wood.

FOURTH QUARTER 2018 STATUS REPORT
Maricopa County Cave Creek Landfill
Phoenix, Arizona

Prepared on behalf of:

Maricopa County Risk Management
222 North Central Avenue, Suite 1110
Phoenix, Arizona 85004

and

Maricopa County Waste Resources & Recycling
2919 West Durango Street
Phoenix, Arizona 85009

Prepared by:

Wood Environment & Infrastructure Solutions, Inc.
4600 East Washington Street, Suite 600
Phoenix, Arizona 85034

March 15, 2019

Project No. 14-2019-2004

Registered Professional Engineer (Civil)
CERTIFICATE NO.
31672
N. CHRISMAN
LAZARR
Date Signed 15 Mar 2019
ARIZONA U.S.A.
Expires 09/30/21

TABLE OF CONTENTS

		Page
EXECUTIVE SUMMARY		1
1.0	INTRODUCTION	1
2.0	SUMMARY OF MEASURES TAKEN TO IMPLEMENT THE RAP	1
3.0	DATA COLLECTED DURING THE REPORTING PERIOD	2
3.1	Groundwater Elevations	2
3.2	Groundwater Quality Monitoring	3
3.3	Soil Vapor Monitoring	4
3.4	SVE System Performance Monitoring	4
4.0	DISCUSSION OF COLLECTED DATA	5
4.1	Groundwater Elevations	5
4.2	Groundwater Quality	5
4.3	Soil Vapor	7
4.4	SVE System Performance	7
5.0	FUTURE ACTIVITIES	8
6.0	REFERENCES	9

LIST OF TABLES

Table 1	Well Construction Summary
Table 2	Groundwater Elevation, Gradient, and Flow Direction
Table 3	Groundwater Analytical Results – Summary of VOC Data
Table 4	Groundwater Analytical Results – Summary of General Chemistry Data
Table 5	Groundwater Analytical Results – Summary of Metals Data
Table 6	Soil Vapor Analytical Results – Wellhead TO-15 Analysis Data
Table 7	Soil Vapor Analytical Results – Process Sample TO-15 Analysis Data
Table 8	Soil Vapor Extraction Mass Removal

LIST OF FIGURES

Figure 1	Well Map
Figure 2	Estimated Extent of TCE Plume in Groundwater – November/December 2018
Figure 3	Shallow Zone TCE Soil Vapor Concentrations – December 2018
Figure 4	Middle Zone TCE Soil Vapor Concentrations – December 2018
Figure 5	Deep Zone TCE Soil Vapor Concentrations – December 2018
Figure 6	Above Water Table TCE Soil Vapor Concentrations – December 2018
Figure 7	Deep Zone 1,1-DCE Soil Vapor Concentrations – December 2018
Figure 8.1	SVE System Process Flow Diagram – Pressure Flow
Figure 8.2	SVE System Process Flow Diagram – Vacuum Flow
Figure 9	Mass Removal of VOCs – through December 2018

LIST OF APPENDICES

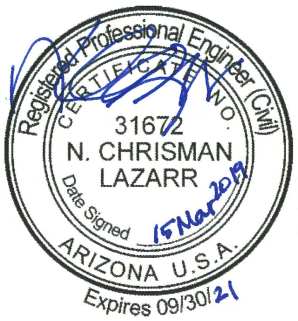
Appendix A	Community Notice Flyer
Appendix B	Laboratory Reports of Analysis

LIST OF EXHIBITS

Exhibit 1	Cave Creek Landfill Progress Schedule

LIST OF SHEETS

Sheet 1	TCE Concentration Trends in Groundwater – November/December 2018



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 fourth calendar quarter of 2018 (October through December 2018) and presents an annual review of data collected at the site in 2018.

Groundwater Data Collection and Discussion. During Fourth Quarter 2018, Maricopa County monitored groundwater elevations and collected groundwater samples from November 15 through 28, 2018. The predominant direction of groundwater flow was 176.7 degrees from north with a gradient of 0.002 feet per foot, which is consistent with the other three quarters of 2018. Groundwater elevations at the site remained relatively constant in 2018. Analytical results from Fourth Quarter 2018 indicate that the highest concentrations of TCE in groundwater were associated with monitoring locations TSSV-03-PZ (270 micrograms per liter [µg/L]) and MW-10 (350 µg/L) which are located in the southern portion of the New Landfill and to the west of the New Landfill, respectively. TCE concentrations at TSSV-03-PZ have declined from a peak concentration observed in the fourth quarter of 2017 (1,100 µg/L), suggesting that the higher concentrations previously observed at this well may have migrated to the south with groundwater flow.

