | 29.0 | 13.18 | 007 | 1812-03 |
| 19C023-08 | MW-12D-SG-031919 | 1792 | 1903-07 | 29.0 | 13.36 | 207 | 1812-07 |
| 19C023-09 | TSSV-3S-SG-032019 | E2102 | 1903-07 | 29.0 | 13.51 | 195 | 1812-07 |
| 19C023-10 | TSSV-3M-SG-032019 | E2096 | 1903-07 | 29.0 | 13.45 | 035 | 1812-03 |
| 19C023-11 | TSSV-3PZ-SG-032019 | E2385 | 1903-10 | 29.0 | 13.33 | 065 | 1902-03 |
| 19C023-12 | TSSV-5S-SG-032019 | 1807 | 1903-10 | 29.0 | 13.45 | 196 | 1902-03 |
| 19C023-13 | TSSV-5D-SG-032019 | 1810 | 1903-10 | 29.0 | 13.34 | 137 | 1903-04 |
| 19C023-14 | TSSV-5PZ-SG-032019 | 0265 | 1903-10 | 29.0 | 13.36 | 189 | 1812-03 |
| 19C023-15 | DUP04-032019 | 0197 | 1903-10 | 29.0 | 13.29 | 053 | 1812-07 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-13-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 01 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| **1,1-Dichloroethane** | **6.6** | **1.0** | **26.6** | **4.05** | | 2 | 3/28/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **192** | **5.0** | **763** | **19.9** | | 10 | 3/28/2019 | 75-35-4 |
| **1,2-Dichlorobenzene** | **4.8** | **1.0** | **29.1** | **6.01** | | 2 | 3/28/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 3/28/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 3/28/2019 | 78-93-3 |
| **Acetone** | **15** | **10** | **36.7** | **23.8** | | 2 | 3/28/2019 | 67-64-1 |
| **Benzene** | **1.1** | **1.0** | **3.51** | **3.19** | | 2 | 3/28/2019 | 71-43-2 |
| **Chlorobenzene** | **5.5** | **1.0** | **25.2** | **4.60** | | 2 | 3/28/2019 | 108-90-7 |
| **Chloroform** | **1.4** | **1.0** | **6.83** | **4.88** | | 2 | 3/28/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **11** | **1.0** | **43.9** | **3.96** | | 2 | 3/28/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **21** | **2.0** | **103** | **9.90** | | 2 | 3/28/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/28/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 3/28/2019 | 179601-23-1 |
| **Methylene chloride** | **24** | **4.0** | **82.2** | **13.9** | | 2 | 3/28/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/28/2019 | 95-47-6 |
| **Tetrachloroethene** | **66** | **2.0** | **445** | **13.6** | | 2 | 3/28/2019 | 127-18-4 |
| **Tetrahydrofuran** | **34** | **4.0** | **99.4** | **11.8** | | 2 | 3/28/2019 | 109-99-9 |
| **Toluene** | **3.8** | **1.0** | **14.3** | **3.77** | | 2 | 3/28/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 3/28/2019 | 156-60-5 |
| **Trichloroethene** | **91** | **1.0** | **487** | **5.37** | | 2 | 3/28/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **3.7** | **1.0** | **20.8** | **5.62** | | 2 | 3/28/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **42** | **1.0** | **320** | **7.66** | | 2 | 3/28/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 3/28/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 98.7 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 3/28/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-13S-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 02 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 5.0 | 5.0 | < 20.3 | 20.3 | | 10 | 3/28/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **191** | **5.0** | **758** | **19.9** | | 10 | 3/28/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 5.0 | 5.0 | < 30.1 | 30.1 | | 10 | 3/28/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 5.0 | 5.0 | < 20.3 | 20.3 | | 10 | 3/28/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 50 | 50 | < 148 | 148 | | 10 | 3/28/2019 | 78-93-3 |
| Acetone | < 50 | 50 | < 119 | 119 | | 10 | 3/28/2019 | 67-64-1 |
| Benzene | < 5.0 | 5.0 | < 16.0 | 16.0 | | 10 | 3/28/2019 | 71-43-2 |
| Chlorobenzene | < 5.0 | 5.0 | < 23.0 | 23.0 | | 10 | 3/28/2019 | 108-90-7 |
| **Chloroform** | **12** | **5.0** | **59.5** | **24.4** | | 10 | 3/28/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **11** | **5.0** | **41.6** | **19.8** | | 10 | 3/28/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **152** | **10** | **751** | **49.5** | | 10 | 3/28/2019 | 75-71-8 |
| Ethylbenzene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 10 | 3/28/2019 | 100-41-4 |
| m&p-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 10 | 3/28/2019 | 179601-23-1 |
| Methylene chloride | < 20 | 20 | < 69.4 | 69.4 | | 10 | 3/28/2019 | 75-09-2 |
| o-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 10 | 3/28/2019 | 95-47-6 |
| **Tetrachloroethene** | **76** | **10** | **517** | **67.8** | | 10 | 3/28/2019 | 127-18-4 |
| Tetrahydrofuran | < 20 | 20 | < 59.0 | 59.0 | | 10 | 3/28/2019 | 109-99-9 |
| **Toluene** | **5.4** | **5.0** | **20.4** | **18.9** | | 10 | 3/28/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 5.0 | 5.0 | < 19.8 | 19.8 | | 10 | 3/28/2019 | 156-60-5 |
| **Trichloroethene** | **26** | **5.0** | **141** | **26.9** | | 10 | 3/28/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **5.4** | **5.0** | **30.3** | **28.1** | | 10 | 3/28/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **15** | **5.0** | **111** | **38.3** | | 10 | 3/28/2019 | 76-13-1 |
| **Vinyl chloride** | **9.2** | **5.0** | **23.6** | **12.8** | | 10 | 3/28/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 98.1 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 100 | 100 | ppbv | | T4 | 10 | 3/28/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-13M-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 03 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/28/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **7,450** | **100** | **29,600** | **397** | | 200 | 3/28/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 3/28/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/28/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/28/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/28/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 3/28/2019 | 71-43-2 |
| **Chlorobenzene** | **160** | **100** | **736** | **460** | | 200 | 3/28/2019 | 108-90-7 |
| Chloroform | < 100 | 100 | < 488 | 488 | | 200 | 3/28/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/28/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **264** | **200** | **1,310** | **990** | | 200 | 3/28/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/28/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/28/2019 | 179601-23-1 |
| Methylene chloride | < 400 | 400 | 1,390 | 1,390 | | 200 | 3/28/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/28/2019 | 95-47-6 |
| **Tetrachloroethene** | **950** | **200** | **6,440** | **1,360** | | 200 | 3/28/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/28/2019 | 109-99-9 |
| Toluene | < 100 | 100 | 377 | 377 | | 200 | 3/28/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/28/2019 | 156-60-5 |
| **Trichloroethene** | **650** | **100** | **2,230** | **537** | | 200 | 3/28/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | 562 | 562 | | 200 | 3/28/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **606** | **100** | **4,640** | **766** | | 200 | 3/28/2019 | 76-13-1 |
| Vinyl chloride | < 100 | 100 | < 256 | 256 | | 200 | 3/28/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 96.8 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 2,000 | 2,000 | ppbv | | T4 | 200 | 3/28/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-13D-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 04 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| **1,1-Dichloroethane** | **14** | **10** | **56.7** | **40.5** | | 20 | 3/28/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **985** | **10** | **3,910** | **39.7** | | 20 | 3/28/2019 | 75-35-4 |
| **1,2-Dichlorobenzene** | **22** | **10** | **135** | **60.1** | | 20 | 3/28/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/28/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/28/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/28/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 3/28/2019 | 71-43-2 |
| **Chlorobenzene** | **38** | **10** | **174** | **46.0** | | 20 | 3/28/2019 | 108-90-7 |
| Chloroform | < 10 | 10 | < 48.8 | 48.8 | | 20 | 3/28/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **45** | **10** | **1,150** | **39.6** | | 20 | 3/28/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **107** | **20** | **532** | **99.0** | | 20 | 3/28/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/28/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/28/2019 | 179601-23-1 |
| **Methylene chloride** | **440** | **40** | **1,530** | **139** | | 20 | 3/28/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/28/2019 | 95-47-6 |
| **Tetrachloroethene** | **286** | **20** | **1,940** | **136** | | 20 | 3/28/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/28/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/28/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/28/2019 | 156-60-5 |
| **Trichloroethene** | **385** | **10** | **2,070** | **53.7** | | 20 | 3/28/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **48** | **10** | **272** | **56.2** | | 20 | 3/28/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **236** | **10** | **1,810** | **76.6** | | 20 | 3/28/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/28/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 106 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | T4 | 20 | 3/28/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-12-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 05 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 3/29/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 1.0 | 1.0 | < 3.97 | 4.0 | | 2 | 3/29/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | < 6.01 | 6.01 | | 2 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 3/29/2019 | 78-93-3 |
| **Acetone** | **16** | **10** | **38.7** | **23.8** | | 2 | 3/29/2019 | 67-64-1 |
| Benzene | < 1.0 | 1.0 | < 3.19 | 3.19 | | 2 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 3/29/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 3/29/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 3/29/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2.0 | 2.0 | < 9.90 | 9.90 | | 2 | 3/29/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/29/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 3/29/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/29/2019 | 95-47-6 |
| Tetrachloroethene | < 2.0 | 2.0 | < 13.6 | 13.6 | | 2 | 3/29/2019 | 127-18-4 |
| **Tetrahydrofuran** | **6.2** | **4.0** | **18.2** | **11.8** | | 2 | 3/29/2019 | 109-99-9 |
| Toluene | < 1.0 | 1.0 | < 3.77 | 3.77 | | 2 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 3/29/2019 | 156-60-5 |
| **Trichloroethene** | **3.7** | **1.0** | **19.9** | **5.37** | | 2 | 3/29/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1.0 | 1.0 | < 5.62 | 5.62 | | 2 | 3/29/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 1.0 | 1.0 | < 7.66 | 7.66 | | 2 | 3/29/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 3/29/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-12S-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 06 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 3/29/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 1.0 | 1.0 | < 3.97 | 4.0 | | 2 | 3/29/2019 | 75-35-4 |
| **1,2-Dichlorobenzene** | **1.0** | **1.0** | **6.13** | **6.01** | | 2 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 3/29/2019 | 78-93-3 |
| Acetone | < 10 | 10 | < 23.8 | 23.8 | | 2 | 3/29/2019 | 67-64-1 |
| Benzene | < 1.0 | 1.0 | < 3.19 | 3.19 | | 2 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 3/29/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 3/29/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 3/29/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **3.9** | **2.0** | **19.4** | **9.90** | | 2 | 3/29/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/29/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 3/29/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/29/2019 | 95-47-6 |
| **Tetrachloroethene** | **8.9** | **2.0** | **60.3** | **13.6** | | 2 | 3/29/2019 | 127-18-4 |
| Tetrahydrofuran | < 4.0 | 4.0 | < 11.8 | 11.8 | | 2 | 3/29/2019 | 109-99-9 |
| Toluene | < 1.0 | 1.0 | < 3.77 | 3.77 | | 2 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 3/29/2019 | 156-60-5 |
| **Trichloroethene** | **6.9** | **1.0** | **37.1** | **5.37** | | 2 | 3/29/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **1.7** | **1.0** | **9.33** | **5.62** | | 2 | 3/29/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **26** | **1.0** | **196** | **7.66** | | 2 | 3/29/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 103 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 3/29/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-12M-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 07 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 20 | 20 | < 81.0 | 81.0 | | 40 | 3/29/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 20 | 20 | < 79.4 | 79.4 | | 40 | 3/29/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 20 | 20 | < 120 | 120 | | 40 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 20 | 20 | < 81.0 | 81.0 | | 40 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 200 | 200 | < 590 | 590 | | 40 | 3/29/2019 | 78-93-3 |
| Acetone | < 200 | 200 | < 476 | 476 | | 40 | 3/29/2019 | 67-64-1 |
| Benzene | < 20 | 20 | < 63.8 | 63.8 | | 40 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 20 | 20 | < 92.0 | 92.0 | | 40 | 3/29/2019 | 108-90-7 |
| Chloroform | < 20 | 20 | < 97.6 | 97.6 | | 40 | 3/29/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 20 | 20 | < 79.2 | 79.2 | | 40 | 3/29/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **200** | **40** | **992** | **198** | | 40 | 3/29/2019 | 75-71-8 |
| Ethylbenzene | < 20 | 20 | < 86.8 | 86.8 | | 40 | 3/29/2019 | 100-41-4 |
| m&p-Xylene | < 40 | 40 | < 174 | 174 | | 40 | 3/29/2019 | 179601-23-1 |
| Methylene chloride | < 80 | 80 | < 278 | 278 | | 40 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 40 | 3/29/2019 | 95-47-6 |
| **Tetrachloroethene** | **54** | **40** | **363** | **271** | | 40 | 3/29/2019 | 127-18-4 |
| Tetrahydrofuran | < 80 | 80 | < 236 | 236 | | 40 | 3/29/2019 | 109-99-9 |
| Toluene | < 20 | 20 | < 75.4 | 75.4 | | 40 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 20 | 20 | < 79.2 | 79.2 | | 40 | 3/29/2019 | 156-60-5 |
| Trichloroethene | < 20 | 20 | < 107 | 107 | | 40 | 3/29/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **82** | **20** | **461** | **112** | | 40 | 3/29/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **973** | **20** | **7,450** | **153** | | 40 | 3/29/2019 | 76-13-1 |
| Vinyl chloride | < 20 | 20 | < 51.2 | 51.2 | | 40 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 95.4 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 400 | 400 | ppbv | | T4 | 40 | 3/29/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-12D-SG-031919 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/19/2019 |
| **Lab ID:** | 08 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: YM | |
| **1,1-Dichloroethane** | **9.2** | **2.5** | **37.3** | **10.1** | | 5 | 3/29/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 2.5 | 2.5 | < 9.93 | 9.93 | | 5 | 3/29/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 3/29/2019 | 78-93-3 |
| **Acetone** | **133** | **25** | **316** | **59.5** | | 5 | 3/29/2019 | 67-64-1 |
| Benzene | < 2.5 | 2.5 | < 7.98 | 7.98 | | 5 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 3/29/2019 | 108-90-7 |
| Chloroform | < 2.5 | 2.5 | < 12.2 | 12.2 | | 5 | 3/29/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/29/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **137** | **5.0** | **679** | **24.8** | | 5 | 3/29/2019 | 75-71-8 |
| Ethylbenzene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/29/2019 | 100-41-4 |
| m&p-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 5 | 3/29/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/29/2019 | 95-47-6 |
| **Tetrachloroethene** | **33** | **5.0** | **223** | **33.9** | | 5 | 3/29/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 3/29/2019 | 109-99-9 |
| **Toluene** | **114** | **2.5** | **428** | **9.43** | | 5 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/29/2019 | 156-60-5 |
| **Trichloroethene** | **3.6** | **2.5** | **19.1** | **13.4** | | 5 | 3/29/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **57** | **2.5** | **319** | **14.1** | | 5 | 3/29/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **39** | **2.5** | **296** | **19.2** | | 5 | 3/29/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 3/29/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-3S-SG-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 09 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: | YM |
| **1,1-Dichloroethane** | **48** | **10** | **193** | **40.5** | | 20 | 3/28/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 10 | 10 | < 39.7 | 39.7 | | 20 | 3/28/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 3/28/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/28/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/28/2019 | 78-93-3 |
| **Acetone** | **277** | **100** | **659** | **238** | | 20 | 3/28/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 3/28/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 3/28/2019 | 108-90-7 |
| Chloroform | < 10 | 10 | < 48.8 | 48.8 | | 20 | 3/28/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **30** | **10** | **1,150** | **39.6** | | 20 | 3/28/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **859** | **20** | **4,250** | **99.0** | | 20 | 3/28/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/28/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/28/2019 | 179601-23-1 |
| **Methylene chloride** | **128** | **40** | **443** | **139** | | 20 | 3/28/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/28/2019 | 95-47-6 |
| **Tetrachloroethene** | **142** | **20** | **964** | **136** | | 20 | 3/28/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/28/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/28/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/28/2019 | 156-60-5 |
| **Trichloroethene** | **29** | **10** | **154** | **53.7** | | 20 | 3/27/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **71** | **10** | **400** | **56.2** | | 20 | 3/27/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **29** | **10** | **225** | **76.6** | | 20 | 3/27/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/27/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 3/27/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-3M-SG-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 10 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| **1,1-Dichloroethane** | **688** | **10** | **2,790** | **40.5** | | 20 | 3/28/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **37** | **10** | **148** | **39.7** | | 20 | 3/28/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 3/28/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/28/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/28/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/28/2019 | 67-64-1 |
| **Benzene** | **87** | **10** | **279** | **31.9** | | 20 | 3/28/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 3/28/2019 | 108-90-7 |
| **Chloroform** | **14** | **10** | **69.3** | **48.8** | | 20 | 3/28/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **107** | **10** | **1,150** | **39.6** | | 20 | 3/28/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **4,830** | **100** | **23,900** | **495** | | 100 | 3/29/2018 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/28/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/28/2019 | 179601-23-1 |
| **Methylene chloride** | **811** | **40** | **2,820** | **139** | | 20 | 3/28/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/28/2019 | 95-47-6 |
| **Tetrachloroethene** | **340** | **20** | **2,310** | **136** | | 20 | 3/28/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/28/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/28/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/28/2019 | 156-60-5 |
| **Trichloroethene** | **140** | **10** | **753** | **54** | | 20 | 3/28/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **966** | **10** | **5,430** | **56.2** | | 20 | 3/28/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **224** | **10** | **1,720** | **76.6** | | 20 | 3/28/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/28/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 99.3 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 3/28/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-3PZ-SG-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 11 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 3/29/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 1.0 | 1.0 | < 3.97 | 4.0 | | 2 | 3/29/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | < 6.01 | 6.01 | | 2 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 3/29/2019 | 78-93-3 |
| Acetone | < 10 | 10 | < 23.8 | 23.8 | | 2 | 3/29/2019 | 67-64-1 |
| Benzene | < 1.0 | 1.0 | < 3.19 | 3.19 | | 2 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 3/29/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 3/29/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 3/29/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2.0 | 2.0 | < 9.90 | 9.90 | | 2 | 3/29/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/29/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 3/29/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 3/29/2019 | 95-47-6 |
| Tetrachloroethene | < 2.0 | 2.0 | < 13.6 | 13.6 | | 2 | 3/29/2019 | 127-18-4 |
| Tetrahydrofuran | < 4.0 | 4.0 | < 11.8 | 11.8 | | 2 | 3/29/2019 | 109-99-9 |
| Toluene | < 1.0 | 1.0 | < 3.77 | 3.77 | | 2 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 3/29/2019 | 156-60-5 |
| **Trichloroethene** | **1.3** | **1.0** | **6.87** | **5.37** | | 2 | 3/29/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1.0 | 1.0 | < 5.62 | 5.62 | | 2 | 3/29/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 1.0 | 1.0 | < 7.66 | 7.66 | | 2 | 3/29/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 110 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 3/29/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-5S-SG-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 12 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: | YM |
| **1,1-Dichloroethane** | **10** | **2.5** | **42.3** | **10.1** | | 5 | 3/29/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **2.9** | **2.5** | **11.3** | **9.93** | | 5 | 3/29/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 3/29/2019 | 78-93-3 |
| Acetone | < 25 | 25 | < 59.5 | 59.5 | | 5 | 3/29/2019 | 67-64-1 |
| **Benzene** | **12** | **2.5** | **38.0** | **7.98** | | 5 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 3/29/2019 | 108-90-7 |
| **Chloroform** | **6.6** | **2.5** | **32.0** | **12.2** | | 5 | 3/29/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **23** | **2.5** | **89.1** | **9.90** | | 5 | 3/29/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **77** | **5.0** | **382** | **24.8** | | 5 | 3/29/2019 | 75-71-8 |
| **Ethylbenzene** | **6.8** | **2.5** | **29.5** | **10.9** | | 5 | 3/29/2019 | 100-41-4 |
| **m&p-Xylene** | **18** | **5.0** | **76.0** | **21.7** | | 5 | 3/29/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 3/29/2019 | 95-47-6 |
| **Tetrachloroethene** | **100** | **5.0** | **678** | **33.9** | | 5 | 3/29/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 3/29/2019 | 109-99-9 |
| **Toluene** | **14** | **2.5** | **54.3** | **9.43** | | 5 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 3/29/2019 | 156-60-5 |
| **Trichloroethene** | **23** | **2.5** | **121** | **13.4** | | 5 | 3/29/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **27** | **2.5** | **150** | **14.1** | | 5 | 3/29/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **15** | **2.5** | **116** | **19.2** | | 5 | 3/29/2019 | 76-13-1 |
| **Vinyl chloride** | **3.8** | **2.5** | **9.73** | **6.40** | | 5 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 93.0 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 3/29/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-5D-SG-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 13 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| **1,1-Dichloroethane** | **330** | **10** | **1,340** | **40.5** | | 20 | 3/29/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **77** | **10** | **307** | **39.7** | | 20 | 3/29/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/29/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/29/2019 | 67-64-1 |
| **Benzene** | **38** | **10** | **120** | **31.9** | | 20 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 3/29/2019 | 108-90-7 |
| Chloroform | < 10 | 10 | < 48.8 | 48.8 | | 20 | 3/29/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **59** | **10** | **1,150** | **39.6** | | 20 | 3/29/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **4,490** | **100** | **22,200** | **495** | | 100 | 3/30/2019 | 75-71-8 |
| **Ethylbenzene** | **19** | **10** | **82.5** | **43.4** | | 20 | 3/29/2019 | 100-41-4 |
| **m&p-Xylene** | **23** | **20** | **99.8** | **86.8** | | 20 | 3/29/2019 | 179601-23-1 |
| **Methylene chloride** | **89** | **40** | **310** | **139** | | 20 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/29/2019 | 95-47-6 |
| **Tetrachloroethene** | **289** | **20** | **1,960** | **136** | | 20 | 3/29/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/29/2019 | 109-99-9 |
| **Toluene** | **233** | **10** | **879** | **37.7** | | 20 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/29/2019 | 156-60-5 |
| **Trichloroethene** | **170** | **10** | **914** | **54** | | 20 | 3/29/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **1,620** | **50** | **9,100** | **281** | | 100 | 3/30/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **150** | **10** | **1,150** | **76.6** | | 20 | 3/29/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 97.8 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 3/29/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-5PZ-SG-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 14 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| **1,1-Dichloroethane** | **13** | **10** | **54.3** | **40.5** | | 20 | 3/29/2018 | 75-34-3 |
| **1,1-Dichloroethene** | **127** | **10** | **505** | **39.7** | | 20 | 3/29/2018 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 3/29/2018 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/29/2018 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/29/2018 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/29/2018 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 3/29/2018 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 3/29/2018 | 108-90-7 |
| **Chloroform** | **25** | **10** | **122** | **48.8** | | 20 | 3/29/2018 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **70** | **10** | **1,150** | **39.6** | | 20 | 3/29/2018 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **2,240** | **100** | **11,100** | **495** | | 100 | 3/30/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/29/2018 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/29/2018 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 3/29/2018 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/29/2018 | 95-47-6 |
| **Tetrachloroethene** | **181** | **20** | **1,230** | **136** | | 20 | 3/29/2018 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/29/2018 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/29/2018 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/29/2018 | 156-60-5 |
| **Trichloroethene** | **4,440** | **50** | **23,800** | **269** | | 100 | 3/30/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **719** | **10** | **4,040** | **56.2** | | 20 | 3/29/2018 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **266** | **10** | **2,040** | **76.6** | | 20 | 3/29/2018 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/29/2018 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 97.5 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | T4 | 20 | 3/29/2018 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | DUP04-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 15 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: YM | |
| **1,1-Dichloroethane** | **12** | **10** | **47.8** | **40.5** | | 20 | 3/29/2018 | 75-34-3 |
| **1,1-Dichloroethene** | **136** | **10** | **540** | **39.7** | | 20 | 3/29/2018 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 3/29/2018 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 3/29/2018 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 3/29/2018 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 3/29/2018 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 3/29/2018 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 3/29/2018 | 108-90-7 |
| **Chloroform** | **26** | **10** | **126** | **48.8** | | 20 | 3/29/2018 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **71** | **10** | **1,150** | **39.6** | | 20 | 3/29/2018 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,930** | **100** | **9,550** | **495** | | 100 | 3/30/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/29/2018 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 3/29/2018 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 3/29/2018 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 3/29/2018 | 95-47-6 |
| **Tetrachloroethene** | **203** | **20** | **1,380** | **136** | | 20 | 3/29/2018 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 3/29/2018 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 3/29/2018 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 3/29/2018 | 156-60-5 |
| **Trichloroethene** | **3,330** | **50** | **17,900** | **269** | | 100 | 3/30/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **769** | **10** | **4,320** | **56.2** | | 20 | 3/29/2018 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **275** | **10** | **2,110** | **76.6** | | 20 | 3/29/2018 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 3/29/2018 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 98.4 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 3/29/2018 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010328 Analyst: YM