TCE is present above the Arizona Water Quality Standard (AWQS) for TCE of 5 µg/L in off-site downgradient wells MW-05 (59 µg/L), MW-07 (30 µg/L), and MW-11 (16 µg/L). MW-11 is a new well that was installed in 2018 and was intended to delineate the downgradient extent of the TCE plume. Elevated concentrations of TCE in MW-11 have prompted Maricopa County to temporarily delay installation of planned Groundwater Treatment System injection well IW-01, which is currently sited approximately 1,000 feet down/cross-gradient of MW-11 pending further analysis of the potential impacts of groundwater injection near the groundwater plume.

Soil Vapor Data Collection and Discussion. Maricopa County collected quarterly soil vapor samples on December 10 through 14, December 19, and December 20, 2018. Analytical results from Fourth Quarter 2018 indicate that the highest sitewide concentrations of TCE were associated with wells monitoring and extracting soil vapor in the deep and above water table zones of the southwest corner of the Old Landfill (i.e., TSSV-07-D, TSSV-07-PZ, and SVE-04). Compared to the previous quarter, TCE concentrations in soil vapor decreased in the shallow, middle, and deep depth intervals and increased in the above water table interval. TCE concentrations in soil vapor in the above water table monitoring zone fluctuated throughout 2018, notably at MW-09 and TSSV-07-PZ. In the Second Quarter, the concentration of TCE in MW-09 was 1,100 milligrams per cubic meter (mg/m^3), while in the Fourth Quarter the concentration decreased to 1.6 mg/m^3. At TSSV-07-PZ, the TCE concentration in the Second Quarter was 27 mg/m^3, while in the Fourth Quarter it increased to 810 mg/m^3.

SVE System Performance. Based on the results of the SVE system performance sampling on November 14, 2018, the soil vapor treatment system captured or destroyed over 99% of extracted volatile organic compounds (VOCs), as defined by Maricopa County Air Quality Department Rule 100 Section 200.113, and over 98% of Federal Hazardous Air Pollutants, 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 37,306 pounds (lbs). During Fourth Quarter 2018, the SVE system removed 3,435 lbs of VOCs, which is equivalent to a daily mass removal rate of approximately 38 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 fourth calendar quarter of 2018 (October through December 2018) and presents an annual review of data collected at the site in 2018.

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:

- Maricopa County collected quarterly groundwater levels between November 15 and 28, 2018.
- Maricopa County collected quarterly groundwater samples between November 15 and 28, 2018.
- Xenco Laboratories, an environmental laboratory certified by the Arizona Department of Health Services (ADHS) (certification number AZ0757), analyzed the groundwater samples.
- Maricopa County collected quarterly soil vapor samples on December 10 through December 14, December 19, and December 20, 2018.
- Airtech Environmental Laboratories (AEL), an environmental laboratory certified by the ADHS (certification number AZ0740), analyzed the soil vapor samples for volatile organic compounds (VOCs) in air by United States Environmental Protection Agency (EPA) Method TO-15.
- Maricopa County collected monthly SVE system performance samples on October 17, November 14, and December 19, 2018.
- 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 December 14, 2018.
- The SVE system operated in the Fourth Quarter 2018 from October 1 to December 21, 2018, with intermittent manual shut-downs to ensure required system efficiencies were maintained.