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/28/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/28/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/28/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/28/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/28/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/28/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/28/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/28/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/28/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/28/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/28/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/28/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/28/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/28/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/28/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/28/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/28/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/28/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/28/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/28/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/28/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/28/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/28/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10 | 10 | ppbv | T4 | 1 | 3/28/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/28/2019 Batch: MS010328 Analyst: YM

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 11.7 | 117 | 11.4 | 114 | 10.0 | 2.6 | ppbv | | | |
| Vinyl Chloride | 9.1 | 90.8 | 8.9 | 88.5 | 10.0 | 2.6 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 10.9 | 109 | 11.0 | 110 | 10.0 | 1.1 | ppbv | | | |
| Acetone | 8.9 | 88.5 | 8.9 | 89.2 | 10.0 | 0.8 | ppbv | | | |
| 1,1-Dichloroethene | 11.1 | 111 | 11.2 | 112 | 10.0 | 1.2 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 9.6 | 96.2 | 9.8 | 97.7 | 10.0 | 1.5 | ppbv | | | |
| Methylene Chloride | 10.7 | 107 | 10.6 | 106 | 10.0 | 1.8 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.8 | 97.5 | 10.1 | 101 | 10.0 | 3.8 | ppbv | | | |
| 1,1-Dichloroethane | 10.4 | 104 | 10.5 | 105 | 10.0 | 0.3 | ppbv | | | |
| 2-Butanone (MEK) | 9.0 | 90.3 | 9.2 | 91.9 | 10.0 | 1.8 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.8 | 98.1 | 9.9 | 99.2 | 10.0 | 1.1 | ppbv | | | |
| Chloroform | 10.1 | 101 | 10.2 | 102 | 10.0 | 0.5 | ppbv | | | |
| Tetrahydrofuran | 10.2 | 102 | 11.0 | 110 | 10.0 | 7.9 | ppbv | | | |
| 1,2-Dichloroethane | 10.0 | 100 | 10.2 | 102 | 10.0 | 2.2 | ppbv | | | |
| Benzene | 9.2 | 92.1 | 9.4 | 94.0 | 10.0 | 2.0 | ppbv | | | |
| Trichloroethene | 8.1 | 81.0 | 8.0 | 80.3 | 10.0 | 0.9 | ppbv | | | |
| Toluene | 8.8 | 87.6 | 8.9 | 88.5 | 10.0 | 1.0 | ppbv | | | |
| Tetrachloroethene | 8.3 | 82.7 | 8.3 | 82.7 | 10.0 | 0.0 | ppbv | | | |
| Chlorobenzene | 8.5 | 85.0 | 8.7 | 87.2 | 10.0 | 2.6 | ppbv | | | |
| Ethylbenzene | 9.1 | 90.9 | 9.0 | 90.3 | 10.0 | 0.7 | ppbv | | | |
| m&p-Xylene | 17.6 | 88.0 | 18.2 | 91.0 | 20.0 | 3.4 | ppbv | | | |
| o-Xylene | 8.0 | 80.1 | 8.0 | 80.4 | 10.0 | 0.4 | ppbv | | | |
| 1,2-Dichlorobenzene | 7.8 | 77.5 | 7.8 | 78.4 | 10.0 | 1.2 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 11.3 | 113 | 11.1 | 111 | | | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010329 Analyst: YM

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: YM | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/29/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/29/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/29/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/29/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/29/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/29/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/29/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/29/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/29/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/29/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/29/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/29/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/29/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/29/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/29/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/29/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/29/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/29/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/29/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/29/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/29/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/29/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/29/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 94.1 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10 | 10 | ppbv | | T4 | 1 | 3/29/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/29/2019 Batch: MS010329 Analyst: YM

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 10.5 | 105 | 11.0 | 110 | 10.0 | 4.5 | ppbv | | | |
| Vinyl Chloride | 8.6 | 85.9 | 8.6 | 86.3 | 10.0 | 0.5 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 9.8 | 97.7 | 9.9 | 98.7 | 10.0 | 1.0 | ppbv | | | |
| Acetone | 8.6 | 85.7 | 9.4 | 94.3 | 10.0 | 9.6 | ppbv | | | |
| 1,1-Dichloroethene | 9.9 | 98.6 | 10.1 | 101 | 10.0 | 2.8 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 9.1 | 91.1 | 9.4 | 94.2 | 10.0 | 3.3 | ppbv | | | |
| Methylene Chloride | 9.6 | 95.7 | 10.0 | 100 | 10.0 | 4.5 | ppbv | | | |
| trans-1,2-Dichloroethene | 8.9 | 88.5 | 9.4 | 93.6 | 10.0 | 5.6 | ppbv | | | |
| 1,1-Dichloroethane | 9.9 | 98.6 | 9.8 | 98.1 | 10.0 | 0.5 | ppbv | | | |
| 2-Butanone (MEK) | 7.9 | 78.7 | 8.6 | 86.3 | 10.0 | 9.2 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.2 | 92.1 | 9.5 | 94.6 | 10.0 | 2.7 | ppbv | | | |
| Chloroform | 9.5 | 95.2 | 9.3 | 92.6 | 10.0 | 2.8 | ppbv | | | |
| Tetrahydrofuran | 9.1 | 91.2 | 10.0 | 100 | 10.0 | 9.4 | ppbv | | | |
| 1,2-Dichloroethane | 9.2 | 91.5 | 9.1 | 91.2 | 10.0 | 0.3 | ppbv | | | |
| Benzene | 8.8 | 87.8 | 9.0 | 89.7 | 10.0 | 2.1 | ppbv | | | |
| Trichloroethene | 8.0 | 80.2 | 8.2 | 81.8 | 10.0 | 2.0 | ppbv | | | |
| Toluene | 8.7 | 86.6 | 8.8 | 87.7 | 10.0 | 1.3 | ppbv | | | |
| Tetrachloroethene | 8.3 | 82.9 | 8.1 | 80.8 | 10.0 | 2.6 | ppbv | | | |
| Chlorobenzene | 8.4 | 84.3 | 8.7 | 86.7 | 10.0 | 2.8 | ppbv | | | |
| Ethylbenzene | 9.0 | 89.5 | 9.3 | 92.5 | 10.0 | 3.3 | ppbv | | | |
| m&p-Xylene | 17.6 | 88.2 | 18.1 | 90.5 | 20.0 | 2.6 | ppbv | | | |
| o-Xylene | 8.6 | 85.8 | 8.4 | 83.6 | 10.0 | 2.6 | ppbv | | | |
| 1,2-Dichlorobenzene | 7.7 | 77.1 | 7.7 | 77.4 | 10.0 | 0.4 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 11.5 | 115 | 10.8 | 108 | | 6.2 | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | NA |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C023 | **Collection:** | NA |
| **Lab ID:** | Standards | **Matrix:** | Nitrogen |

| AEL ID# | STD Name | Vendor | SGI Order# | Description | CONC. | Accuracy | Exp.Date |
|---|---|---|---|---|---|---|---|
| S-180620-03 | Stock | Spectra Gases | 116447993 | TO-14 39 Analytes | 1.0 ppmv | ± 5% | 6/25/2019 |
| S-180620-02 | Stock | Spectra Gases | 116447993 | TO-15 25 Analytes | 1.0 ppmv | ± 5% | 6/22/2019 |
| S-180620-01 | Stock | Spectra Gases | 116447993 | 15 Additional Compounds | 1.0 ppmv | ± 5% | 6/20/2019 |
| S-181011-01 | Stock | Spectra Gases | 116849616 | TO-15 IS 4 Compounds | 1.0 ppmv | ± 5% | 10/11/2019 |
| A-190312-02 | Working Std | AEL Dilution | | TO-15 74 Analytes | 10 ppbv | ± 5% | 6/12/2019 |
| A-190312-01 | Working IS | AEL Dilution | | TO-15 IS 4 Compounds | 50 ppbv | ± 5% | 6/12/2019 |

# 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: Wood | Page 1 of 2 | | AEL Lab # |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C023 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: Natalie.Chrisman@woodplc.com | P.O. Number: | | |
| Phone: 602.733-6000 Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: | E-Mail Results: Y N | | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes____ No____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes____ No____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | X Standard 10 Working Days | S: soil vapor |
| | | W: water |

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 ~~full list~~ Short List | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1826 | 092 | 6 (1) bag | (1) 2 5 | MW-13-S6-031919 | 3.19.19 | 1056 | S | 1 | X | | | | | | | | | X |
| 02 | E2365 | 201 | 6 (1) bag | (1) 2 5 | MW-13S-S6-031919 | ↓ | 1114 | ↓ | ↓ | X | | | | | | | | | X |
| 03 | 1796 | 013 | 6 (1) bag | (1) 2 5 | MW-13M-S6-031919 | ↓ | 1136 | ↓ | ↓ | X | | | | | | | | | X |
| 04 | E2408 | 048 | 6 (1) bag | (1) 2 5 | MW-13D-S6-031919 | ↓ | 1154 | ↓ | ↓ | X | | | | | | | | | X |
| 05 | 1834 | 075 | 6 (1) bag | (1) 2 5 | MW-12-S6-031919 | ↓ | 1351 | ↓ | ↓ | X | | | | | | | | | X |
| 06 | E2355 | 030 | 6 (1) bag | (1) 2 5 | MW-12S-S6-031919 | ↓ | 1407 | ↓ | ↓ | X | | | | | | | | | X |
| 07 | 1886 | 007 | 6 (1) bag | (1) 2 5 | MW-12M-S6-031919 | ↓ | 1431 | ↓ | ↓ | X | | | | | | | | | X |
| 08 | 1792 | 207 | 6 (1) bag | (1) 2 5 | MW-12D-S6-031919 | ↓ | 1451 | ↓ | ↓ | X | | | | | | | | | X |
| 09 | E2102 | 195 | 6 (1) bag | (1) 2 5 | TSSV-3S-S6-032019 | 3.20.19 | 1638 | ↓ | ↓ | X | | | | | | | | | X |
| 10 | E2096 | 035 | 6 (1) bag | (1) 2 5 | TSSV-3M-S6-032019 | ↓ | 1101 | ↓ | ↓ | X | | | | | | | | | X |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.20.19 | 1525 | E. Miller | |
| | | | |
| | | | |

# 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: Wood | Page 2 of 2 | | AEL Lab # |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C023 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: PHOENIX, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: Natalie.Chrisman@woodplc.com | P.O. Number: | | |
| Phone: 602.733-6000 Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: | E-Mail Results: Y N | | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes_____ No_____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes_____ No_____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | X Standard 10 Working Days | S: soil vapor |
| | | W: water |

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 ~~full list~~ SHORT LIST | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | E2385 | 065 | 6 1 bag | 1 2 5 | TSSV-3PZ-S6-032019 | 3.20.19 | 1201 | S | 1 | X | | | | | | | | | X |
| 12 | 1807 | 196 | 6 1 bag | 1 2 5 | TSSV-5S-S6-032019 | ↓ | 1231 | ↓ | ↓ | X | | | | | | | | | X |
| 13 | 1810 | 137 | 6 1 bag | 1 2 5 | TSSV-5P-S6-032019 | ↓ | 1316 | ↓ | ↓ | X | | | | | | | | | X |
| 14 | 0265 | 189 | 6 1 bag | 1 2 5 | TSSV-5PZ-S6-032019 | ↓ | 1416 | ↓ | ↓ | X | | | | | | | | | X |
| 15 | 0197 | 053 | 6 1 bag | 1 2 5 | DUP04-032019 | ↓ | 1430 | ↓ | ↓ | X | | | | | | | | | X |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.20.19 | 1525 | E. Miller | |
| | | | |
| | | | |

**Airtech Environmental Laboratories (AEL)**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: April 15, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C029 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/22/2019 |

Dear Client:

Airtech Environmental Laboratories received twenty-one (21) 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: April 15, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C029 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/22/2019 |

## SAMPLE SUMMARY

| LAB ID | CLIENT ID | METHOD | SAMPLE DATE | SAMPLE TIME |
|---|---|---|---|---|
| 19C029-01 | TSSV-4S-SG-032119 | TO-15 | 3/21/2019 | 751 |
| 19C029-02 | TSSV-4PZ-SG-032119 | TO-15 | 3/21/2019 | 846 |
| 19C029-03 | TSSV-4D-SG-032119 | TO-15 | 3/21/2019 | 919 |
| 19C029-04 | SVE-3M-SG-032119 | TO-15 | 3/21/2019 | 1003 |
| 19C029-05 | SVE-3-SG-032119 | TO-15 | 3/21/2019 | 1015 |
| 19C029-06 | SVE-4S-SG-032119 | TO-15 | 3/21/2019 | 1040 |
| 19C029-07 | SVE-4-SG-032119 | TO-15 | 3/21/2019 | 1110 |
| 19C029-08 | MW-11-SG-032119 | TO-15 | 3/21/2019 | 1311 |
| 19C029-09 | DUP05-032119 | TO-15 | 3/21/2019 | 1325 |
| 19C029-10 | TSSV-2S-SG-032219 | TO-15 | 3/22/2019 | 916 |
| 19C029-11 | TSSV-2M-SG-032219 | TO-15 | 3/22/2019 | 938 |
| 19C029-12 | TSSV-2D-SG-032219 | TO-15 | 3/22/2019 | 1006 |
| 19C029-13 | TSSV-2PZ-SG-032219 | TO-15 | 3/22/2019 | 1031 |
| 19C029-14 | SVE-1S-SG-032219 | TO-15 | 3/22/2019 | 1120 |
| 19C029-15 | SVE-1M-SG-032219 | TO-15 | 3/22/2019 | 1141 |
| 19C029-16 | SVE-1D-SG-032219 | TO-15 | 3/22/2019 | 1201 |
| 19C029-17 | SVE-2S-SG-032219 | TO-15 | 3/22/2019 | 1222 |
| 19C029-18 | SVE-2M-SG-032219 | TO-15 | 3/22/2019 | 1246 |
| 19C029-19 | SVE-2-SG-032219 | TO-15 | 3/22/2019 | 1257 |
| 19C029-20 | TSSV-PW-SG-032219 | TO-15 | 3/22/2019 | 1327 |
| 19C029-21 | SVE-1-SG-032219 | TO-15 | 3/22/2019 | 1357 |

**Airtech Environmental Laboratories (AEL)**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: April 15, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C029 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 03/22/19 |