- Maricopa County completed the following activities with regards to the design, permitting, and construction of the Groundwater Treatment System (GWTS):
  - Reviewed material and equipment submittals from the Phase 1 construction subcontractor;
  - Pre-construction meeting with the Phase 1 construction subcontractor and Arizona Public Service (APS) to discuss electrical service construction;
  - Developed a technical memorandum documenting applicability of the US Army Corps of Engineers Nationwide Permit No. 12 to GWTS construction in the wash south of the landfill; and
  - Submitted structural plans for Phase 3 injection well site perimeter wall and landscaping and plant salvage plans to City of Phoenix Planning and Development.
- Maricopa County advanced the Summer 2018 Drilling Program through completion of the following activities:
  - Oversight of borehole drilling and construction of MW-11 on the Sonoran Preserve and MW-13 in the center of the Old Landfill property;
  - Extended work hours permitting for MW-11 on the Sonoran Preserve;
  - Borehole video logging of MW-11 and MW-12 east of the landfill;
  - Geophysical logging of MW-11;
  - Demobilization activities following completion of well drilling and installation; and
  - Initiation of the 2018 Well Completion Report documenting well installation activities in 2018.
- Maricopa County completed the following activities supporting the construction, drilling, and testing of IW-01, located on City of Phoenix (COP) property on Sleepy Ranch Road:
  - Distributed an updated community notice flyer (**Appendix A**) notifying residents that the start of drilling IW-01 was postponed until January 2019 due to a conflict with driller start dates.

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 including the postponement of the injection well drilling program until May 2019 (see Section 4.2). The revised schedule projects that routine GWTS operations will begin in mid-2020.

3.0 DATA COLLECTED DURING THE REPORTING PERIOD

3.1 Groundwater Elevations

On behalf of Maricopa County, Wood collected quarterly groundwater levels on November 15 through November 28, 2018. 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 also shown in **Figure 2**. During the reporting period, the direction of groundwater flow was 176.7 degrees from north with a gradient of 0.002 feet per foot (ft/ft). In previous quarters, the groundwater elevation at TSSV-04-PZ has appeared anomalously low and has not been used in flow direction and gradient calculations or contouring of the water table surface. For this quarter, 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. The basis for this approach is discussed further in Section 4.1.

3.2 Groundwater Quality Monitoring

Maricopa County conducts groundwater quality monitoring at the 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). Based on correspondence with ADEQ, Maricopa County is also evaluating quarterly samples for naphthalene, a 40 CFR 258 Appendix II constituent, at compliance wells (i.e., MW-02, MW-03, MW-04, MW-05, MW-06, MW-07, MW-08, and PW) to assess its presence at the site (email communication with ADEQ, 2017). The naphthalene samples are analyzed using EPA Method 8270C SIM, which allows for a lower laboratory reporting limit than analysis with EPA Method 8260B. Evaluation of naphthalene using EPA Method 8270C SIM began in the Third Quarter of 2017 and is scheduled to end during the Fourth Quarter of 2018, with ADEQ concurrence. In addition to the evaluation of organic constituents, Maricopa County also samples compliance wells semi-annually for 40 CFR 258 Appendix I inorganic constituents (i.e., metals) and general chemistry parameters.

Wood, on behalf of Maricopa County, collected quarterly groundwater samples on November 15 through November 28, 2018. In addition to the compliance wells noted above, the following site wells were also sampled: EW-01, MW-09, MW-10, TSSV-02-PZ, TSSV-03-PZ, TSSV-04-PZ, TSSV-05-PZ, TSSV-06-PZ, and TSSV-07-PZ. Newly installed monitor wells MW-11, MW-12, MW-13 were sampled December 21, 2018 for the same parameters as the November 2018 sampling event but at three depth intervals: 15 feet below the water table (ft bwt), 40 ft bwt, and approximately 10 feet above the bottom of the well. All groundwater samples in the Fourth Quarter 2018 were collected using passive sampling devices (i.e., passive diffusion bags [PDBs]). The sampling devices were deployed in August of 2018 during the Third Quarter 2018 groundwater sampling event with the exception of the PDBs in MW-11, MW-12, and MW-13, which were deployed on November 28, 2018.

Xenco analyzed the groundwater samples for VOCs in water by EPA Method 8260. Samples collected from the compliance wells were additionally analyzed for naphthalene by EPA Method 8270C SIM. Due to laboratory errors associated with holiday hours, instrument malfunctions, and staffing issues, select samples were analyzed after the holding time specified in the analytical method. The sample analysis dates are documented in the associated analytical reports (Xenco Report Numbers 605975 and 605620 in **Appendix B**) and the impacted sample results are qualified with an "H1" qualifier. Based on a comparison of qualified data to historical results, Fourth Quarter 2018 groundwater data are consistent with previous results and usable for evaluation of long-term trends in VOC concentrations in groundwater at the site. Based on Xenco's performance during the reporting period, Pace Analytical Laboratories will analyze samples collected in the First Quarter 2019. Wood will conduct another review of consistency with historical results after transitioning to the new laboratory.

Laboratory results of analyses for samples collected during the reporting period are included in **Appendix B**.

Groundwater analytical results for 2018, including the Fourth Quarter, are presented in **Tables 3**, **4**, and **5**. 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 December 10 through 14, December 19, and December 20, 2018.

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 Fourth Quarter 2018 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 B**.

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. During the reporting period, the system continuously extracted vapor from SVE-03 and SVE-04 from October 1 to December 21, 2018 with a short manual shutdown from November 19 through November 26, 2018. Other system shutdowns during this time were of shorter duration and a result of manual shutdowns in advance of granular activated carbon (GAC) vessel changeouts. The Carbon Adsorption System (CAS) treated the extracted vapor under pressurized flow (**Figure 8**).

The CAS consists of three 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.

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

- October 3, 2018
- October 12, 2018
- October 19, 2018
- October 24, 2018
- October 31, 2018
- November 7, 2018
- November 14, 2018
- November 19, 2018
- December 3, 2018
- December 12, 2018
- December 19, 2018

No Hydrosil change-out occurred in Fourth Quarter 2018.

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 October 17 and December 19, 2018 and the monthly and quarterly performance sample on November 14, 2018. 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 B**.

4.0 DISCUSSION OF COLLECTED DATA

4.1 Groundwater Elevations

Groundwater elevations measured in Fourth Quarter of 2018 at the site were comparable to measurements from recent quarters and overall groundwater elevations in 2018 appear to be stable (**Table 2**). The groundwater flow direction continues to be nearly due south (averaging 177 degrees from north) and the gradient is steady at 0.002 ft/ft.

The installation of MW-11, MW-12, and MW-13 provided new information relevant to the interpretation of groundwater levels at the site. In previous quarters, the groundwater elevation at piezometer TSSV-04-PZ has appeared anomalously low, and as such has been excluded from the calculation of groundwater flow direction and gradient. Although not excluded from past calculations, groundwater elevations measured at TSSV-07-PZ, TSSV-06-PZ, and TSSV-02-PZ have not been entirely consistent with the understanding of generalized groundwater flow at the site, in that elevations at TSSV-02-PZ, are one-tenth to one-half of a foot higher than elevations at TSSV-07-PZ and TSSV-06-PZ, which are located upgradient of TSSV-02-PZ. This anomaly is likely attributable to variations in construction in these two- to three-inch diameter piezometers installed more than 700 ft below ground surface (bgs). With the addition of MW-11, MW-12, and MW-13 to the south, east, and north of the defined plume, respectively, groundwater flow direction and gradient can be inferred without including measurements from the TSSV piezometers. This interpretation is presented in **Figure 2** and **Sheet 1**.

4.2 Groundwater Quality

Vicinity of the New Landfill. Analytical results from Fourth Quarter 2018 indicate that the highest concentrations of TCE in groundwater were associated with monitoring locations TSSV-03-PZ (270 micrograms per liter [µg/L]) and MW-10 (350 µg/L) which are located in the southern portion of the New Landfill and to the west of the New Landfill, respectively. While concentrations of TCE at MW-10 have remained relatively stable throughout 2018, TCE concentrations at TSSV-03-PZ have declined from a peak concentration observed in the fourth quarter of 2017 (1,100 µg/L), suggesting that the higher concentrations previously observed at this well may have migrated to the south with groundwater flow. The TCE concentration in the sample collected from MW-02, 1,200 feet downgradient of TSSV-03-PZ, was 97 µg/L during Fourth Quarter 2018, which is comparable to the First, Second, and Third Quarter 2018 concentrations of 130, 87, and 87 µg/L, respectively. These data indicate that if elevated concentrations at

TSSV-03-PZ have migrated to the south with groundwater flow, they have not been observed at MW-02 to date.