## 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.

**Airtech Environmental Laboratories (AEL) - AZ 0740**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | N/A |
| **Lab ID:** | Kits QC | **Matrix:** | Air |

| | | Canister | | | | Grab Sampler | |
|---|---|---|---|---|---|---|---|
| | | Type | | Vacuum | Pressure | Type | |
| | Client | 1.0 liter | | before sampled | after sampled | 1 minute-fill 1.0L canister | |
| AEL# | ID | SN# | Clean Batch# | Hg inch | psia | SN# | Clean Batch# |
| 19C029-01 | TSSV-4S-SG-032119 | 1676 | 1903-11 | 29.0 | 14.08 | 062 | 1903-01 |
| 19C029-02 | TSSV-4PZ-SG-032119 | E2403 | 1903-04 | 29.0 | 14.08 | 163 | 1903-01 |
| 19C029-03 | TSSV-4D-SG-032119 | 0206 | 1903-11 | 29.0 | 13.93 | 165 | 1903-01 |
| 19C029-04 | SVE-3M-SG-032119 | 1869 | 1903-11 | 29.0 | 13.98 | 197 | 1903-01 |
| 19C029-05 | SVE-3-SG-032119 | 1829 | 1903-11 | 29.0 | 13.21 | 193 | 1903-01 |
| 19C029-06 | SVE-4S-SG-032119 | 0223 | 1903-12 | 29.0 | 13.68 | 136 | 1903-01 |
| 19C029-07 | SVE-4-SG-032119 | E2375 | 1903-11 | 29.0 | 12.98 | 021 | 1903-01 |
| 19C029-08 | MW-11-SG-032119 | 1852 | 1903-12 | 29.0 | 13.60 | 179 | 1903-01 |
| 19C029-09 | DUP05-032119 | 1809 | 1903-12 | 29.0 | 13.55 | 057 | 1903-01 |
| 19C029-10 | TSSV-2S-SG-032219 | 1849 | 1903-11 | 29.0 | 13.91 | 202 | 1903-01 |
| 19C029-11 | TSSV-2M-SG-032219 | E2362 | 1903-11 | 29.0 | 13.88 | 205 | 1903-01 |
| 19C029-12 | TSSV-2D-SG-032219 | E2101 | 1903-12 | 29.0 | 13.76 | 012 | 1903-01 |
| 19C029-13 | TSSV-2PZ-SG-032219 | 1796 | 1903-12 | 29.0 | 13.53 | 206 | 1903-01 |
| 19C029-14 | SVE-1S-SG-032219 | E2098 | 1903-17 | 29.0 | 13.60 | 041 | 1903-01 |
| 19C029-15 | SVE-1M-SG-032219 | E2393 | 1903-03 | 29.0 | 13.65 | 158 | 1903-01 |
| 19C029-16 | SVE-1D-SG-032219 | 1827 | 1903-12 | 29.0 | 13.65 | 072 | 1903-01 |
| 19C029-17 | SVE-2S-SG-032219 | 1884 | 1903-11 | 29.0 | 13.61 | 023 | 1903-01 |
| 19C029-18 | SVE-2M-SG-032219 | E2088 | 1903-12 | 29.0 | 13.65 | 144 | 1903-01 |
| 19C029-19 | SVE-2-SG-032219 | E2351 | 1903-12 | 29.0 | 12.53 | 024 | 1903-01 |
| 19C029-20 | TSSV-PW-SG-032219 | 1837 | 1903-07 | 29.0 | 12.27 | 068 | 1903-01 |
| 19C029-21 | SVE-1-SG-032219 | E2091 | 1903-12 | 29.0 | 12.92 | 117 | 1903-01 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-4S-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 01 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| **1,1-Dichloroethane** | **4.9** | **2.5** | **19.6** | **10.1** | | 5 | 4/2/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **5.7** | **2.5** | **22.6** | **9.93** | | 5 | 4/2/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 2.5 | 2.5 | < 15.0 | 15.0 | | 5 | 4/2/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 4/2/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 4/2/2019 | 78-93-3 |
| Acetone | < 25 | 25 | < 59.5 | 59.5 | | 5 | 4/2/2019 | 67-64-1 |
| Benzene | < 2.5 | 2.5 | < 7.98 | 7.98 | | 5 | 4/2/2019 | 71-43-2 |
| Chlorobenzene | < 2.5 | 2.5 | < 11.5 | 11.5 | | 5 | 4/2/2019 | 108-90-7 |
| **Chloroform** | **133** | **2.5** | **649** | **12.2** | | 5 | 4/2/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **6.6** | **2.5** | **25.9** | **9.90** | | 5 | 4/2/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **40** | **5.0** | **196** | **24.8** | | 5 | 4/2/2019 | 75-71-8 |
| Ethylbenzene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 4/2/2019 | 100-41-4 |
| m&p-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 5 | 4/2/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 4/2/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 4/2/2019 | 95-47-6 |
| **Tetrachloroethene** | **124** | **5.0** | **838** | **33.9** | | 5 | 4/2/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 4/2/2019 | 109-99-9 |
| Toluene | < 2.5 | 2.5 | < 9.43 | 9.43 | | 5 | 4/2/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 4/2/2019 | 156-60-5 |
| **Trichloroethene** | **50** | **2.5** | **269** | **13.4** | | 5 | 4/2/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **16** | **2.5** | **92.2** | **14.1** | | 5 | 4/2/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **7.8** | **2.5** | **59.7** | **19.2** | | 5 | 4/2/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 4/2/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 98.8 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 4/2/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-4PZ-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 02 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/2/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 1.0 | 1.0 | < 3.97 | 3.97 | | 2 | 4/2/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | < 6.01 | 6.01 | | 2 | 4/2/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/2/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 4/2/2019 | 78-93-3 |
| **Acetone** | **11** | **10** | **25.3** | **23.8** | | 2 | 4/2/2019 | 67-64-1 |
| Benzene | < 1.0 | 1.0 | < 3.19 | 3.19 | | 2 | 4/2/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 4/2/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 4/2/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/2/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2.0 | 2.0 | < 9.90 | 9.90 | | 2 | 4/2/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/2/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 4/2/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 4/2/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/2/2019 | 95-47-6 |
| Tetrachloroethene | < 2.0 | 2.0 | < 13.6 | 13.6 | | 2 | 4/2/2019 | 127-18-4 |
| Tetrahydrofuran | < 4.0 | 4.0 | < 11.8 | 11.8 | | 2 | 4/2/2019 | 109-99-9 |
| Toluene | < 1.0 | 1.0 | < 3.77 | 3.77 | | 2 | 4/2/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/2/2019 | 156-60-5 |
| **Trichloroethene** | **1.4** | **1.0** | **7.63** | **5.37** | | 2 | 4/2/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1.0 | 1.0 | < 5.62 | 5.62 | | 2 | 4/2/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 1.0 | 1.0 | < 7.66 | 7.66 | | 2 | 4/2/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 4/2/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 97.4 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 4/2/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-4D-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 03 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/2/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **46** | **10** | **183** | **39.7** | | 20 | 4/2/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 4/2/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/2/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 4/2/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 4/2/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 4/2/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 4/2/2019 | 108-90-7 |
| Chloroform | < 10 | 10 | < 48.8 | 48.8 | | 20 | 4/2/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **195** | **10** | **774** | **39.6** | | 20 | 4/2/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **33** | **20** | **163** | **99.0** | | 20 | 4/2/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/2/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 4/2/2019 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 4/2/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/2/2019 | 95-47-6 |
| **Tetrachloroethene** | **62** | **20** | **419** | **136** | | 20 | 4/2/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 4/2/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 4/2/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 4/2/2019 | 156-60-5 |
| **Trichloroethene** | **871** | **10** | **4,680** | **53.7** | | 20 | 4/2/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 10 | 10 | < 56.2 | 56.2 | | 20 | 4/2/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **343** | **10** | **2,630** | **76.6** | | 20 | 4/2/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 4/2/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 98.5 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 4/2/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-3M-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 04 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/2/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 10 | 10 | < 39.7 | 39.7 | | 20 | 4/2/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 4/2/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/2/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 4/2/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 4/2/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 4/2/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 4/2/2019 | 108-90-7 |
| **Chloroform** | **18** | **10** | **88.8** | **48.8** | | 20 | 4/2/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 4/2/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **121** | **20** | **600** | **99.0** | | 20 | 4/2/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/2/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 4/2/2019 | 179601-23-1 |
| **Methylene chloride** | **181** | **40** | **628** | **139** | | 20 | 4/2/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/2/2019 | 95-47-6 |
| **Tetrachloroethene** | **80** | **20** | **545** | **136** | | 20 | 4/2/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 4/2/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 4/2/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 4/2/2019 | 156-60-5 |
| **Trichloroethene** | **120** | **10** | **644** | **53.7** | | 20 | 4/2/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **105** | **10** | **588** | **56.2** | | 20 | 4/2/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **39** | **10** | **297** | **76.6** | | 20 | 4/2/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 4/2/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | T4 | 20 | 4/2/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-3-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 05 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 250 | 250 | < 1,010 | 1,010 | | 500 | 4/3/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **1,340** | **250** | **5,320** | **993** | | 500 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 250 | 250 | < 1,500 | 1,500 | | 500 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 250 | 250 | < 1,010 | 1,010 | | 500 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 2,500 | 2,500 | < 7,380 | 7,380 | | 500 | 4/3/2019 | 78-93-3 |
| Acetone | < 2,500 | 2,500 | < 5,950 | 5,950 | | 500 | 4/3/2019 | 67-64-1 |
| Benzene | < 250 | 250 | < 798 | 798 | | 500 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 250 | 250 | < 1,150 | 1,150 | | 500 | 4/3/2019 | 108-90-7 |
| Chloroform | < 250 | 250 | < 1,220 | 1,220 | | 500 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **1,390** | **250** | **5,500** | **990** | | 500 | 4/3/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,440** | **500** | **7,130** | **2,480** | | 500 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 500 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 1,000 | 1,000 | < 3,470 | 3,470 | | 500 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **670** | **500** | **4,540** | **3,390** | | 500 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 1,000 | 1,000 | < 2,950 | 2,950 | | 500 | 4/3/2019 | 109-99-9 |
| Toluene | < 250 | 250 | < 943 | 943 | | 500 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 250 | 250 | < 990 | 990 | | 500 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **14,400** | **250** | **77,300** | **1,340** | | 500 | 4/3/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **530** | **250** | **2,980** | **1,410** | | 500 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **2,740** | **250** | **21,000** | **1,920** | | 500 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 250 | 250 | < 640 | 640 | | 500 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 100 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 5,000 | 5,000 | ppbv | | T4 | 500 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-4S-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 06 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 4/2/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 2.5 | 2.5 | < 9.93 | 9.93 | | 5 | 4/2/2019 | 75-35-4 |
| **1,2-Dichlorobenzene** | **25** | **2.5** | **153** | **15.0** | | 5 | 4/2/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 2.5 | 2.5 | < 10.1 | 10.1 | | 5 | 4/2/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 25 | 25 | < 73.8 | 73.8 | | 5 | 4/2/2019 | 78-93-3 |
| **Acetone** | **44** | **25** | **104** | **59.5** | | 5 | 4/2/2019 | 67-64-1 |
| Benzene | < 2.5 | 2.5 | < 7.98 | 7.98 | | 5 | 4/2/2019 | 71-43-2 |
| **Chlorobenzene** | **75** | **2.5** | **343** | **11.5** | | 5 | 4/2/2019 | 108-90-7 |
| **Chloroform** | **4.0** | **2.5** | **19.5** | **12.2** | | 5 | 4/2/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **25** | **2.5** | **97.8** | **9.90** | | 5 | 4/2/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **16** | **5.0** | **81.2** | **24.8** | | 5 | 4/2/2019 | 75-71-8 |
| Ethylbenzene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 4/2/2019 | 100-41-4 |
| m&p-Xylene | < 5.0 | 5.0 | < 21.7 | 21.7 | | 5 | 4/2/2019 | 179601-23-1 |
| Methylene chloride | < 10 | 10 | < 34.7 | 34.7 | | 5 | 4/2/2019 | 75-09-2 |
| o-Xylene | < 2.5 | 2.5 | < 10.9 | 10.9 | | 5 | 4/2/2019 | 95-47-6 |
| **Tetrachloroethene** | **43** | **5.0** | **292** | **33.9** | | 5 | 4/2/2019 | 127-18-4 |
| Tetrahydrofuran | < 10 | 10 | < 29.5 | 29.5 | | 5 | 4/2/2019 | 109-99-9 |
| Toluene | < 2.5 | 2.5 | < 9.43 | 9.43 | | 5 | 4/2/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 2.5 | 2.5 | < 9.90 | 9.90 | | 5 | 4/2/2019 | 156-60-5 |
| **Trichloroethene** | **129** | **2.5** | **691** | **13.4** | | 5 | 4/2/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **76** | **2.5** | **429** | **14.1** | | 5 | 4/2/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **14** | **2.5** | **110** | **19.2** | | 5 | 4/2/2019 | 76-13-1 |
| Vinyl chloride | < 2.5 | 2.5 | < 6.40 | 6.40 | | 5 | 4/2/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 110 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 50 | 50 | ppbv | | T4 | 5 | 4/2/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-4-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 07 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 4/3/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **41,900** | **1,000** | **166,000** | **3,970** | | 2,000 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1,000 | 1,000 | < 6,010 | 6,010 | | 2,000 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10,000 | 10,000 | < 29,500 | 29,500 | | 2,000 | 4/3/2019 | 78-93-3 |
| Acetone | < 10,000 | 10,000 | < 23,800 | 23,800 | | 2,000 | 4/3/2019 | 67-64-1 |
| Benzene | < 1,000 | 1,000 | < 3,190 | 3,190 | | 2,000 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 1,000 | 1,000 | < 4,600 | 4,600 | | 2,000 | 4/3/2019 | 108-90-7 |
| Chloroform | < 1,000 | 1,000 | < 4,880 | 4,880 | | 2,000 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **5,800** | **1,000** | **23,000** | **3,960** | | 2,000 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2,000 | 2,000 | < 9,900 | 9,900 | | 2,000 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 2,000 | 2,000 | < 8,680 | 8,680 | | 2,000 | 4/3/2019 | 179601-23-1 |
| **Methylene chloride** | **69,000** | **4,000** | **239,000** | **13,900** | | 2,000 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **6,200** | **2,000** | **42,000** | **13,600** | | 2,000 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 4,000 | 4,000 | < 11,800 | 11,800 | | 2,000 | 4/3/2019 | 109-99-9 |
| Toluene | < 1,000 | 1,000 | < 3,770 | 3,770 | | 2,000 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1,000 | 1,000 | < 3,960 | 3,960 | | 2,000 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **36,800** | **1,000** | **198,000** | **5,370** | | 2,000 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1,000 | 1,000 | < 5,620 | 5,620 | | 2,000 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **11,300** | **1,000** | **86,600** | **7,660** | | 2,000 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 1,000 | 1,000 | < 2,560 | 2,560 | | 2,000 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 97.6 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20,000 | 20,000 | ppbv | | T4 | 2,000 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | MW-11-SG-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 08 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 1.0 | 1.0 | < 3.97 | 3.97 | | 2 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | < 6.01 | 6.01 | | 2 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 4/3/2019 | 78-93-3 |
| Acetone | < 10 | 10 | < 23.8 | 23.8 | | 2 | 4/3/2019 | 67-64-1 |
| Benzene | < 1.0 | 1.0 | < 3.19 | 3.19 | | 2 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 4/3/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 4/3/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2.0 | 2.0 | < 9.90 | 9.90 | | 2 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/3/2019 | 95-47-6 |
| Tetrachloroethene | < 2.0 | 2.0 | < 13.6 | 13.6 | | 2 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 4.0 | 4.0 | < 11.8 | 11.8 | | 2 | 4/3/2019 | 109-99-9 |
| Toluene | < 1.0 | 1.0 | < 3.77 | 3.77 | | 2 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **1.2** | **1.0** | **6.66** | **5.37** | | 2 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1.0 | 1.0 | < 5.62 | 5.62 | | 2 | 4/3/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 1.0 | 1.0 | < 7.66 | 7.66 | | 2 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 102 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | DUP05-032119 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/21/2019 |
| **Lab ID:** | 09 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 1.0 | 1.0 | < 3.97 | 3.97 | | 2 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | < 6.01 | 6.01 | | 2 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 4/3/2019 | 78-93-3 |
| **Acetone** | **11** | **10** | **25.0** | **23.8** | | 2 | 4/3/2019 | 67-64-1 |
| Benzene | < 1.0 | 1.0 | < 3.19 | 3.19 | | 2 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 4/3/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 4/3/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2.0 | 2.0 | < 9.90 | 9.90 | | 2 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/3/2019 | 95-47-6 |
| Tetrachloroethene | < 2.0 | 2.0 | < 13.6 | 13.6 | | 2 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 4.0 | 4.0 | < 11.8 | 11.8 | | 2 | 4/3/2019 | 109-99-9 |
| Toluene | < 1.0 | 1.0 | < 3.77 | 3.77 | | 2 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **1.1** | **1.0** | **6.01** | **5.37** | | 2 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1.0 | 1.0 | < 5.62 | 5.62 | | 2 | 4/3/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 1.0 | 1.0 | < 7.66 | 7.66 | | 2 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-2S-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 10 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 10 | 10 | < 39.7 | 39.7 | | 20 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 4/3/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 4/3/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 4/3/2019 | 108-90-7 |
| Chloroform | < 10 | 10 | < 48.8 | 48.8 | | 20 | 4/3/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 20 | 20 | < 99.0 | 99.0 | | 20 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **58** | **20** | **393** | **136** | | 20 | 4/3/2019 | 127-18-4 |
| **Tetrahydrofuran** | **58** | **40** | **172** | **118** | | 20 | 4/3/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **606** | **10** | **3,250** | **53.7** | | 20 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 10 | 10 | < 56.2 | 56.2 | | 20 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **17** | **10** | **130** | **76.6** | | 20 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 106 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-2M-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 11 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/3/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **1.2** | **1.0** | **4.84** | **3.97** | | 2 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | < 6.01 | 6.01 | | 2 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 4/3/2019 | 78-93-3 |
| Acetone | < 10 | 10 | < 23.8 | 23.8 | | 2 | 4/3/2019 | 67-64-1 |
| Benzene | < 1.0 | 1.0 | < 3.19 | 3.19 | | 2 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 4/3/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **1.1** | **1.0** | **4.36** | **3.96** | | 2 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2.0 | 2.0 | < 9.90 | 9.90 | | 2 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **2.3** | **2.0** | **15.3** | **13.6** | | 2 | 4/3/2019 | 127-18-4 |
| **Tetrahydrofuran** | **89** | **40** | **262** | **118** | | 20 | 4/3/2019 | 109-99-9 |
| Toluene | < 1.0 | 1.0 | < 3.77 | 3.77 | | 2 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **19** | **1.0** | **100** | **5.37** | | 2 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1.0 | 1.0 | < 5.62 | 5.62 | | 2 | 4/3/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 1.0 | 1.0 | < 7.66 | 7.66 | | 2 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 99.6 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | T4 | 2 | 4/3/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-2D-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 12 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/4/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **10** | **10** | **40.5** | **39.7** | | 20 | 4/4/2019 | 75-35-4 |
| **1,2-Dichlorobenzene** | **20** | **10** | **121** | **60.1** | | 20 | 4/4/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/4/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 4/4/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 4/4/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 4/4/2019 | 71-43-2 |
| **Chlorobenzene** | **31** | **10** | **144** | **46.0** | | 20 | 4/4/2019 | 108-90-7 |
| **Chloroform** | **26** | **10** | **127** | **48.8** | | 20 | 4/4/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **323** | **10** | **1,280** | **39.6** | | 20 | 4/4/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 20 | 20 | < 99.0 | 99.0 | | 20 | 4/4/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/4/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 4/4/2019 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 4/4/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/4/2019 | 95-47-6 |
| **Tetrachloroethene** | **35** | **20** | **239** | **136** | | 20 | 4/4/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 4/4/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 4/4/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 4/4/2019 | 156-60-5 |
| **Trichloroethene** | **843** | **50** | **4,530** | **269** | | 100 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 10 | 10 | < 56.2 | 56.2 | | 20 | 4/4/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **58** | **10** | **446** | **76.6** | | 20 | 4/4/2019 | 76-13-1 |
| Vinyl chloride | < 10 | 10 | < 25.6 | 25.6 | | 20 | 4/4/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 4/4/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-2PZ-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 13 | **Matrix:** | Soil vapor |