Vicinity of the Old Landfill. The concentrations of TCE in the original and duplicate samples collected from MW-08 were 140 and 130 µg/L, respectively. These results are comparable to concentrations observed since Third Quarter 2017, when groundwater concentrations of TCE were first noted to be increasing at MW-08 (**Sheet 1**). During the reporting period, the concentration of TCE in the original and duplicate samples collected from TSSV-07-PZ were 1.3 and 1.1 µg/L, respectively, providing definition on the western boundary of the groundwater TCE plume observed at the Old Landfill. New monitoring well MW-13 was sampled for the first time during Fourth Quarter 2018 and analytical results show that concentrations of TCE range from 11 µg/L at 15 ft bwt to 4.5 and 4.1 µg/L at the lower two intervals. The results from MW-08, TSSV-07-PZ, and MW-13 indicate that the highest concentrations of TCE in groundwater in this portion of the site underlie the southeastern portion of the Old Landfill.

Downgradient of the Property Boundary. TCE is present above the Arizona Water Quality Standard (AWQS) for TCE of 5 µg/L in off-site downgradient wells MW-05 (59 µg/L), MW-07 (30 µg/L), and new monitoring well MW-11 (16 µg/L). MW-11 was installed in September and October of 2018 and was intended to delineate the downgradient extent of the TCE plume as well as possibly monitor the future mounding influence of planned GWTS injection well IW-01, which is currently sited approximately 1,000 feet down/cross-gradient of MW-11. Elevated concentrations of TCE in MW-11 prompted Maricopa County to temporarily delay the installation of IW-01 until further analysis on the potential impacts of injecting groundwater near the groundwater TCE plume can be completed.

Other Chlorinated VOCs Present in Groundwater. Co-contaminants 1,1-DCE and tetrachloroethene (PCE) have been observed in groundwater samples collected from site monitoring wells for some time. Concentrations of these co-contaminants have generally trended with the observed TCE concentrations; monitoring wells with the highest concentration of TCE have also had the highest concentrations of 1,1-DCE and PCE. In the Fourth Quarter 2018 and the previous three quarters in 2018, the highest concentrations of PCE at the site were observed in samples collected from MW-10, a well that also has relatively high concentrations of TCE. Concentrations of 1,1-DCE are lower, sitewide, compared to concentrations of PCE. In the Fourth Quarter 2018, the highest concentrations of 1,1-DCE were observed in the three samples collected at different depths from MW-13. This result is consistent with the characteristics of soil vapor observed at the Old Landfill, where 1,1-DCE concentrations in the soil vapor have tended to be higher in wells monitoring soil vapor beneath the Old Landfill compared to the New Landfill.

Naphthalene in Groundwater. Maricopa County completed five rounds of sampling for naphthalene per EPA Method 8270C SIM (Third Quarter 2017, First Quarter 2018, Second Quarter 2018, Third Quarter 2018, and Fourth Quarter 2018) to further evaluate the presence of this contaminant in groundwater after it was detected at a concentration of 0.26 µg/L in a sample collected from MW-02 in May 2017. During these subsequent monitoring rounds, naphthalene was not detected at concentrations that exceeded the laboratory reporting limit (RL) which was routinely 0.0005 µg/L on non-diluted samples. At select locations, the analytical laboratory did detect estimated concentrations of naphthalene at concentrations that were less than the RL; these results have been summarized in quarterly report analytical tables and flagged as such in the analytical reports. On the basis that low-level analysis of groundwater samples for naphthalene indicate that this contaminant is not present in groundwater at the site, Maricopa County proposes that no further sampling for naphthalene per EPA Method 8270C SIM is necessary. Naphthalene would continue to be included in the list of constituents analyzed for via EPA Method 8260B.

4.3 Soil Vapor

The analytical results from the Fourth Quarter 2018 indicate that TCE concentrations in soil vapor samples collected from the shallow and middle zones were relatively low, with the highest concentrations observed in wells monitoring soil vapor in the vicinity of the transfer station. In the shallow zone, the highest concentrations were 11 and 12 milligrams per cubic meter (mg/m^3) in SVE-01-S and TSSV-01-S, respectively (**Figure 3**). In the middle zone, the highest concentrations were 16 and 24 mg/m^3 in TSSV-06-M and TSSV-01-M, respectively (**Figure 4**).

Concentrations of TCE in the deep and above water table zones were generally one to two orders of magnitude higher than those observed in the shallow and middle zones. Analytical results from the Fourth Quarter 2018 indicate that the highest concentrations of TCE were associated with wells monitoring soil vapor in the vicinity of the southwest corner of the Old Landfill. The highest concentrations in the deep zone (**Figure 5**) were 470 and 520 mg/m^3 from the original and duplicate samples collected from TSSV-07-D and 330 mg/m^3 from SVE-04. The highest concentration observed in the above water table zone (**Figure 6**) was 810 mg/m^3 at TSSV-07-PZ.