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/4/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **11** | **1.0** | **44.3** | **3.97** | | 2 | 4/4/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | < 6.01 | 6.01 | | 2 | 4/4/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1.0 | 1.0 | < 4.05 | 4.05 | | 2 | 4/4/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10 | 10 | < 29.5 | 29.5 | | 2 | 4/4/2019 | 78-93-3 |
| **Acetone** | **13** | **10** | **29.9** | **23.8** | | 2 | 4/4/2019 | 67-64-1 |
| **Benzene** | **2.6** | **1.0** | **8.23** | **3.19** | | 2 | 4/4/2019 | 71-43-2 |
| Chlorobenzene | < 1.0 | 1.0 | < 4.60 | 4.60 | | 2 | 4/4/2019 | 108-90-7 |
| Chloroform | < 1.0 | 1.0 | < 4.88 | 4.88 | | 2 | 4/4/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **73** | **1.0** | **290** | **3.96** | | 2 | 4/4/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2.0 | 2.0 | < 9.90 | 9.90 | | 2 | 4/4/2019 | 75-71-8 |
| Ethylbenzene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/4/2019 | 100-41-4 |
| m&p-Xylene | < 2.0 | 2.0 | < 8.68 | 8.68 | | 2 | 4/4/2019 | 179601-23-1 |
| Methylene chloride | < 4.0 | 4.0 | < 13.9 | 13.9 | | 2 | 4/4/2019 | 75-09-2 |
| o-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 2 | 4/4/2019 | 95-47-6 |
| **Tetrachloroethene** | **13** | **2.0** | **84.9** | **13.6** | | 2 | 4/4/2019 | 127-18-4 |
| Tetrahydrofuran | < 4.0 | 4.0 | < 11.8 | 11.8 | | 2 | 4/4/2019 | 109-99-9 |
| **Toluene** | **3.6** | **1.0** | **13.5** | **3.77** | | 2 | 4/4/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | < 3.96 | 3.96 | | 2 | 4/4/2019 | 156-60-5 |
| **Trichloroethene** | **50** | **1.0** | **269** | **5.37** | | 2 | 4/4/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1.0 | 1.0 | < 5.62 | 5.62 | | 2 | 4/4/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **6.4** | **1.0** | **48.9** | **7.66** | | 2 | 4/4/2019 | 76-13-1 |
| Vinyl chloride | < 1.0 | 1.0 | < 2.56 | 2.56 | | 2 | 4/4/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 107 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 20 | 20 | ppbv | | T4 | 2 | 4/4/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-1S-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 14 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 4/4/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 100 | 100 | < 397 | 397 | | 200 | 4/4/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 4/4/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 4/4/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 4/4/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 4/4/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 4/4/2019 | 71-43-2 |
| **Chlorobenzene** | **134** | **100** | **616** | **460** | | 200 | 4/4/2019 | 108-90-7 |
| Chloroform | < 100 | 100 | < 488 | 488 | | 200 | 4/4/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 4/4/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 200 | 200 | < 990 | 990 | | 200 | 4/4/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 4/4/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 4/4/2019 | 179601-23-1 |
| Methylene chloride | < 400 | 400 | < 1,390 | 1,390 | | 200 | 4/4/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 4/4/2019 | 95-47-6 |
| **Tetrachloroethene** | **244** | **200** | **1,650** | **1,360** | | 200 | 4/4/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 4/4/2019 | 109-99-9 |
| Toluene | < 100 | 100 | < 377 | 377 | | 200 | 4/4/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 4/4/2019 | 156-60-5 |
| **Trichloroethene** | **3,070** | **100** | **16,500** | **537** | | 200 | 4/4/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | < 562 | 562 | | 200 | 4/4/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **114** | **100** | **873** | **766** | | 200 | 4/4/2019 | 76-13-1 |
| Vinyl chloride | < 100 | 100 | < 256 | 256 | | 200 | 4/4/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 96.9 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 2,000 | 2,000 | ppbv | | T4 | 200 | 4/4/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-1M-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 15 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 50 | 50 | < 199 | 199 | | 100 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 50 | 50 | < 301 | 301 | | 100 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 500 | 500 | < -1,480 | 1,480 | | 100 | 4/3/2019 | 78-93-3 |
| Acetone | < 500 | 500 | < 1,190 | 1,190 | | 100 | 4/3/2019 | 67-64-1 |
| Benzene | < 50 | 50 | < 160 | 160 | | 100 | 4/3/2019 | 71-43-2 |
| **Chlorobenzene** | **174** | **50** | **800** | **230** | | 100 | 4/3/2019 | 108-90-7 |
| Chloroform | < 50 | 50 | < 244 | 244 | | 100 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **58** | **50** | **230** | **198** | | 100 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 100 | 100 | < 495 | 495 | | 100 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 100 | 100 | < 434 | 434 | | 100 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 200 | 200 | < 694 | 694 | | 100 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **114** | **100** | **773** | **678** | | 100 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 200 | 200 | < 590 | 590 | | 100 | 4/3/2019 | 109-99-9 |
| Toluene | < 50 | 50 | < 189 | 189 | | 100 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 50 | 50 | < 198 | 198 | | 100 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **1,490** | **50** | **8,000** | **269** | | 100 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 50 | 50 | < 281 | 281 | | 100 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **81** | **50** | **620** | **383** | | 100 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 50 | 50 | < 128 | 128 | | 100 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 107 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 1,000 | 1,000 | ppbv | | T4 | 100 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-1D-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 16 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 50 | 50 | < 199 | 199 | | 100 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 50 | 50 | < 301 | 301 | | 100 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 500 | 500 | < 1,480 | 1,480 | | 100 | 4/3/2019 | 78-93-3 |
| Acetone | < 500 | 500 | < 1,190 | 1,190 | | 100 | 4/3/2019 | 67-64-1 |
| Benzene | < 50 | 50 | < 160 | 160 | | 100 | 4/3/2019 | 71-43-2 |
| **Chlorobenzene** | **224** | **50** | **1,030** | **230** | | 100 | 4/3/2019 | 108-90-7 |
| Chloroform | < 50 | 50 | < 244 | 244 | | 100 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **55** | **50** | **218** | **198** | | 100 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 100 | 100 | < 495 | 495 | | 100 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 100 | 100 | < 434 | 434 | | 100 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 200 | 200 | < 694 | 694 | | 100 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **116** | **100** | **786** | **678** | | 100 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 200 | 200 | < 590 | 590 | | 100 | 4/3/2019 | 109-99-9 |
| Toluene | < 50 | 50 | < 189 | 189 | | 100 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 50 | 50 | < 198 | 198 | | 100 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **1,500** | **50** | **8,060** | **269** | | 100 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 50 | 50 | < 281 | 281 | | 100 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **77** | **50** | **590** | **383** | | 100 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 50 | 50 | < 128 | 128 | | 100 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 106 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 1,000 | 1,000 | ppbv | | T4 | 100 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-2S-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 17 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 50 | 50 | < 199 | 199 | | 100 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 50 | 50 | < 301 | 301 | | 100 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 500 | 500 | < 1,480 | 1,480 | | 100 | 4/3/2019 | 78-93-3 |
| Acetone | < 500 | 500 | < 1,190 | 1,190 | | 100 | 4/3/2019 | 67-64-1 |
| Benzene | < 50 | 50 | < 160 | 160 | | 100 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 50 | 50 | < 230 | 230 | | 100 | 4/3/2019 | 108-90-7 |
| Chloroform | < 50 | 50 | < 244 | 244 | | 100 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **968** | **50** | **3,830** | **198** | | 100 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 100 | 100 | < 495 | 495 | | 100 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 100 | 100 | < 434 | 434 | | 100 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 200 | 200 | < 694 | 694 | | 100 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **101** | **100** | **685** | **678** | | 100 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 200 | 200 | < 590 | 590 | | 100 | 4/3/2019 | 109-99-9 |
| Toluene | < 50 | 50 | < 189 | 189 | | 100 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 50 | 50 | < 198 | 198 | | 100 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **159** | **50** | **854** | **269** | | 100 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 50 | 50 | < 281 | 281 | | 100 | 4/3/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 50 | 50 | < 383 | 383 | | 100 | 4/3/2019 | 76-13-1 |
| **Vinyl chloride** | **266** | **50** | **681** | **128** | | 100 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 103 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Difluoroethane | < | 1,000 | 1,000 | ppbv | T4 | 100 | 4/3/2019 | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-2M-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 18 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 10 | 10 | < 39.7 | 39.7 | | 20 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 10 | 10 | < 60.1 | 60.1 | | 20 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 10 | 10 | < 40.5 | 40.5 | | 20 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 100 | 100 | < 295 | 295 | | 20 | 4/3/2019 | 78-93-3 |
| Acetone | < 100 | 100 | < 238 | 238 | | 20 | 4/3/2019 | 67-64-1 |
| Benzene | < 10 | 10 | < 31.9 | 31.9 | | 20 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 10 | 10 | < 46.0 | 46.0 | | 20 | 4/3/2019 | 108-90-7 |
| Chloroform | < 10 | 10 | < 48.8 | 48.8 | | 20 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **50** | **10** | **196** | **39.6** | | 20 | 4/3/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **92** | **20** | **453** | **99.0** | | 20 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 20 | 20 | < 86.8 | 86.8 | | 20 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 40 | 40 | < 139 | 139 | | 20 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 10 | 10 | < 43.4 | 43.4 | | 20 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **91** | **20** | **618** | **136** | | 20 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 40 | 40 | < 118 | 118 | | 20 | 4/3/2019 | 109-99-9 |
| Toluene | < 10 | 10 | < 37.7 | 37.7 | | 20 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 10 | 10 | < 39.6 | 39.6 | | 20 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **171** | **10** | **919** | **53.7** | | 20 | 4/3/2019 | 79-01-6 |
| **Trichlorofluoromethane(F-11)** | **35** | **10** | **199** | **56.2** | | 20 | 4/3/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 10 | 10 | < 76.6 | 76.6 | | 20 | 4/3/2019 | 76-13-1 |
| **Vinyl chloride** | **86** | **10** | **221** | **25.6** | | 20 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 97.3 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 200 | 200 | ppbv | | T4 | 20 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-2-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 19 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 50 | 50 | < 199 | 199 | | 100 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 50 | 50 | < 301 | 301 | | 100 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 500 | 500 | < 1,480 | 1,480 | | 100 | 4/3/2019 | 78-93-3 |
| Acetone | < 500 | 500 | < 1,190 | 1,190 | | 100 | 4/3/2019 | 67-64-1 |
| Benzene | < 50 | 50 | < 160 | 160 | | 100 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 50 | 50 | < 230 | 230 | | 100 | 4/3/2019 | 108-90-7 |
| **Chloroform** | **72** | **50** | **351** | **244** | | 100 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **80** | **50** | **317** | **198** | | 100 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 100 | 100 | < 495 | 495 | | 100 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 100 | 100 | < 434 | 434 | | 100 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 200 | 200 | < 694 | 694 | | 100 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **257** | **100** | **1,740** | **678** | | 100 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 200 | 200 | < 590 | 590 | | 100 | 4/3/2019 | 109-99-9 |
| Toluene | < 50 | 50 | < 189 | 189 | | 100 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 50 | 50 | < 198 | 198 | | 100 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **2,470** | **50** | **13,300** | **269** | | 100 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 50 | 50 | < 281 | 281 | | 100 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **133** | **50** | **1,020** | **383** | | 100 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 50 | 50 | < 128 | 128 | | 100 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 99.9 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 1,000 | 1,000 | ppbv | | T4 | 100 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | TSSV-PW-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 20 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 50 | 50 | < 199 | 199 | | 100 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 50 | 50 | < 301 | 301 | | 100 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 500 | 500 | < 1,480 | 1,480 | | 100 | 4/3/2019 | 78-93-3 |
| Acetone | < 500 | 500 | < 1,190 | 1,190 | | 100 | 4/3/2019 | 67-64-1 |
| Benzene | < 50 | 50 | < 160 | 160 | | 100 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 50 | 50 | < 230 | 230 | | 100 | 4/3/2019 | 108-90-7 |
| Chloroform | < 50 | 50 | < 244 | 244 | | 100 | 4/3/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 50 | 50 | < 198 | 198 | | 100 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 100 | 100 | < 495 | 495 | | 100 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 100 | 100 | < 434 | 434 | | 100 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 200 | 200 | < 694 | 694 | | 100 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 95-47-6 |
| Tetrachloroethene | < 100 | 100 | < 678 | 678 | | 100 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 200 | 200 | < 590 | 590 | | 100 | 4/3/2019 | 109-99-9 |
| Toluene | < 50 | 50 | < 189 | 189 | | 100 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 50 | 50 | < 198 | 198 | | 100 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **1,020** | **50** | **5,480** | **269** | | 100 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 50 | 50 | < 281 | 281 | | 100 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **72** | **50** | **552** | **383** | | 100 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 50 | 50 | < 128 | 128 | | 100 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 1,000 | 1,000 | ppbv | | T4 | 100 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SVE-1-SG-032219 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | 3/22/2019 |
| **Lab ID:** | 21 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 50 | 50 | < 199 | 199 | | 100 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 50 | 50 | < 301 | 301 | | 100 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 50 | 50 | < 203 | 203 | | 100 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 500 | 500 | < 1,480 | 1,480 | | 100 | 4/3/2019 | 78-93-3 |
| Acetone | < 500 | 500 | < 1,190 | 1,190 | | 100 | 4/3/2019 | 67-64-1 |
| Benzene | < 50 | 50 | < 160 | 160 | | 100 | 4/3/2019 | 71-43-2 |
| **Chlorobenzene** | **808** | **50** | **3,720** | **230** | | 100 | 4/3/2019 | 108-90-7 |
| **Chloroform** | **68** | **50** | **332** | **244** | | 100 | 4/3/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **151** | **50** | **598** | **198** | | 100 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 100 | 100 | < 495 | 495 | | 100 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 100 | 100 | < 434 | 434 | | 100 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 200 | 200 | < 694 | 694 | | 100 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 50 | 50 | < 217 | 217 | | 100 | 4/3/2019 | 95-47-6 |
| **Tetrachloroethene** | **127** | **100** | **861** | **678** | | 100 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 200 | 200 | < 590 | 590 | | 100 | 4/3/2019 | 109-99-9 |
| Toluene | < 50 | 50 | < 189 | 189 | | 100 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 50 | 50 | < 198 | 198 | | 100 | 4/3/2019 | 156-60-5 |
| **Trichloroethene** | **1,960** | **50** | **10,500** | **269** | | 100 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 50 | 50 | < 281 | 281 | | 100 | 4/3/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **97** | **50** | **743** | **383** | | 100 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 50 | 50 | < 128 | 128 | | 100 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 107 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 1,000 | 1,000 | ppbv | | T4 | 100 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010402 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 4/2/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 4/2/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 4/2/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 4/2/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 4/2/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 4/2/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 4/2/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 4/2/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 4/2/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 4/2/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 4/2/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 4/2/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 4/2/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 4/2/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 4/2/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 4/2/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 4/2/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 4/2/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 4/2/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 4/2/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 4/2/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 4/2/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 4/2/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 95.6 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10 | 10 | ppbv | | T4 | 1 | 4/2/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 4/2/2019 Batch: MS010402 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 10.6 | 106 | 10.4 | 104 | 10.0 | 1.6 | ppbv | | | |
| Vinyl Chloride | 8.3 | 82.6 | 8.5 | 84.6 | 10.0 | 2.4 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 10.5 | 105 | 10.3 | 103 | 10.0 | 1.3 | ppbv | | | |
| Acetone | 10.5 | 105 | 10.0 | 100 | 10.0 | 4.7 | ppbv | | | |
| 1,1-Dichloroethene | 10.6 | 106 | 11.0 | 110 | 10.0 | 3.5 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 10.0 | 100 | 10.1 | 101 | 10.0 | 0.5 | ppbv | | | |
| Methylene Chloride | 10.6 | 106 | 10.6 | 106 | 10.0 | 0.6 | ppbv | | | |
| trans-1,2-Dichloroethene | 10.0 | 99.9 | 10.3 | 103 | 10.0 | 3.0 | ppbv | | | |
| 1,1-Dichloroethane | 10.5 | 105 | 10.7 | 107 | 10.0 | 2.5 | ppbv | | | |
| 2-Butanone (MEK) | 10.2 | 102 | 10.7 | 107 | 10.0 | 4.1 | ppbv | | | |
| cis-1,2-Dichloroethene | 10.2 | 102 | 10.4 | 104 | 10.0 | 1.6 | ppbv | | | |
| Chloroform | 10.1 | 101 | 10.2 | 102 | 10.0 | 0.9 | ppbv | | | |
| Tetrahydrofuran | 11.2 | 112 | 11.5 | 115 | 10.0 | 1.9 | ppbv | | | |
| 1,2-Dichloroethane | 10.5 | 105 | 10.7 | 107 | 10.0 | 1.6 | ppbv | | | |
| Benzene | 10.3 | 103 | 10.6 | 106 | 10.0 | 3.0 | ppbv | | | |
| Trichloroethene | 9.9 | 99.4 | 9.8 | 97.8 | 10.0 | 1.6 | ppbv | | | |
| Toluene | 11.0 | 110 | 10.8 | 108 | 10.0 | 2.1 | ppbv | | | |
| Tetrachloroethene | 10.0 | 99.9 | 9.7 | 97.0 | 10.0 | 2.9 | ppbv | | | |
| Chlorobenzene | 10.5 | 105 | 10.1 | 101 | 10.0 | 3.9 | ppbv | | | |
| Ethylbenzene | 11.4 | 114 | 11.0 | 110 | 10.0 | 3.7 | ppbv | | | |
| m&p-Xylene | 22.9 | 114 | 21.5 | 107 | 20.0 | 6.3 | ppbv | | | |
| o-Xylene | 10.4 | 104 | 10.2 | 102 | 10.0 | 2.5 | ppbv | | | |
| 1,2-Dichlorobenzene | 10.2 | 102 | 9.4 | 94.2 | 10.0 | 7.7 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 11.0 | 110 | 10.7 | 107 | | | %REC | | | |
| | | 70-130% | | 70-130% | | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010403 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 4/3/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 4/3/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 4/3/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 4/3/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 4/3/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 4/3/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 4/3/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 4/3/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 4/3/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 4/3/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 4/3/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 4/3/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 4/3/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 4/3/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 4/3/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 4/3/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 4/3/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 4/3/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 4/3/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 4/3/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 4/3/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 4/3/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 4/3/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 92.1 | 70-130 | %REC | | | | | |