In general, the TCE concentrations in all soil vapor monitoring intervals display considerable variability between sampling events. Compared to the previous quarter, TCE concentrations in soil vapor decreased in the shallow, middle, and deep monitoring intervals and increased in the above water table interval. However, trends are apparent and TCE concentrations in the shallow, middle, and deep zones tended to decline throughout 2018. In the deep zone, TCE concentration decreases are likely attributable to the SVE system successfully remediating the target treatment area. TCE concentrations in soil vapor in the above water table zone fluctuated throughout 2018, specifically at MW-09 and TSSV-07-PZ. In the Second Quarter, the concentration of TCE in MW-09 was 1,100 mg/m^3, while in the Fourth Quarter the concentration decreased to 1.6 and 1.4 mg/m^3 in the original and duplicate samples, respectively. At TSSV-07-PZ, the TCE concentration in the Second Quarter was 27 mg/m^3, while in the Fourth Quarter it increased to 810 mg/m^3. These fluctuations could be associated with sample representativeness and will be further assessed as more data are collected.

1,1-DCE is frequently observed in soil vapor samples collected from wells in and near the Old Landfill (**Figure 7**). As in previous quarters in 2018, the highest concentrations of 1,1-DCE in the soil vapor in the Fourth Quarter occurred in the deep zone at SVE-04 and in original and duplicate samples from TSSV-07-D (240 mg/m^3 and 120/120 mg/m^3, respectively). The deep vapor sample collected from MW-13, installed in the middle of the Old Landfill, had a 1,1-DCE concentration of 2.7 mg/m^3, suggesting that elevated concentrations of 1,1-DCE may not be present in the central portion of the Old Landfill. The concentrations of 1,1-DCE observed at the other wells that were sampled were less than 10 mg/m^3 and in many cases were below the laboratory reporting limit. This is consistent with observations from samples from previous quarters.

4.4 SVE System Performance

Based on the results of SVE system performance sampling, the CAS captured or destroyed over 99% of extracted VOCs, as defined by Maricopa County Air Quality Department Rule 100 Section 200.113, and 98% of Federal Hazardous Air Pollutants (HAPs) during the Fourth Quarter 2018. It is notable that there has been an increase in HAPs emissions since late 2017. This is attributed to increasing influent methylene chloride concentrations associated with extraction from SVE-04. The 12-month rolling total HAPs emissions for 2018 was 3,289 pounds (lbs), approximately 47% of the emission limit of 6,979 lbs. Maricopa County continues

to monitor these increases closely and will re-evaluate the SVE system operating strategy if necessary to control the emissions and comply with the terms of the air quality permit.

The calculated total mass removed on a monthly basis from the vadose zone in 2018 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 3,435 lbs of VOCs over a time period of 91 days, which is equivalent to a daily mass extraction rate of approximately 38 lbs per day. Since operations began on September 15, 2015, the calculated total mass of VOCs removed through December 19, 2018 is 37,306 lbs. The cumulative mass of VOCs removed since SVE system start up is presented in **Figure 9**. Also shown in **Figure 9** is the estimated mass removed per month, normalized by dividing by the calculated mass by the instantaneous system flow rate observed during performance testing that month. In general, the normalized mass removed per month has steadily decreased as the SVE system removes more mass from the subsurface.

The SVE System operated for 73% of the time in 2018 including an 81% up time in the Fourth Quarter 2018. 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 vessel order in the CAS. 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 First Quarter of 2019 and listed in Section 2.0, upcoming activities scheduled through the Second Quarter of 2019 include:

- Maricopa County and Wood will meet with ADEQ to discuss groundwater monitoring results from MW-11 and present proposed modifications to the injection well installation schedule so that analysis of injection impacts on the groundwater TCE plume can be conducted. IW-01 well installation is currently scheduled to begin in May 2019.
- Continued operation of the SVE system for source control.
- Maricopa County will complete the 2018 Well Installation Report documenting the drilling and construction of new monitoring wells MW11, MW-12, and MW-13.
- Maricopa County will prepare an Old Landfill Site Characterization Work Plan to investigate elevated TCE concentrations in groundwater at MW-8. The Site Characterization Work Plan will rely on data collected during the installation and sampling of new wells MW-12 and MW-13, as well as other site data.
- Maricopa County will continue to advance the design, permitting, and construction of the GWTS with the following activities:
  - Begin Phase 1 construction;
  - Initiate design modifications to plans for Phase 2 based on COP input, as needed;
  - Coordinate for plant salvage prior to Phase 3 wall construction; and
  - Solicit bids for implementation of Phase 3 landscape design following wall construction.