**Tentatively Identified Compounds (TIC's)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Difluoroethane | < 10 | 10 | ppbv | | T4 | 1 | 4/3/2019 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 4/3/2019 Batch: MS010403 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 10.3 | 103 | 10.6 | 106 | 10.0 | 2.8 | ppbv | | | |
| Vinyl Chloride | 10.0 | 99.5 | 9.9 | 98.7 | 10.0 | 0.8 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 9.4 | 94.0 | 9.6 | 96.3 | 10.0 | 2.4 | ppbv | | | |
| Acetone | 9.0 | 90.2 | 9.3 | 92.6 | 10.0 | 2.6 | ppbv | | | |
| 1,1-Dichloroethene | 9.8 | 98.0 | 10.3 | 103 | 10.0 | 4.8 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 9.0 | 89.5 | 9.1 | 91.4 | 10.0 | 2.1 | ppbv | | | |
| Methylene Chloride | 9.6 | 95.6 | 9.9 | 99.2 | 10.0 | 3.7 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.1 | 91.4 | 9.4 | 93.8 | 10.0 | 2.6 | ppbv | | | |
| 1,1-Dichloroethane | 9.5 | 94.7 | 10.0 | 100 | 10.0 | 5.3 | ppbv | | | |
| 2-Butanone (MEK) | 8.6 | 85.5 | 9.0 | 90.1 | 10.0 | 5.2 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.5 | 95.3 | 9.4 | 94.2 | 10.0 | 1.2 | ppbv | | | |
| Chloroform | 9.1 | 90.9 | 9.5 | 95.1 | 10.0 | 4.5 | ppbv | | | |
| Tetrahydrofuran | 9.9 | 99.3 | 10.0 | 100 | 10.0 | 0.9 | ppbv | | | |
| 1,2-Dichloroethane | 9.1 | 91.2 | 9.5 | 95.0 | 10.0 | 4.1 | ppbv | | | |
| Benzene | 9.1 | 91.3 | 9.2 | 91.7 | 10.0 | 0.4 | ppbv | | | |
| Trichloroethene | 8.4 | 84.2 | 8.5 | 84.6 | 10.0 | 0.5 | ppbv | | | |
| Toluene | 9.1 | 91.4 | 9.2 | 92.1 | 10.0 | 0.8 | ppbv | | | |
| Tetrachloroethene | 8.3 | 82.6 | 8.2 | 81.9 | 10.0 | 0.9 | ppbv | | | |
| Chlorobenzene | 8.8 | 88.0 | 8.7 | 87.1 | 10.0 | 1.0 | ppbv | | | |
| Ethylbenzene | 9.6 | 95.5 | 9.6 | 95.5 | 10.0 | 0.0 | ppbv | | | |
| m&p-Xylene | 19.1 | 95.6 | 19.1 | 95.7 | 20.0 | 0.1 | ppbv | | | |
| o-Xylene | 8.7 | 86.8 | 8.8 | 88.0 | 10.0 | 1.4 | ppbv | | | |
| 1,2-Dichlorobenzene | 7.9 | 78.5 | 7.9 | 78.8 | 10.0 | 0.4 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 11.0 | 110 | 11.1 | 111 | | | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | NA |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C029 | **Collection:** | NA |
| **Lab ID:** | Standards | **Matrix:** | Nitrogen |

| AEL ID# | STD Name | Vendor | SGI Order# | Description | CONC. | Accuracy | Exp.Date |
|---|---|---|---|---|---|---|---|
| S-180620-03 | Stock | Spectra Gases | 116447993 | TO-14 39 Analytes | 1.0 ppmv | ± 5% | 6/25/2019 |
| S-180620-02 | Stock | Spectra Gases | 116447993 | TO-15 25 Analytes | 1.0 ppmv | ± 5% | 6/22/2019 |
| S-180620-01 | Stock | Spectra Gases | 116447993 | 15 Additional Compounds | 1.0 ppmv | ± 5% | 6/20/2019 |
| S-181011-01 | Stock | Spectra Gases | 116849616 | TO-15 IS 4 Compounds | 1.0 ppmv | ± 5% | 10/11/2019 |
| A-190312-02 | Working Std | AEL Dilution | | TO-15 74 Analytes | 10 ppbv | ± 5% | 6/12/2019 |
| A-190312-01 | Working IS | AEL Dilution | | TO-15 IS 4 Compounds | 50 ppbv | ± 5% | 6/12/2019 |

# 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: Wood | Page 1 of 3 | | AEL Lab # |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C029 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: Natalie Christman@woodplc.com | P.O. Number: | | |
| Phone: 602.733-6000 Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: | E-Mail Results: Y N | | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes_____ No_____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes_____ No_____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | X Standard 10 Working Days | S: soil vapor |
| | | W: water |

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 full list (SHORT LIST) | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1676 | 062 | 6 (1) bag | (1) 2 5 | TSSV-4S-S6-032119 | 3.21.19 | 751 | S | 1 | X | | | | | | | | | X |
| 02 | E2403 | 163 | 6 (1) bag | (1) 2 5 | TSSV-4PZ-S6-032119 | ↓ | 846 | ↓ | ↓ | X | | | | | | | | | X |
| 03 | 0206 | 165 | 6 (1) bag | (1) 2 5 | TSSV-4D-S6-032119 | ↓ | 919 | ↓ | ↓ | X | | | | | | | | | X |
| 04 | 1869 | 197 | 6 (1) bag | (1) 2 5 | SVE-3M-S6-032119 | ↓ | 1003 | ↓ | ↓ | X | | | | | | | | | X |
| 05 | 1829 | 193 | 6 (1) bag | (1) 2 5 | SVE-3-S6-032119 | ↓ | 1015 | ↓ | ↓ | X | | | | | | | | | X |
| 06 | 0223 | 136 | 6 (1) bag | (1) 2 5 | SVE-4S-S6-032119 | ↓ | 1040 | ↓ | ↓ | X | | | | | | | | | X |
| 07 | E2375 | 021 | 6 (1) bag | (1) 2 5 | SVE-4-S6-032119 | ↓ | 1110 | ↓ | ↓ | X | | | | | | | | | X |
| 08 | 1852 | 179 | 6 (1) bag | (1) 2 5 | MW-11-S6-032119 | ↓ | 1311 | ↓ | ↓ | X | | | | | | | | | X |
| 09 | 1809 | 057 | 6 (1) bag | (1) 2 5 | DUP05-032119 | ↓ | 1325 | ↓ | ↓ | X | | | | | | | | | X |
| 10 | 1849 | 202 | 6 (1) bag | (1) 2 5 | TSSV-2S-S6-032219 | 3.22.19 | 916 | ↓ | ↓ | X | | | | | | | | | X |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.22.19 | 1505 | E. Miller | [signature] |
| | | | |
| | | | |

# 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: Wood | Page 2 of 3 | | AEL Lab# |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C029 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: | P.O. Number: | | |
| Phone: 602.733-6000 / Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: Natalie.Chrisman@woodplc.com | 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

X Standard 10 Working Days

**Sample Type**

SVE: soil vapor extraction
A: ambient air
I: indoor air
S: soil vapor
W: water
GW: ground water
WW: waste water

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 ~~full list~~ (SHORT LIST) | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | E2362 | 205 | 6 (1) bag | (1) 2 5 | TSSV-ZM-S6-032219 | 3.22.19 | 938 | S | 1 | X | | | | | | | | | X |
| 12 | E2101 | 012 | 6 (1) bag | (1) 2 5 | TSSV-ZD-S6-032219 | | 1006 | | | X | | | | | | | | | X |
| 13 | 1796 | 206 | 6 (1) bag | (1) 2 5 | TSSV-ZPZ-S6-032219 | | 1031 | | | X | | | | | | | | | X |
| 14 | E2098 | 041 | 6 (1) bag | (1) 2 5 | SVE-1S-S6-032219 | | 1120 | | | X | | | | | | | | | X |
| 15 | E2393 | 158 | 6 (1) bag | (1) 2 5 | SVE-1M-S6-032219 | | 1141 | | | X | | | | | | | | | X |
| 16 | 1827 | 072 | 6 (1) bag | (1) 2 5 | SVE-1D-S6-032219 | | 1201 | | | X | | | | | | | | | X |
| 17 | 1884 | 023 | 6 (1) bag | (1) 2 5 | SVE-2S-S6-032219 | | 1222 | | | X | | | | | | | | | X |
| 18 | E2088 | 144 | 6 (1) bag | (1) 2 5 | SVE-2M-S6-032219 | | 1246 | | | X | | | | | | | | | X |
| 19 | E2351 | 024 | 6 (1) bag | (1) 2 5 | SVE-2-S6-032219 | | 1257 | | | X | | | | | | | | | X |
| 20 | 1837 | 068 | 6 (1) bag | (1) 2 5 | TSSV-PW-S6-032219 | | 1327 | | | X | | | | | | | | | X |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.22.19 | 1505 | E. Miller | [illegible] |
| | | | |
| | | | |

# 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: Wood | Page 3 of 3 | | AEL Lab # |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C029 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: | P.O. Number: | | |
| Phone: 602.733-6000 / Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: Natalie.Chrisman@woodplc.com | 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
X Standard 10 Working Days

**Sample Type**

SVE: soil vapor extraction
A: ambient air
I: indoor air
S: soil vapor
W: water
GW: ground water
WW: waste water

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | ~~TO-15 full list~~ SHORT LIST | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | E2091 | 117 | 6 (1) bag | (1) 2 5 | SVE-1-S6-032219 | 3.22.19 | 1357 | S | 1 | X | | | | | | | | | X |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.22.19 | 1505 | E Mill | [signature] |
| | | | |
| | | | |

# Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888


Date: January 22, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19A013 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2017-2034 |
| | Phoenix, AZ 85034 | Received Date: | 1/16/2019 |

Dear Client:

Airtech Environmental Laboratories received four (4) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

# Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888


Date: January 22, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19A013 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2017-2034 |
| | Phoenix, AZ 85034 | Received Date: | 1/16/2019 |

## SAMPLE SUMMARY

| LAB ID | CLIENT ID | METHOD | SAMPLE DATE | SAMPLE TIME |
|---|---|---|---|---|
| 19A013-01 | SP4-H1-011619 | TO-15 | 1/16/2019 | 1005 |
| 19A013-02 | SP3-C2-011619 | TO-15 | 1/16/2019 | 1010 |
| 19A013-03 | SP2-C3-011619 | TO-15 | 1/16/2019 | 1015 |
| 19A013-04 | SP1-SkidOutlet-011619 | TO-15 | 1/16/2019 | 1020 |

**Airtech Environmental Laboratories (AEL)**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: January 22, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19A013 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2017-2034 |
| | Phoenix, AZ 85034 | Received Date: | 01/16/19 |

## 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.

**Airtech Environmental Laboratories (AEL) - AZ 0740**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | N/A |
| **Lab ID:** | Kits QC | **Matrix:** | Air |

| | | Canister | | | | Grab Sampler | |
|---|---|---|---|---|---|---|---|
| | | Type | | Vacuum | Pressure | Type | |
| | Client | 1.0 liter | | before sampled | after sampled | 1 minute-fill 1.0L canister | |
| AEL# | ID | SN# | Clean Batch# | Hg inch | psia | SN# | Clean Batch# |
| 19A013-01 | SP4-H1-011619 | E2387 | 1901-02 | 29.0 | 14.25 | 022 | 1812-08 |
| 19A013-02 | SP3-C2-011619 | E2100 | 1901-02 | 29.0 | 14.43 | 158 | 1812-07 |
| 19A013-03 | SP2-C3-011619 | E2085 | 1901-02 | 29.0 | 14.66 | 199 | 1812-03 |
| 19A013-04 | SP1-SkidOutlet-011619 | 1865 | 1901-02 | 29.0 | 14.80 | 107 | 1812-03 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP4-H1-011619 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | 1/16/2019 |
| **Lab ID:** | 01 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 250 | 250 | < 1,010 | 1,010 | | 500 | 1/21/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 250 | 250 | < 993 | 993 | | 500 | 1/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 250 | 250 | < 1,500 | 1,500 | | 500 | 1/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 250 | 250 | < 1,010 | 1,010 | | 500 | 1/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 2,500 | 2,500 | < 7,380 | 7,380 | | 500 | 1/21/2019 | 78-93-3 |
| Acetone | < 2,500 | 2,500 | < 5,950 | 5,950 | | 500 | 1/21/2019 | 67-64-1 |
| Benzene | < 250 | 250 | < 798 | 798 | | 500 | 1/21/2019 | 71-43-2 |
| Chlorobenzene | < 250 | 250 | < 1,150 | 1,150 | | 500 | 1/21/2019 | 108-90-7 |
| Chloroform | < 250 | 250 | < 1,220 | 1,220 | | 500 | 1/21/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 250 | 250 | < 990 | 990 | | 500 | 1/21/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,670** | **500** | **8,270** | **2,480** | | 500 | 1/21/2019 | 75-71-8 |
| Ethylbenzene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 1/21/2019 | 100-41-4 |
| m&p-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 500 | 1/21/2019 | 179601-23-1 |
| **Methylene chloride** | **9,300** | **1,000** | **32,300** | **3,470** | | 500 | 1/21/2019 | 75-09-2 |
| o-Xylene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 1/21/2019 | 95-47-6 |
| Tetrachloroethene | < 500 | 500 | < 3,390 | 3,390 | | 500 | 1/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 1,000 | 1,000 | < 2,950 | 2,950 | | 500 | 1/21/2019 | 109-99-9 |
| Toluene | < 250 | 250 | < 943 | 943 | | 500 | 1/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 250 | 250 | < 990 | 990 | | 500 | 1/21/2019 | 156-60-5 |
| Trichloroethene | < 250 | 250 | < 1,340 | 1,340 | | 500 | 1/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 250 | 250 | < 1,410 | 1,410 | | 500 | 1/21/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 250 | 250 | < 1,920 | 1,920 | | 500 | 1/21/2019 | 76-13-1 |
| **Vinyl chloride** | **310** | **250** | **794** | **640** | | 500 | 1/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 91.6 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP3-C2-011619 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | 1/16/2019 |
| **Lab ID:** | 02 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 250 | 250 | < 1,010 | 1,010 | | 500 | 1/21/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 250 | 250 | < 993 | 993 | | 500 | 1/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 250 | 250 | < 1,500 | 1,500 | | 500 | 1/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 250 | 250 | < 1,010 | 1,010 | | 500 | 1/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 2,500 | 2,500 | < 7,380 | 7,380 | | 500 | 1/21/2019 | 78-93-3 |
| Acetone | < 2,500 | 2,500 | < 5,950 | 5,950 | | 500 | 1/21/2019 | 67-64-1 |
| Benzene | < 250 | 250 | < 798 | 798 | | 500 | 1/21/2019 | 71-43-2 |
| Chlorobenzene | < 250 | 250 | < 1,150 | 1,150 | | 500 | 1/21/2019 | 108-90-7 |
| Chloroform | < 250 | 250 | < 1,220 | 1,220 | | 500 | 1/21/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 250 | 250 | < 990 | 990 | | 500 | 1/21/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,710** | **500** | **8,470** | **2,480** | | 500 | 1/21/2019 | 75-71-8 |
| Ethylbenzene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 1/21/2019 | 100-41-4 |
| m&p-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 500 | 1/21/2019 | 179601-23-1 |
| **Methylene chloride** | **10,200** | **1,000** | **35,400** | **3,470** | | 500 | 1/21/2019 | 75-09-2 |
| o-Xylene | < 250 | 250 | < 1,090 | 1,090 | | 500 | 1/21/2019 | 95-47-6 |
| Tetrachloroethene | < 500 | 500 | < 3,390 | 3,390 | | 500 | 1/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 1,000 | 1,000 | < 2,950 | 2,950 | | 500 | 1/21/2019 | 109-99-9 |
| Toluene | < 250 | 250 | < 943 | 943 | | 500 | 1/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 250 | 250 | < 990 | 990 | | 500 | 1/21/2019 | 156-60-5 |
| **Trichloroethene** | **475** | **250** | **2,550** | **1,340** | | 500 | 1/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 250 | 250 | < 1,410 | 1,410 | | 500 | 1/21/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 250 | 250 | < 1,920 | 1,920 | | 500 | 1/21/2019 | 76-13-1 |
| **Vinyl chloride** | **500** | **250** | **1,280** | **640** | | 500 | 1/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 91.7 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP2-C3-011619 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | 1/16/2019 |
| **Lab ID:** | 03 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 1/21/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 500 | 500 | < 1,990 | 1,990 | | 1,000 | 1/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 500 | 500 | < 3,010 | 3,010 | | 1,000 | 1/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 1/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5,000 | 5,000 | < 14,800 | 14,800 | | 1,000 | 1/21/2019 | 78-93-3 |
| Acetone | < 5,000 | 5,000 | < 11,900 | 11,900 | | 1,000 | 1/21/2019 | 67-64-1 |
| Benzene | < 500 | 500 | < 1,600 | 1,600 | | 1,000 | 1/21/2019 | 71-43-2 |
| Chlorobenzene | < 500 | 500 | < 2,300 | 2,300 | | 1,000 | 1/21/2019 | 108-90-7 |
| Chloroform | < 500 | 500 | < 2,440 | 2,440 | | 1,000 | 1/21/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 1/21/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,270** | **1,000** | **6,290** | **4,950** | | 1,000 | 1/21/2019 | 75-71-8 |
| Ethylbenzene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 1/21/2019 | 100-41-4 |
| m&p-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 1,000 | 1/21/2019 | 179601-23-1 |
| **Methylene chloride** | **41,100** | **2,000** | **143,000** | **6,940** | | 1,000 | 1/21/2019 | 75-09-2 |
| o-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 1/21/2019 | 95-47-6 |
| Tetrachloroethene | < 1,000 | 1,000 | < 6,780 | 6,780 | | 1,000 | 1/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 2,000 | 2,000 | < 5,900 | 5,900 | | 1,000 | 1/21/2019 | 109-99-9 |
| Toluene | < 500 | 500 | < 1,890 | 1,890 | | 1,000 | 1/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 1/21/2019 | 156-60-5 |
| Trichloroethene | < 500 | 500 | < 2,690 | 2,690 | | 1,000 | 1/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 500 | 500 | < 2,810 | 2,810 | | 1,000 | 1/21/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 500 | 500 | < 3,830 | 3,830 | | 1,000 | 1/21/2019 | 76-13-1 |
| Vinyl chloride | < 500 | 500 | < 1,280 | 1,280 | | 1,000 | 1/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 89.5 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP1-SkidOutlet-011619 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | 1/16/2019 |
| **Lab ID:** | 04 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 1/21/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **36,500** | **1,000** | **145,000** | **3,970** | | 2,000 | 1/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1,000 | 1,000 | < 6,010 | 6,010 | | 2,000 | 1/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 1/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10,000 | 10,000 | < 29,500 | 29,500 | | 2,000 | 1/21/2019 | 78-93-3 |
| Acetone | < 10,000 | 10,000 | < 23,800 | 23,800 | | 2,000 | 1/21/2019 | 67-64-1 |
| Benzene | < 1,000 | 1,000 | < 3,190 | 3,190 | | 2,000 | 1/21/2019 | 71-43-2 |
| Chlorobenzene | < 1,000 | 1,000 | < 4,600 | 4,600 | | 2,000 | 1/21/2019 | 108-90-7 |
| Chloroform | < 1,000 | 1,000 | < 4,880 | 4,880 | | 2,000 | 1/21/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **7,460** | **1,000** | **29,500** | **3,960** | | 2,000 | 1/21/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2,000 | 2,000 | < 9,900 | 9,900 | | 2,000 | 1/21/2019 | 75-71-8 |
| Ethylbenzene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 1/21/2019 | 100-41-4 |
| m&p-Xylene | < 2,000 | 2,000 | < 8,680 | 8,680 | | 2,000 | 1/21/2019 | 179601-23-1 |
| **Methylene chloride** | **56,200** | **4,000** | **195,000** | **13,900** | | 2,000 | 1/21/2019 | 75-09-2 |
| o-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 1/21/2019 | 95-47-6 |
| **Tetrachloroethene** | **9,600** | **2,000** | **65,100** | **13,560** | | 2,000 | 1/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 4,000 | 4,000 | < 11,800 | 11,800 | | 2,000 | 1/21/2019 | 109-99-9 |
| Toluene | < 1,000 | 1,000 | < 3,770 | 3,770 | | 2,000 | 1/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1,000 | 1,000 | < 3,960 | 3,960 | | 2,000 | 1/21/2019 | 156-60-5 |
| **Trichloroethene** | **63,800** | **1,000** | **343,000** | **5,370** | | 2,000 | 1/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1,000 | 1,000 | < 5,620 | 5,620 | | 2,000 | 1/21/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **13,100** | **1,000** | **100,000** | **7,660** | | 2,000 | 1/21/2019 | 76-13-1 |
| Vinyl chloride | < 1,000 | 1,000 | < 2,560 | 2,560 | | 2,000 | 1/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 91.6 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010121 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 1/22/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 1/22/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 1/22/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 1/22/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 1/22/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 1/22/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 1/22/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 1/22/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 1/22/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 1/22/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 1/22/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 1/22/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 1/22/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 1/22/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 1/22/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 1/22/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 1/22/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 1/22/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 1/22/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 1/22/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 1/22/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 1/22/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 1/22/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 94.5 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 1/21/2019 Batch: MS010121 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 9.2 | 92.2 | 9.5 | 94.9 | 10.0 | 2.9 | ppbv | | | |
| Vinyl Chloride | 8.8 | 87.5 | 8.8 | 87.7 | 10.0 | 0.2 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 9.7 | 97.1 | 9.8 | 97.7 | 10.0 | 0.6 | ppbv | | | |
| Acetone | 10.0 | 99.5 | 10.2 | 102 | 10.0 | 2.1 | ppbv | | | |
| 1,1-Dichloroethene | 9.8 | 97.9 | 10.1 | 101 | 10.0 | 3.4 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 9.7 | 96.7 | 9.8 | 98.4 | 10.0 | 1.7 | ppbv | | | |
| Methylene Chloride | 9.2 | 91.8 | 9.2 | 92.0 | 10.0 | 0.2 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.7 | 96.9 | 10.1 | 101 | 10.0 | 4.2 | ppbv | | | |
| 1,1-Dichloroethane | 9.5 | 94.7 | 9.7 | 96.7 | 10.0 | 2.1 | ppbv | | | |
| 2-Butanone (MEK) | 9.6 | 95.5 | 10.1 | 101 | 10.0 | 5.9 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.3 | 93.4 | 9.7 | 97.0 | 10.0 | 3.8 | ppbv | | | |
| Chloroform | 9.3 | 92.9 | 9.6 | 96.0 | 10.0 | 3.3 | ppbv | | | |
| Tetrahydrofuran | 9.5 | 94.5 | 10.4 | 104 | 10.0 | 9.2 | ppbv | | | |
| 1,2-Dichloroethane | 9.6 | 96.4 | 9.9 | 98.7 | 10.0 | 2.4 | ppbv | | | |
| Benzene | 9.3 | 92.5 | 9.7 | 97.3 | 10.0 | 5.1 | ppbv | | | |
| Trichloroethene | 9.4 | 93.7 | 9.5 | 94.5 | 10.0 | 0.9 | ppbv | | | |
| Toluene | 9.9 | 98.9 | 10.0 | 100 | 10.0 | 1.4 | ppbv | | | |
| Tetrachloroethene | 9.8 | 97.5 | 9.9 | 99.3 | 10.0 | 1.8 | ppbv | | | |
| Chlorobenzene | 9.7 | 96.8 | 10.0 | 100 | 10.0 | 3.4 | ppbv | | | |
| Ethylbenzene | 10.3 | 103 | 10.5 | 105 | 10.0 | 2.2 | ppbv | | | |
| m&p-Xylene | 19.1 | 95.3 | 19.5 | 97.3 | 20.0 | 2.1 | ppbv | | | |
| o-Xylene | 10.2 | 102 | 10.5 | 105 | 10.0 | 3.5 | ppbv | | | |
| 1,2-Dichlorobenzene | 9.7 | 96.7 | 9.8 | 98.0 | 10.0 | 1.3 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 10.6 | 106 | 10.4 | 104 | | | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | NA |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2017-2034 |
| **Lab Order:** | 19A013 | **Collection:** | NA |
| **Lab ID:** | Standards | **Matrix:** | Nitrogen |

| AEL ID# | STD Name | Vendor | SGI Order# | Description | CONC. | Accuracy | Exp.Date |
|---|---|---|---|---|---|---|---|
| S-180620-03 | Stock | Spectra Gases | 116447993 | TO-14 39 Analytes | 1.0 ppmv | ± 5% | 6/25/2019 |
| S-180620-02 | Stock | Spectra Gases | 116447993 | TO-15 25 Analytes | 1.0 ppmv | ± 5% | 6/22/2019 |
| S-180620-01 | Stock | Spectra Gases | 116447993 | 15 Additional Compounds | 1.0 ppmv | ± 5% | 6/20/2019 |
| S-181011-01 | Stock | Spectra Gases | 116849616 | TO-15 IS 4 Compounds | 1.0 ppmv | ± 5% | 10/11/2019 |
| A-181218-01 | Working Std | AEL Dilution | | TO-15 74 Analytes | 10 ppbv | ± 5% | 3/18/2019 |
| A-190109-01 | Working IS | AEL Dilution | | TO-15 IS 4 Compounds | 50 ppbv | ± 5% | 4/9/2019 |

# 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: Wood | Page 1 of 1 | | AEL Lab # |
| Address: 4600 E WASHINGTON ST | Sampler: ERIC MILLER | Phone: 602.300.8313 | 19A013 |
| | Project Name: Cave Creek Landfill | Project Number: | |
| City, State, Zip: PHOENIX, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: NATALIE CHRISMAN | P.O. Number: | | |
| Phone: 602.733.6000 Fax: | Fax Results: Y N | | |
| E-Mail Address: Natalie.Chrisman@woodplc.com | E-Mail Results: (Y) N | | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes_____ No_____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes_____ No_____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | (✓) Standard 10 Working Days | S: soil vapor |
| | | W: water |

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 full list | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | E2387 | 022 | 6 (1) bag | (1) 2 5 | SP4-HI-011619 | 1.16.19 | 1005 | SVE | 1 | | | ✓ | | | | | | | |
| 02 | E2100 | 158 | 6 (1) bag | (1) 2 5 | SP3-C2-011619 | ↓ | 1010 | ↓ | ↓ | | | ✓ | | | | | | | |
| 03 | E2085 | 199 | 6 (1) bag | (1) 2 5 | SP2-C3-011619 | ↓ | 1015 | ↓ | ↓ | | | ✓ | | | | | | | |
| 04 | 1865 | 107 | 6 (1) bag | (1) 2 5 | SP1-SKIDOUTLET-011619 | ↓ | 1020 | ↓ | ↓ | | | ✓ | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 1.16.19 | 1353 | E. Miller | James Jones - Airtech |
| | | | |
| | | | |

# Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888


Date: March 13, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C006 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/5/2019 |

Dear Client:

Airtech Environmental Laboratories received four (4) 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: March 13, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C006 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 3/5/2019 |

## SAMPLE SUMMARY

| LAB ID | CLIENT ID | METHOD | SAMPLE DATE | SAMPLE TIME |
|---|---|---|---|---|
| 19C006-01 | SP4-H1-030419 | TO-15 | 3/4/2019 | 1025 |
| 19C006-02 | SP3-C1-030419 | TO-15 | 3/4/2019 | 1030 |
| 19C006-03 | SP2-C3-030419 | TO-15 | 3/4/2019 | 1035 |
| 19C006-04 | SP1-SkidOutlet-030419 | TO-15 | 3/4/2019 | 1040 |

**Airtech Environmental Laboratories (AEL)**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 13, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C006 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2019-2004 |
| | Phoenix, AZ 85034 | Received Date: | 03/05/19 |

## 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.

**Airtech Environmental Laboratories (AEL) - AZ 0740**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | N/A |
| **Lab ID:** | Kits QC | **Matrix:** | Air |

| | | Canister | | | | Grab Sampler | |
|---|---|---|---|---|---|---|---|
| | | Type | | Vacuum | Pressure | Type | |
| | Client | 1.0 liter | | before sampled | after sampled | 1 minute-fill 1.0L canister | |
| AEL# | ID | SN# | Clean Batch# | Hg inch | psia | SN# | Clean Batch# |
| 19C006-01 | SP4-H1-030419 | E2352 | 1902-06 | 29.0 | 14.13 | 117 | 1812-07 |
| 19C006-02 | SP3-C1-030419 | E2404 | 1902-06 | 29.0 | 14.51 | 021 | 1812-03 |
| 19C006-03 | SP2-C3-030419 | E2400 | 1902-06 | 29.0 | 14.72 | 072 | 1812-03 |
| 19C006-04 | SP1-SkidOutlet-030419 | 1859 | 1902-06 | 29.0 | 14.70 | 041 | 1812-07 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP4-H1-030419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | 3/4/2019 |
| **Lab ID:** | 01 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/8/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 100 | 100 | < 397 | 397 | | 200 | 3/8/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 3/8/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/8/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/8/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/8/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 3/8/2019 | 71-43-2 |
| Chlorobenzene | < 100 | 100 | < 460 | 460 | | 200 | 3/8/2019 | 108-90-7 |
| Chloroform | < 100 | 100 | < 488 | 488 | | 200 | 3/8/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/8/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,610** | **200** | **7,970** | **990** | | 200 | 3/8/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/8/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/8/2019 | 179601-23-1 |
| **Methylene chloride** | **63,300** | **4,000** | **220,000** | **13,900** | | 2,000 | 3/11/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/8/2019 | 95-47-6 |
| Tetrachloroethene | < 200 | 200 | < 1,360 | 1,360 | | 200 | 3/8/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/8/2019 | 109-99-9 |
| Toluene | < 100 | 100 | < 377 | 377 | | 200 | 3/8/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/8/2019 | 156-60-5 |
| Trichloroethene | < 100 | 100 | < 537 | 537 | | 200 | 3/8/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | < 562 | 562 | | 200 | 3/8/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 100 | 100 | < 766 | 766 | | 200 | 3/8/2019 | 76-13-1 |
| **Vinyl chloride** | **302** | **100** | **773** | **256** | | 200 | 3/8/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 89.9 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP3-C1-030419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | 3/4/2019 |
| **Lab ID:** | 02 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/8/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 100 | 100 | < 397 | 397 | | 200 | 3/8/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 100 | 100 | < 601 | 601 | | 200 | 3/8/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 100 | 100 | < 405 | 405 | | 200 | 3/8/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 1,000 | 1,000 | < 2,950 | 2,950 | | 200 | 3/8/2019 | 78-93-3 |
| Acetone | < 1,000 | 1,000 | < 2,380 | 2,380 | | 200 | 3/8/2019 | 67-64-1 |
| Benzene | < 100 | 100 | < 319 | 319 | | 200 | 3/8/2019 | 71-43-2 |
| Chlorobenzene | < 100 | 100 | < 460 | 460 | | 200 | 3/8/2019 | 108-90-7 |
| Chloroform | < 100 | 100 | < 488 | 488 | | 200 | 3/8/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/8/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,320** | **200** | **6,530** | **990** | | 200 | 3/8/2019 | 75-71-8 |
| Ethylbenzene | < 100 | 100 | < 434 | 434 | | 200 | 3/8/2019 | 100-41-4 |
| m&p-Xylene | < 200 | 200 | < 868 | 868 | | 200 | 3/8/2019 | 179601-23-1 |
| **Methylene chloride** | **49,500** | **4,000** | **172,000** | **13,900** | | 2,000 | 3/11/2019 | 75-09-2 |
| o-Xylene | < 100 | 100 | < 434 | 434 | | 200 | 3/8/2019 | 95-47-6 |
| Tetrachloroethene | < 200 | 200 | < 1,360 | 1,360 | | 200 | 3/8/2019 | 127-18-4 |
| Tetrahydrofuran | < 400 | 400 | < 1,180 | 1,180 | | 200 | 3/8/2019 | 109-99-9 |
| Toluene | < 100 | 100 | < 377 | 377 | | 200 | 3/8/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 100 | 100 | < 396 | 396 | | 200 | 3/8/2019 | 156-60-5 |
| Trichloroethene | < 100 | 100 | < 537 | 537 | | 200 | 3/8/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 100 | 100 | < 562 | 562 | | 200 | 3/8/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 100 | 100 | < 766 | 766 | | 200 | 3/8/2019 | 76-13-1 |
| **Vinyl chloride** | **290** | **100** | **742** | **256** | | 200 | 3/8/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 90.0 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP2-C3-030419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | 3/4/2019 |
| **Lab ID:** | 03 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/8/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **2,670** | **500** | **10,600** | **1,990** | | 1,000 | 3/8/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 500 | 500 | < 3,010 | 3,010 | | 1,000 | 3/8/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/8/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5,000 | 5,000 | < 14,800 | 14,800 | | 1,000 | 3/8/2019 | 78-93-3 |
| Acetone | < 5,000 | 5,000 | < 11,900 | 11,900 | | 1,000 | 3/8/2019 | 67-64-1 |
| Benzene | < 500 | 500 | < 1,600 | 1,600 | | 1,000 | 3/8/2019 | 71-43-2 |
| Chlorobenzene | < 500 | 500 | < 2,300 | 2,300 | | 1,000 | 3/8/2019 | 108-90-7 |
| Chloroform | < 500 | 500 | < 2,440 | 2,440 | | 1,000 | 3/8/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/8/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,540** | **1,000** | **7,620** | **4,950** | | 1,000 | 3/8/2019 | 75-71-8 |
| Ethylbenzene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/8/2019 | 100-41-4 |
| m&p-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 1,000 | 3/8/2019 | 179601-23-1 |
| **Methylene chloride** | **63,600** | **4,000** | **221,000** | **13,900** | | 2,000 | 3/11/2019 | 75-09-2 |
| o-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/8/2019 | 95-47-6 |
| Tetrachloroethene | < 1,000 | 1,000 | < 6,780 | 6,780 | | 1,000 | 3/8/2019 | 127-18-4 |
| Tetrahydrofuran | < 2,000 | 2,000 | < 5,900 | 5,900 | | 1,000 | 3/8/2019 | 109-99-9 |
| Toluene | < 500 | 500 | < 1,890 | 1,890 | | 1,000 | 3/8/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/8/2019 | 156-60-5 |
| Trichloroethene | < 500 | 500 | < 2,690 | 2,690 | | 1,000 | 3/8/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 500 | 500 | < 2,810 | 2,810 | | 1,000 | 3/8/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 500 | 500 | < 3,830 | 3,830 | | 1,000 | 3/8/2019 | 76-13-1 |
| Vinyl chloride | < 500 | 500 | < 1,280 | 1,280 | | 1,000 | 3/8/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 88.9 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP1-SkidOutlet-030419 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | 3/4/2019 |
| **Lab ID:** | 04 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 3/11/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **29,700** | **1,000** | **118,000** | **3,970** | | 2,000 | 3/11/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1,000 | 1,000 | < 6,010 | 6,010 | | 2,000 | 3/11/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 3/11/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 10,000 | 10,000 | < 29,500 | 29,500 | | 2,000 | 3/11/2019 | 78-93-3 |
| Acetone | < 10,000 | 10,000 | < 23,800 | 23,800 | | 2,000 | 3/11/2019 | 67-64-1 |
| Benzene | < 1,000 | 1,000 | < 3,190 | 3,190 | | 2,000 | 3/11/2019 | 71-43-2 |
| Chlorobenzene | < 1,000 | 1,000 | < 4,600 | 4,600 | | 2,000 | 3/11/2019 | 108-90-7 |
| Chloroform | < 1,000 | 1,000 | < 4,880 | 4,880 | | 2,000 | 3/11/2019 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **6,640** | **1,000** | **26,300** | **3,960** | | 2,000 | 3/11/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2,000 | 2,000 | < 9,900 | 9,900 | | 2,000 | 3/11/2019 | 75-71-8 |
| Ethylbenzene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 3/11/2019 | 100-41-4 |
| m&p-Xylene | < 2,000 | 2,000 | < 8,680 | 8,680 | | 2,000 | 3/11/2019 | 179601-23-1 |
| **Methylene chloride** | **48,400** | **4,000** | **168,000** | **13,900** | | 2,000 | 3/11/2019 | 75-09-2 |
| o-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 3/11/2019 | 95-47-6 |
| **Tetrachloroethene** | **14,100** | **2,000** | **95,600** | **13,600** | | 2,000 | 3/11/2019 | 127-18-4 |
| Tetrahydrofuran | < 4,000 | 4,000 | < 11,800 | 11,800 | | 2,000 | 3/11/2019 | 109-99-9 |
| Toluene | < 1,000 | 1,000 | < 3,770 | 3,770 | | 2,000 | 3/11/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1,000 | 1,000 | < 3,960 | 3,960 | | 2,000 | 3/11/2019 | 156-60-5 |
| **Trichloroethene** | **46,300** | **1,000** | **249,000** | **5,370** | | 2,000 | 3/11/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1,000 | 1,000 | < 5,620 | 5,620 | | 2,000 | 3/11/2019 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **10,600** | **1,000** | **81,200** | **7,660** | | 2,000 | 3/11/2019 | 76-13-1 |
| Vinyl chloride | < 1,000 | 1,000 | < 2,560 | 2,560 | | 2,000 | 3/11/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 78.4 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010307 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/7/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/7/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/7/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/7/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/7/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/7/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/7/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/7/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/7/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/7/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/7/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/7/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/7/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/7/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/7/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/7/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/7/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/7/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/7/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/7/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/7/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/7/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/7/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 91.7 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/7/2019 Batch: MS010307 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 11.1 | 111 | 10.8 | 108 | 10.0 | 3.2 | ppbv | | | |
| Vinyl Chloride | 9.9 | 98.6 | 10.1 | 101 | 10.0 | 2.6 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 10.6 | 106 | 10.8 | 108 | 10.0 | 1.9 | ppbv | | | |
| Acetone | 10.9 | 109 | 11.4 | 114 | 10.0 | 4.7 | ppbv | | | |
| 1,1-Dichloroethene | 11.0 | 110 | 11.1 | 111 | 10.0 | 0.8 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 10.4 | 104 | 10.5 | 105 | 10.0 | 0.9 | ppbv | | | |
| Methylene Chloride | 10.8 | 108 | 11.0 | 110 | 10.0 | 1.9 | ppbv | | | |
| trans-1,2-Dichloroethene | 10.2 | 102 | 10.8 | 108 | 10.0 | 5.2 | ppbv | | | |
| 1,1-Dichloroethane | 10.9 | 109 | 10.9 | 109 | 10.0 | 0.1 | ppbv | | | |
| 2-Butanone (MEK) | 10.6 | 106 | 10.8 | 108 | 10.0 | 1.5 | ppbv | | | |
| cis-1,2-Dichloroethene | 10.3 | 103 | 10.8 | 108 | 10.0 | 4.4 | ppbv | | | |
| Chloroform | 10.6 | 106 | 10.6 | 106 | 10.0 | 0.3 | ppbv | | | |
| Tetrahydrofuran | 11.9 | 119 | 12.3 | 123 | 10.0 | 4.0 | ppbv | | | |
| 1,2-Dichloroethane | 10.7 | 107 | 10.9 | 109 | 10.0 | 2.3 | ppbv | | | |
| Benzene | 10.8 | 108 | 11.1 | 111 | 10.0 | 3.0 | ppbv | | | |
| Trichloroethene | 9.4 | 94.4 | 9.4 | 93.7 | 10.0 | 0.7 | ppbv | | | |
| Toluene | 10.8 | 108 | 10.9 | 109 | 10.0 | 1.3 | ppbv | | | |
| Tetrachloroethene | 9.0 | 89.7 | 9.2 | 92.4 | 10.0 | 3.0 | ppbv | | | |
| Chlorobenzene | 9.8 | 97.8 | 10.2 | 102 | 10.0 | 3.7 | ppbv | | | |
| Ethylbenzene | 10.5 | 105 | 10.9 | 109 | 10.0 | 3.5 | ppbv | | | |
| m&p-Xylene | 19.2 | 96.0 | 19.9 | 99.5 | 20.0 | 3.6 | ppbv | | | |
| o-Xylene | 10.4 | 104 | 10.5 | 105 | 10.0 | 1.2 | ppbv | | | |
| 1,2-Dichlorobenzene | 8.4 | 84.2 | 8.6 | 86.2 | 10.0 | 2.3 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 10.9 | 109 | 10.6 | 106 | | | %REC | | | |
| | | 70-130% | | 70-130% | | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010311 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/11/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/11/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/11/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/11/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/11/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/11/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/11/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/11/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/11/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/11/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/11/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/11/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/11/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/11/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/11/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/11/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/11/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/11/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/11/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/11/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/11/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/11/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/11/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 80.0 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/11/2019 Batch: MS010311 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 9.2 | 91.6 | 9.6 | 95.5 | 10.0 | 4.2 | ppbv | | | |
| Vinyl Chloride | 8.0 | 80.0 | 8.0 | 80.3 | 10.0 | 0.4 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 8.9 | 89.3 | 8.8 | 87.9 | 10.0 | 1.6 | ppbv | | | |
| Acetone | 9.3 | 93.3 | 10.2 | 102 | 10.0 | 8.8 | ppbv | | | |
| 1,1-Dichloroethene | 9.2 | 91.6 | 9.2 | 91.9 | 10.0 | 0.3 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 9.2 | 92.0 | 9.3 | 93.1 | 10.0 | 1.2 | ppbv | | | |
| Methylene Chloride | 9.5 | 95.0 | 9.2 | 91.9 | 10.0 | 3.3 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.4 | 94.1 | 9.9 | 98.5 | 10.0 | 4.6 | ppbv | | | |
| 1,1-Dichloroethane | 9.4 | 93.7 | 9.5 | 94.9 | 10.0 | 1.3 | ppbv | | | |
| 2-Butanone (MEK) | 9.7 | 97.0 | 9.1 | 90.7 | 10.0 | 6.7 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.4 | 94.3 | 9.7 | 97.0 | 10.0 | 2.8 | ppbv | | | |
| Chloroform | 9.3 | 92.6 | 9.1 | 90.5 | 10.0 | 2.3 | ppbv | | | |
| Tetrahydrofuran | 10.2 | 102 | 10.1 | 101 | 10.0 | 1.7 | ppbv | | | |
| 1,2-Dichloroethane | 9.2 | 91.9 | 8.5 | 85.0 | 10.0 | 7.8 | ppbv | | | |
| Benzene | 9.5 | 95.1 | 9.6 | 96.1 | 10.0 | 1.0 | ppbv | | | |
| Trichloroethene | 9.3 | 93.3 | 9.6 | 95.6 | 10.0 | 2.4 | ppbv | | | |
| Toluene | 10.0 | 100 | 10.0 | 100 | 10.0 | 0.1 | ppbv | | | |
| Tetrachloroethene | 9.8 | 98.2 | 9.7 | 97.4 | 10.0 | 0.8 | ppbv | | | |
| Chlorobenzene | 9.7 | 96.6 | 9.8 | 98.1 | 10.0 | 1.5 | ppbv | | | |
| Ethylbenzene | 10.5 | 105 | 10.5 | 105 | 10.0 | 0.4 | ppbv | | | |
| m&p-Xylene | 19.2 | 96.2 | 19.2 | 95.9 | 20.0 | 0.3 | ppbv | | | |
| o-Xylene | 10.7 | 107 | 10.3 | 103 | 10.0 | 3.5 | ppbv | | | |
| 1,2-Dichlorobenzene | 9.8 | 98.0 | 9.3 | 93.2 | 10.0 | 5.0 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 10.6 | 106 | 10.1 | 101 | | 4.7 | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | NA |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2019-2004 |
| **Lab Order:** | 19C006 | **Collection:** | NA |
| **Lab ID:** | Standards | **Matrix:** | Nitrogen |

| AEL ID# | STD Name | Vendor | SGI Order# | Description | CONC. | Accuracy | Exp.Date |
|---|---|---|---|---|---|---|---|
| S-180620-03 | Stock | Spectra Gases | 116447993 | TO-14 39 Analytes | 1.0 ppmv | ± 5% | 6/25/2019 |
| S-180620-02 | Stock | Spectra Gases | 116447993 | TO-15 25 Analytes | 1.0 ppmv | ± 5% | 6/22/2019 |
| S-180620-01 | Stock | Spectra Gases | 116447993 | 15 Additional Compounds | 1.0 ppmv | ± 5% | 6/20/2019 |
| S-181011-01 | Stock | Spectra Gases | 116849616 | TO-15 IS 4 Compounds | 1.0 ppmv | ± 5% | 10/11/2019 |
| A-190219-01 | Working Std | AEL Dilution | | TO-15 74 Analytes | 10 ppbv | ± 5% | 5/19/2019 |
| A-190215-01 | Working IS | AEL Dilution | | TO-15 IS 4 Compounds | 50 ppbv | ± 5% | 5/15/2019 |

# 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: Wood | Page 1 of 1 | | AEL Lab # |
| Address: 4600 East Washington St, Suite 600 | Sampler: Eric Miller | Phone: 602.300.8313 | 19C006 |
| | Project Name: Cave Creek Landfill | Project Number: 14-2019-2004 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | | |
| Contact: | P.O. Number: | | |
| Phone: 602.733-6000 Fax: 602.733-6100 | Fax Results: Y N | | |
| E-Mail Address: Natalie.Chrisman@woodplc.com | E-Mail Results: Y N | | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes_____ No_____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes_____ No_____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | X Standard 10 Working Days | S: soil vapor |
| | | W: water |

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 full list | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | E2352 | 117 | 6 1 bag | 1 2 5 | SP4-H1-030419 | 3.4.19 | 1025 | SVE | 1 | | | X | | | | | | | |
| 02 | E2404 | 021 | 6 1 bag | 1 2 5 | SP3-C1-030419 | ↓ | 1030 | ↓ | ↓ | | | X | | | | | | | |
| 03 | E2400 | 072 | 6 1 bag | 1 2 5 | SP2-C3-030419 | ↓ | 1035 | ↓ | ↓ | | | X | | | | | | | |
| 04 | 1859 | 041 | 6 1 bag | 1 2 5 | SP1-SKIDOUTLET-030419 | ↓ | 1040 | ↓ | ↓ | | | X | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3.5.19 | 1335 | E. Miller | |
| | | | |
| | | | |

# Airtech Environmental Laboratories (AEL)

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888


Date: March 27, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C022 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2014-2020 |
| | Phoenix, AZ 85034 | Received Date: | 3/20/2019 |

Dear Client:

Airtech Environmental Laboratories received four (4) 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: March 27, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C022 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2014-2020 |
| | Phoenix, AZ 85034 | Received Date: | 3/20/2019 |

## SAMPLE SUMMARY

| LAB ID | CLIENT ID | METHOD | SAMPLE DATE | SAMPLE TIME |
|---|---|---|---|---|
| 19C022-01 | SP4-H1-032019 | TO-15 | 3/20/2019 | 905 |
| 19C022-02 | SP3-C3-032019 | TO-15 | 3/20/2019 | 910 |
| 19C022-03 | SP2-C2-032019 | TO-15 | 3/20/2019 | 915 |
| 19C022-04 | SP1-SkidOutlet-032019 | TO-15 | 3/20/2019 | 920 |

**Airtech Environmental Laboratories (AEL)**
4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

Date: March 27, 2019

| | | | |
|---|---|---|---|
| Client: | Natalie Chrisman | Work Order #: | 19C022 |
| Company: | Wood | Project Name: | Cave Creek Landfill |
| Address: | 4600 E Washington St, #600 | Project Number: | 14-2014-2020 |
| | Phoenix, AZ 85034 | Received Date: | 03/20/19 |

## 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.

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | N/A |
| **Lab ID:** | Kits QC | **Matrix:** | Air |

| | | Canister | | | | Grab Sampler | |
|---|---|---|---|---|---|---|---|
| | | Type | | Vacuum | Pressure | Type | |
| | Client | 1.0 liter | | before sampled | after sampled | 1 minute-fill 1.0L canister | |
| AEL# | ID | SN# | Clean Batch# | Hg inch | psia | SN# | Clean Batch# |
| 19C022-01 | SP4-H1-032019 | E2407 | 1903-10 | 29.0 | 14.06 | 105 | 1902-03 |
| 19C022-02 | SP3-C3-032019 | E2284 | 1903-10 | 29.0 | 14.43 | 143 | 1902-03 |
| 19C022-03 | SP2-C2-032019 | E2399 | 1903-10 | 29.0 | 14.62 | 117 | 1902-03 |
| 19C022-04 | SP1-SkidOutlet-032019 | 1802 | 1903-10 | 29.0 | 14.86 | 194 | 1902-03 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP4-H1-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 01 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/21/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **1,050** | **500** | **4,170** | **1,990** | | 1,000 | 3/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 500 | 500 | < 3,010 | 3,010 | | 1,000 | 3/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5,000 | 5,000 | < 14,800 | 14,800 | | 1,000 | 3/21/2019 | 78-93-3 |
| Acetone | < 5,000 | 5,000 | < 11,900 | 11,900 | | 1,000 | 3/21/2019 | 67-64-1 |
| Benzene | < 500 | 500 | < 1,600 | 1,600 | | 1,000 | 3/21/2019 | 71-43-2 |
| Chlorobenzene | < 500 | 500 | < 2,300 | 2,300 | | 1,000 | 3/21/2019 | 108-90-7 |
| Chloroform | < 500 | 500 | < 2,440 | 2,440 | | 1,000 | 3/21/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/21/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,630** | **1,000** | **8,070** | **4,950** | | 1,000 | 3/21/2019 | 75-71-8 |
| Ethylbenzene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/21/2019 | 100-41-4 |
| m&p-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 1,000 | 3/21/2019 | 179601-23-1 |
| **Methylene chloride** | **48,900** | **2,000** | **170,000** | **6,940** | | 1,000 | 3/21/2019 | 75-09-2 |
| o-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/21/2019 | 95-47-6 |
| Tetrachloroethene | < 1,000 | 1,000 | < 6,780 | 6,780 | | 1,000 | 3/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 2,000 | 2,000 | < 5,900 | 5,900 | | 1,000 | 3/21/2019 | 109-99-9 |
| Toluene | < 500 | 500 | < 1,890 | 1,890 | | 1,000 | 3/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/21/2019 | 156-60-5 |
| **Trichloroethene** | **2,080** | **500** | **11,200** | **2,690** | | 1,000 | 3/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 500 | 500 | < 2,810 | 2,810 | | 1,000 | 3/21/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 500 | 500 | < 3,830 | 3,830 | | 1,000 | 3/21/2019 | 76-13-1 |
| Vinyl chloride | < 500 | 500 | < 1,280 | 1,280 | | 1,000 | 3/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 110 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

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| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP3-C3-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 02 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/21/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 500 | 500 | < 1,990 | 1,990 | | 1,000 | 3/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 500 | 500 | < 3,010 | 3,010 | | 1,000 | 3/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5,000 | 5,000 | < 14,800 | 14,800 | | 1,000 | 3/21/2019 | 78-93-3 |
| Acetone | < 5,000 | 5,000 | < 11,900 | 11,900 | | 1,000 | 3/21/2019 | 67-64-1 |
| Benzene | < 500 | 500 | < 1,600 | 1,600 | | 1,000 | 3/21/2019 | 71-43-2 |
| Chlorobenzene | < 500 | 500 | < 2,300 | 2,300 | | 1,000 | 3/21/2019 | 108-90-7 |
| Chloroform | < 500 | 500 | < 2,440 | 2,440 | | 1,000 | 3/21/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/21/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,660** | **1,000** | **8,220** | **4,950** | | 1,000 | 3/21/2019 | 75-71-8 |
| Ethylbenzene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/21/2019 | 100-41-4 |
| m&p-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 1,000 | 3/21/2019 | 179601-23-1 |
| **Methylene chloride** | **39,700** | **4,000** | **138,000** | **13,900** | | 2,000 | 3/21/2019 | 75-09-2 |
| o-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/21/2019 | 95-47-6 |
| Tetrachloroethene | < 1,000 | 1,000 | < 6,780 | 6,780 | | 1,000 | 3/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 2,000 | 2,000 | < 5,900 | 5,900 | | 1,000 | 3/21/2019 | 109-99-9 |
| Toluene | < 500 | 500 | < 1,890 | 1,890 | | 1,000 | 3/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/21/2019 | 156-60-5 |
| Trichloroethene | < 500 | 500 | < 2,690 | 2,690 | | 1,000 | 3/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 500 | 500 | < 2,810 | 2,810 | | 1,000 | 3/21/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 500 | 500 | < 3,830 | 3,830 | | 1,000 | 3/21/2019 | 76-13-1 |
| Vinyl chloride | < 500 | 500 | < 1,280 | 1,280 | | 1,000 | 3/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 110 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP2-C2-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 03 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/21/2019 | 75-34-3 |
| **1,1-Dichloroethene** | **14,900** | **500** | **59,200** | **1,990** | | 1,000 | 3/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 500 | 500 | < 3,010 | 3,010 | | 1,000 | 3/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 500 | 500 | < 2,030 | 2,030 | | 1,000 | 3/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5,000 | 5,000 | < 14,800 | 14,800 | | 1,000 | 3/21/2019 | 78-93-3 |
| Acetone | < 5,000 | 5,000 | < 11,900 | 11,900 | | 1,000 | 3/21/2019 | 67-64-1 |
| Benzene | < 500 | 500 | < 1,600 | 1,600 | | 1,000 | 3/21/2019 | 71-43-2 |
| Chlorobenzene | < 500 | 500 | < 2,300 | 2,300 | | 1,000 | 3/21/2019 | 108-90-7 |
| Chloroform | < 500 | 500 | < 2,440 | 2,440 | | 1,000 | 3/21/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/21/2019 | 156-59-2 |
| **Dichlorodifluoromethane(F-12)** | **1,620** | **1,000** | **8,020** | **4,950** | | 1,000 | 3/21/2019 | 75-71-8 |
| Ethylbenzene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/21/2019 | 100-41-4 |
| m&p-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 1,000 | 3/21/2019 | 179601-23-1 |
| **Methylene chloride** | **50,400** | **4,000** | **175,000** | **13,900** | | 2,000 | 3/21/2019 | 75-09-2 |
| o-Xylene | < 500 | 500 | < 2,170 | 2,170 | | 1,000 | 3/21/2019 | 95-47-6 |
| Tetrachloroethene | < 1,000 | 1,000 | < 6,780 | 6,780 | | 1,000 | 3/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 2,000 | 2,000 | < 5,900 | 5,900 | | 1,000 | 3/21/2019 | 109-99-9 |
| Toluene | < 500 | 500 | < 1,890 | 1,890 | | 1,000 | 3/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 500 | 500 | < 1,980 | 1,980 | | 1,000 | 3/21/2019 | 156-60-5 |
| Trichloroethene | < 500 | 500 | < 2,690 | 2,690 | | 1,000 | 3/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 500 | 500 | < 2,810 | 2,810 | | 1,000 | 3/21/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 500 | 500 | < 3,830 | 3,830 | | 1,000 | 3/21/2019 | 76-13-1 |
| Vinyl chloride | < 500 | 500 | < 1,280 | 1,280 | | 1,000 | 3/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 110 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | SP1-SkidOutlet-032019 |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | 3/20/2019 |
| **Lab ID:** | 04 | **Matrix:** | Soil vapor |

| | ppbv | | ug/M$^3$ | | | | Date | |
|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Analyzed** | **CAS#** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 12/28/2016 | 75-34-3 |
| **1,1-Dichloroethene** | **17,900** | **1,000** | **71,100** | **3,970** | | 2,000 | 12/28/2016 | 75-35-4 |
| 1,2-Dichlorobenzene | < 1,000 | 1,000 | < 6,010 | 6,010 | | 2,000 | 12/28/2016 | 95-50-1 |
| 1,2-Dichloroethane | < 1,000 | 1,000 | < 4,050 | 4,050 | | 2,000 | 12/28/2016 | 107-06-2 |
| 2-Butanone (MEK) | < 10,000 | 10,000 | < 29,500 | 29,500 | | 2,000 | 12/28/2016 | 78-93-3 |
| Acetone | < 10,000 | 10,000 | < 23,800 | 23,800 | | 2,000 | 12/28/2016 | 67-64-1 |
| Benzene | < 1,000 | 1,000 | < 3,190 | 3,190 | | 2,000 | 12/28/2016 | 71-43-2 |
| Chlorobenzene | < 1,000 | 1,000 | < 4,600 | 4,600 | | 2,000 | 12/28/2016 | 108-90-7 |
| Chloroform | < 1,000 | 1,000 | < 4,880 | 4,880 | | 2,000 | 12/28/2016 | 67-66-3 |
| **cis-1,2-Dichloroethene** | **3,160** | **1,000** | **12,500** | **3,960** | | 2,000 | 12/28/2016 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 2,000 | 2,000 | < 9,900 | 9,900 | | 2,000 | 12/28/2016 | 75-71-8 |
| Ethylbenzene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 12/28/2016 | 100-41-4 |
| m&p-Xylene | < 2,000 | 2,000 | < 8,680 | 8,680 | | 2,000 | 12/28/2016 | 179601-23-1 |
| **Methylene chloride** | **28,800** | **4,000** | **99,900** | **13,880** | | 2,000 | 12/28/2016 | 75-09-2 |
| o-Xylene | < 1,000 | 1,000 | < 4,340 | 4,340 | | 2,000 | 12/28/2016 | 95-47-6 |
| Tetrachloroethene | < 2,000 | 2,000 | < 13,600 | 13,600 | | 2,000 | 12/28/2016 | 127-18-4 |
| Tetrahydrofuran | < 4,000 | 4,000 | < 11,800 | 11,800 | | 2,000 | 12/28/2016 | 109-99-9 |
| Toluene | < 1,000 | 1,000 | < 3,770 | 3,770 | | 2,000 | 12/28/2016 | 108-88-3 |
| trans-1,2-Dichloroethene | < 1,000 | 1,000 | < 3,960 | 3,960 | | 2,000 | 12/28/2016 | 156-60-5 |
| **Trichloroethene** | **17,500** | **1,000** | **94,000** | **5,370** | | 2,000 | 12/28/2016 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 1,000 | 1,000 | < 5,620 | 5,620 | | 2,000 | 12/28/2016 | 75-69-4 |
| **Trichlorotrifluoroethane(F-113)** | **5,520** | **1,000** | **42,300** | **7,660** | | 2,000 | 12/28/2016 | 76-13-1 |
| Vinyl chloride | < 1,000 | 1,000 | < 2,560 | 2,560 | | 2,000 | 12/28/2016 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 117 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010320 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/20/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/20/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/20/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/20/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/20/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/20/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/20/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/20/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/20/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/20/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/20/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/20/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/20/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/20/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/20/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/20/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/20/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/20/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/20/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/20/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/20/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/20/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/20/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 92.3 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/20/2019 Batch: MS010320 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 10.4 | 104 | 9.7 | 97.0 | 10.0 | 7.3 | ppbv | | | |
| Vinyl Chloride | 9.4 | 94.3 | 9.0 | 89.5 | 10.0 | 5.2 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 9.2 | 92.4 | 9.0 | 89.8 | 10.0 | 2.9 | ppbv | | | |
| Acetone | 8.8 | 88.1 | 9.5 | 95.3 | 10.0 | 7.9 | ppbv | | | |
| 1,1-Dichloroethene | 9.4 | 94.1 | 9.5 | 95.3 | 10.0 | 1.3 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 9.0 | 90.4 | 9.0 | 89.7 | 10.0 | 0.8 | ppbv | | | |
| Methylene Chloride | 9.7 | 96.6 | 9.0 | 89.7 | 10.0 | 7.4 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.2 | 91.7 | 9.2 | 91.6 | 10.0 | 0.1 | ppbv | | | |
| 1,1-Dichloroethane | 9.5 | 95.4 | 9.4 | 94.0 | 10.0 | 1.5 | ppbv | | | |
| 2-Butanone (MEK) | 8.8 | 88.1 | 8.6 | 85.7 | 10.0 | 2.8 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.3 | 92.6 | 9.2 | 92.3 | 10.0 | 0.3 | ppbv | | | |
| Chloroform | 9.2 | 92.1 | 9.2 | 91.7 | 10.0 | 0.4 | ppbv | | | |
| Tetrahydrofuran | 9.6 | 96.4 | 9.4 | 94.3 | 10.0 | 2.2 | ppbv | | | |
| 1,2-Dichloroethane | 9.4 | 94.0 | 9.0 | 89.6 | 10.0 | 4.8 | ppbv | | | |
| Benzene | 9.2 | 92.1 | 9.1 | 91.2 | 10.0 | 1.0 | ppbv | | | |
| Trichloroethene | 8.5 | 84.8 | 8.4 | 83.6 | 10.0 | 1.4 | ppbv | | | |
| Toluene | 9.2 | 91.5 | 9.0 | 90.0 | 10.0 | 1.7 | ppbv | | | |
| Tetrachloroethene | 8.8 | 87.5 | 8.7 | 86.9 | 10.0 | 0.7 | ppbv | | | |
| Chlorobenzene | 8.7 | 87.2 | 8.6 | 86.1 | 10.0 | 1.3 | ppbv | | | |
| Ethylbenzene | 9.3 | 92.9 | 9.3 | 93.1 | 10.0 | 0.2 | ppbv | | | |
| m&p-Xylene | 18.9 | 94.3 | 18.5 | 92.6 | 20.0 | 1.9 | ppbv | | | |
| o-Xylene | 8.6 | 86.0 | 8.4 | 84.1 | 10.0 | 2.2 | ppbv | | | |
| 1,2-Dichlorobenzene | 8.9 | 89.0 | 8.3 | 83.4 | 10.0 | 6.5 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 10.6 | 106 | 10.6 | 106 | | 0.3 | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | N/A |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

**Method QC Data**

Batch: MS010321 Analyst: JJ

| Analyses | ppbv Result | ppbv Limit | ug/M$^3$ Result | ug/M$^3$ Limit | Qual | DF | Date Analyzed | CAS# |
|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ | |
| 1,1-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/21/2019 | 75-34-3 |
| 1,1-Dichloroethene | < 0.5 | 0.5 | < 1.99 | 1.99 | | 1 | 3/21/2019 | 75-35-4 |
| 1,2-Dichlorobenzene | < 0.5 | 0.5 | < 3.01 | 3.01 | | 1 | 3/21/2019 | 95-50-1 |
| 1,2-Dichloroethane | < 0.5 | 0.5 | < 2.03 | 2.03 | | 1 | 3/21/2019 | 107-06-2 |
| 2-Butanone (MEK) | < 5.0 | 5.0 | < 14.8 | 14.8 | | 1 | 3/21/2019 | 78-93-3 |
| Acetone | < 5.0 | 5.0 | < 11.9 | 11.9 | | 1 | 3/21/2019 | 67-64-1 |
| Benzene | < 0.5 | 0.5 | < 1.60 | 1.60 | | 1 | 3/21/2019 | 71-43-2 |
| Chlorobenzene | < 0.5 | 0.5 | < 2.30 | 2.30 | | 1 | 3/21/2019 | 108-90-7 |
| Chloroform | < 0.5 | 0.5 | < 2.44 | 2.44 | | 1 | 3/21/2019 | 67-66-3 |
| cis-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/21/2019 | 156-59-2 |
| Dichlorodifluoromethane(F-12) | < 1.0 | 1.0 | < 4.95 | 4.95 | | 1 | 3/21/2019 | 75-71-8 |
| Ethylbenzene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/21/2019 | 100-41-4 |
| m&p-Xylene | < 1.0 | 1.0 | < 4.34 | 4.34 | | 1 | 3/21/2019 | 179601-23-1 |
| Methylene chloride | < 2.0 | 2.0 | < 6.94 | 6.94 | | 1 | 3/21/2019 | 75-09-2 |
| o-Xylene | < 0.5 | 0.5 | < 2.17 | 2.17 | | 1 | 3/21/2019 | 95-47-6 |
| Tetrachloroethene | < 1.0 | 1.0 | < 6.78 | 6.78 | | 1 | 3/21/2019 | 127-18-4 |
| Tetrahydrofuran | < 2.0 | 2.0 | < 5.90 | 5.90 | | 1 | 3/21/2019 | 109-99-9 |
| Toluene | < 0.5 | 0.5 | < 1.89 | 1.89 | | 1 | 3/21/2019 | 108-88-3 |
| trans-1,2-Dichloroethene | < 0.5 | 0.5 | < 1.98 | 1.98 | | 1 | 3/21/2019 | 156-60-5 |
| Trichloroethene | < 0.5 | 0.5 | < 2.69 | 2.69 | | 1 | 3/21/2019 | 79-01-6 |
| Trichlorofluoromethane(F-11) | < 0.5 | 0.5 | < 2.81 | 2.81 | | 1 | 3/21/2019 | 75-69-4 |
| Trichlorotrifluoroethane(F-113) | < 0.5 | 0.5 | < 3.83 | 3.83 | | 1 | 3/21/2019 | 76-13-1 |
| Vinyl chloride | < 0.5 | 0.5 | < 1.28 | 1.28 | | 1 | 3/21/2019 | 75-01-4 |
| Surr: 4-Bromofluorobenzene | 114 | 70-130 | %REC | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

4620 E.Elwood St., Suite 13, Phoenix, AZ 85040 480-968-5888 Fax 480-966-1888

| | | | |
|---|---|---|---|
| **Client:** | Wood | **Client Sample ID:** | N/A |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | N/A |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 3/21/2019 Batch: MS010321 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | %RPD | Unit | Qualifier LCS | Qualifier LCSD | Qualifier RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | | <25% |
| Dichlorodifluoromethane(F-12) | 11.5 | 115 | 11.2 | 112 | 10.0 | 2.9 | ppbv | | | |
| Vinyl Chloride | 10.3 | 103 | 9.7 | 96.7 | 10.0 | 5.9 | ppbv | | | |
| Trichlorofluoromethane (F-11) | 11.6 | 116 | 11.5 | 115 | 10.0 | 0.7 | ppbv | | | |
| Acetone | 9.3 | 92.5 | 9.5 | 95.2 | 10.0 | 2.9 | ppbv | | | |
| 1,1-Dichloroethene | 11.5 | 115 | 11.1 | 111 | 10.0 | 3.2 | ppbv | | | |
| Trichlorotrifluoroethane (F-113) | 10.0 | 100 | 10.0 | 99.5 | 10.0 | 0.9 | ppbv | | | |
| Methylene Chloride | 10.6 | 106 | 10.2 | 102 | 10.0 | 3.4 | ppbv | | | |
| trans-1,2-Dichloroethene | 9.8 | 98.0 | 9.5 | 94.7 | 10.0 | 3.4 | ppbv | | | |
| 1,1-Dichloroethane | 10.6 | 106 | 10.6 | 106 | 10.0 | 0.5 | ppbv | | | |
| 2-Butanone (MEK) | 9.5 | 94.6 | 9.2 | 91.7 | 10.0 | 3.1 | ppbv | | | |
| cis-1,2-Dichloroethene | 9.8 | 98.2 | 9.8 | 98.1 | 10.0 | 0.1 | ppbv | | | |
| Chloroform | 10.5 | 105 | 10.4 | 104 | 10.0 | 0.4 | ppbv | | | |
| Tetrahydrofuran | 12.1 | 121 | 11.9 | 119 | 10.0 | 1.9 | ppbv | | | |
| 1,2-Dichloroethane | 11.7 | 117 | 11.2 | 112 | 10.0 | 4.1 | ppbv | | | |
| Benzene | 9.8 | 97.6 | 9.6 | 96.4 | 10.0 | 1.2 | ppbv | | | |
| Trichloroethene | 8.0 | 80.0 | 7.8 | 78.0 | 10.0 | 2.5 | ppbv | | | |
| Toluene | 9.3 | 92.5 | 9.1 | 90.5 | 10.0 | 2.2 | ppbv | | | |
| Tetrachloroethene | 7.8 | 78.2 | 7.6 | 76.4 | 10.0 | 2.3 | ppbv | | | |
| Chlorobenzene | 8.7 | 87.1 | 8.3 | 83.1 | 10.0 | 4.7 | ppbv | | | |
| Ethylbenzene | 9.3 | 93.4 | 9.0 | 89.8 | 10.0 | 3.9 | ppbv | | | |
| m&p-Xylene | 18.6 | 92.8 | 18.1 | 90.4 | 20.0 | 2.6 | ppbv | | | |
| o-Xylene | 8.2 | 82.1 | 8.0 | 79.9 | 10.0 | 2.7 | ppbv | | | |
| 1,2-Dichlorobenzene | 8.3 | 82.9 | 8.1 | 80.8 | 10.0 | 2.6 | ppbv | | | |
| Surr: 4-Bromofluorobenzene | 11.8 | 118 | 11.9 | 119 | | | %REC | | | |
| | | 70-130% | | 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:** | Wood | **Client Sample ID:** | NA |
| **Project:** | Cave Creek Landfill | **Project Number:** | 14-2014-2020 |
| **Lab Order:** | 19C022 | **Collection:** | NA |
| **Lab ID:** | Standards | **Matrix:** | Nitrogen |

| AEL ID# | STD Name | Vendor | SGI Order# | Description | CONC. | Accuracy | Exp.Date |
|---|---|---|---|---|---|---|---|
| S-180620-03 | Stock | Spectra Gases | 116447993 | TO-14 39 Analytes | 1.0 ppmv | ± 5% | 6/25/2019 |
| S-180620-02 | Stock | Spectra Gases | 116447993 | TO-15 25 Analytes | 1.0 ppmv | ± 5% | 6/22/2019 |
| S-180620-01 | Stock | Spectra Gases | 116447993 | 15 Additional Compounds | 1.0 ppmv | ± 5% | 6/20/2019 |
| S-181011-01 | Stock | Spectra Gases | 116849616 | TO-15 IS 4 Compounds | 1.0 ppmv | ± 5% | 10/11/2019 |
| A-190312-02 | Working Std | AEL Dilution | | TO-15 74 Analytes | 10 ppbv | ± 5% | 6/12/2019 |
| A-190312-01 | Working IS | AEL Dilution | | TO-15 IS 4 Compounds | 50 ppbv | ± 5% | 6/12/2019 |

# 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 : ~~Amec Foster Wheeler~~ Wood | Page 1 of 1 | AEL Lab # |
| Address: 4600 East Washington Street, Suite #600 | Sampler: Eric Miller Phone: (602) 300-8313 | 19C022 |
| | Project Name: Cave Creek Landfill Project Number: 14-2014-2020 | |
| City, State, Zip: Phoenix, AZ 85034 | Project location: Cave Creek, AZ | |
| Contact: ~~Alex Yiannakakis~~ NATALIE.Chrisman@woodplc.com | P.O. Number: | |
| Phone: (602) 733-6000 Fax: (602) 733-6100 | Fax Results: Y N | |
| E-Mail Address: alex.yiannakakis@amec.com | 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
X Standard 10 Working Days

**Sample Type**

SVE: soil vapor extraction GW: ground water
A: ambient air WW: waste water
I: indoor air
S: soil vapor
W: water

## Sample Information

| AEL Lab # | Serial # Canister | Serial # Grab | Canister (L) or bag | Grab (Min) | Client's Sample Identification | Sampled Date | Sampled Time | Sample Type | Number of Containers | TO-15 full list | TO-15 TPH(GRO) | TO-15 Selet List | 8260B AZ Vapor full list | 8260B Vapor select list | 8015 GRO | 8260B Water | | | DFA tracer cmpd. as TIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | E2407 | 105 | 6 (1) bag | (1) 2 5 | SP4-H1-032019 | 3-20-19 | 905 | S | 1 | | | X | | | | | | | |
| 02 | E2284 | 143 | 6 (1) bag | (1) 2 5 | SP3-C3-032019 | ↓ | 910 | ↓ | ↓ | | | X | | | | | | | |
| 03 | E2399 | 117 | 6 (1) bag | (1) 2 5 | SP2-C2-032019 | ↓ | 915 | ↓ | ↓ | | | X | | | | | | | |
| 04 | 1802 | 194 | 6 (1) bag | (1) 2 5 | SP1-SKIDOUTLET-032019 | ↓ | 920 | ↓ | ↓ | | | X | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |
| | | | 6 1 bag | 1 2 5 | | | | | | | | | | | | | | | |

Instructions / Special Requirements:

| Date: | Time: | Samples Relinquished By: | Received By: |
|---|---|---|---|
| 3-20-19 | 1522 | E. Miller | |
| | | | |
| | | | |

# EXHIBIT 1

## CAVE CREEK LANDFILL PROGRESS SCHEDULE

| ID | | Task Name | Duration | Start | Finish |
|---|---|---|---|---|---|
| 1 | | **SVE Operations** | 1306 days? | Tue 9/15/15 | Tue 9/15/20 |
| 2 | | **GWTS Installation** | **961 days** | **Fri 12/16/16** | **Fri 8/21/20** |
| 3 | | **Phase I (On-Site Infrastructure)** | **710 days** | **Fri 12/16/16** | **Thu 9/5/19** |
| 4 | ✓ | *Design* | 192 days | Fri 12/16/16 | Mon 9/11/17 |
| 5 | ✓ | *Permitting* | 107 days | Thu 10/5/17 | Fri 3/2/18 |
| 6 | ✓ | *Contractor Procurement* | 138 days | Fri 6/1/18 | Tue 12/11/18 |
| 7 | | *Construction* | 154 days | Mon 2/4/19 | Thu 9/5/19 |
| 8 | | **Phase 2 (Conveyance Pipeline)** | **553 days** | **Thu 1/11/18** | **Mon 2/24/20** |
| 9 | ✓ | *Design* | 132 days | Thu 1/11/18 | Fri 7/13/18 |
| 10 | ✓ | *Permitting* | 85 days | Mon 9/24/18 | Fri 1/18/19 |
| 11 | | *Contractor Procurement* | 3 mons | Sat 6/1/19 | Thu 8/22/19 |
| 12 | | *Construction* | 6 mons | Tue 9/10/19 | Mon 2/24/20 |
| 13 | | **Phase 3 (Injection Well Site)** | **200 days** | **Mon 11/18/19** | **Fri 8/21/20** |
| 14 | | *Design* | 3 mons | Mon 11/18/19 | Fri 2/7/20 |
| 15 | | *Permitting* | 1 mon | Mon 2/10/20 | Fri 3/6/20 |
| 16 | | *Contractor Procurement* | 2 mons | Mon 3/9/20 | Fri 5/1/20 |
| 17 | | *Construction* | 4 mons | Mon 5/4/20 | Fri 8/21/20 |
| 18 | | **Injection Well (IW-01) Installation** | **110 days** | **Mon 6/17/19** | **Fri 11/15/19** |
| 19 | | *Drilling/Installation* | 51 days | Mon 6/17/19 | Mon 8/26/19 |
| 20 | | *Testing* | 13 days | Tue 8/27/19 | Thu 9/12/19 |
| 21 | | *IW-01 Installation Reporting* | 45 days | Mon 9/16/19 | Fri 11/15/19 |
| 22 | | **GWTS Operations** | **40 days** | **Mon 7/13/20** | **Fri 9/4/20** |
| 23 | | GWTS As-Built Plan Development | 2 mons | Mon 7/13/20 | Fri 9/4/20 |
| 24 | | GWTS Operations Planning | 2 mons | Mon 7/13/20 | Fri 9/4/20 |
| 25 | | **2018 Well Installation Program** | **220 days** | **Sun 8/12/18** | **Fri 6/14/19** |
| 26 | ✓ | MW-11 Drilling/Installation | 26 days | Wed 9/19/18 | Wed 10/24/18 |
| 27 | ✓ | MW-12 Drilling/Installation | 52 days | Sun 8/12/18 | Sun 10/21/18 |
| 28 | ✓ | MW-13 Drilling/Installation | 32 days | Mon 10/15/18 | Tue 11/27/18 |
| 29 | | Well Installation Reporting | 135 days | Mon 12/10/18 | Fri 6/14/19 |
| 30 | | **Site Groundwater Characterization Work Plan (Former Old Landfill Groundwater Characterization Work Plan)** | 4.9 mons | Mon 3/18/19 | Wed 7/31/19 |
| 31 | | **Groundwater Model Update** | 4 mons | Mon 10/7/19 | Fri 1/24/20 |

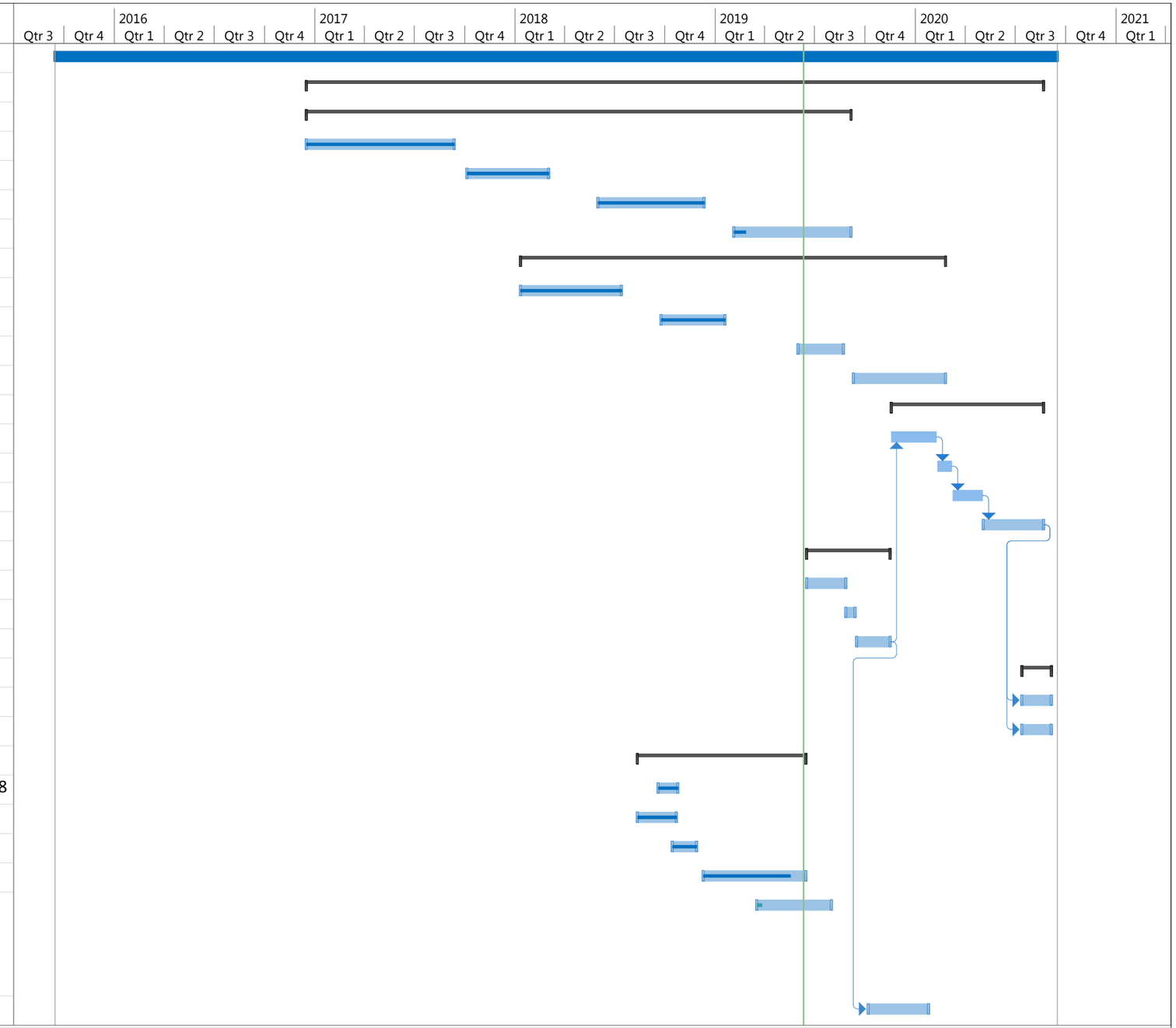


EXHIBIT 1
Project: CCL Project Progress Sc
Date: Tue 6/11/19

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Task | | Project Summary | | Manual Task | | Start-only | | Deadline | |
| Split | | Inactive Task | | Duration-only | | Finish-only | | Progress | |
| Milestone | | Inactive Milestone | | Manual Summary Rollup | | External Tasks | | Manual Progress | |
| Summary | | Inactive Summary | | Manual Summary | | External Milestone | | | |