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.

Email communication with ADEQ, 2017. *Plan to Further Evaluate Naphthalene at Cave Creek Landfill.* From Natalie Chrisman Lazarr, PE, Project Manager with Wood, to Richard Olm, PE, Senior Environmental Engineer with ADEQ. Dated June 30, 2017.

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	1,850.9	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	-	-	-
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	-	-	-

Table 1. Well Construction Summary

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-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	-	-	-
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	-	-	-

Table 1. Well Construction Summary

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-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	-	-	-
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	-	-	-

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-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)
EW-01	1156.53	1156.65	1156.66	1156.63
PW	1162.96	1162.96	1162.91	1162.73
MW-02	1156.62	1156.78	1156.80	1156.79
MW-03	1157.50	1157.50	1157.66	1157.71
MW-04	1156.23	1156.30	1156.31	1156.39
MW-05	1155.78	1155.98	1156.04	1155.94
MW-06	1154.98	1155.21	1155.15	1155.21
MW-07	1156.18	1156.31	1156.29	1156.40
MW-08	1162.59	1162.58	1162.60	1162.47
MW-09	1161.44	1161.62	1161.45	1161.30
MW-10	1158.34	1158.47	1158.46	1158.40
MW-11	NM	NM	NM	1154.12
MW-12	NM	NM	NM	1158.69
MW-13	NM	NM	NM	1163.27
TSSV-02-PZ	1162.69	1162.69	1162.66	1162.69
TSSV-03-PZ	1158.04	1158.04	1158.04	1157.87
TSSV-04-PZ*	1160.84	1160.86	1160.65	1160.60
TSSV-05-PZ	1160.51	1160.54	1160.37	1160.34
TSSV-06-PZ	1162.52	1162.73	1162.64	1162.52
TSSV-07-PZ	1162.49	1162.62	1162.35	1162.04
Gradient (ft/ft)	0.002	0.002	0.002	0.002
Flow Direction (deg. from N)	177.8	176.2	177.5	176.7

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
* = Inconsistent measurement (not used in gradient or flow direction calculations)

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																			
	2/13/2018	1,142.5	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	1.2	<5	1.4	<2	<0.5	20	<0.5	- -
	5/7/2018	1,142.5	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	3.3	<0.5 E8	- -
	8/15/2018	1,114.5	µg/L	PDB	0.27 E4	0.63 E4	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<10 E8	0.67 E4	<5 E8	<5 E8	19	<2 E8	- -
	11/16/2018	1,141.5	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 N1,E8,V1	<0.5 E8	<0.5 E8	1.5	<5 E8	0.64	<2 E8	<0.5 E8	21	<0.5 N1,E8	- -
MW-02																			
	2/13/2018	1,142.0	µg/L	PDB	2.8	4.2	0.57	<1	<0.5	<0.5	<0.5	4.9	<0.005 E8	4.9	<2	<0.5	130 D2	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	2/13/2018	1,142.0	µg/L	HS	-	-	-	-	-	-	-	-	<0.005 E8	-	-	-	-	-	Analytical method for Naphthalene is PAHs by 8270C SIM
	5/7/2018	1,142.0	µg/L	PDB	1.4	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	2.3	<5 E8	1.8	<2 E8	<0.5 E8	87 M3	<0.5 E8	- -
	8/15/2018	1,142.0	µg/L	PDB	3.6	<0.5 E8	0.53	<1 E8	<0.5 E8	<0.5 E8	1.7 B1	6.4	0.052 E4	4.9	<2 E8	<0.5 E8	83	<0.5 E8	- -
	11/15/2018	1,142.0	µg/L	PDB	2.1 H1	<0.5 H1,E8	0.49 H1,E4	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	4.3 H1	<5 H1,E8	3.3 H1	0.53 H1,E4	<0.5 H1,E8	97 H1	<0.5 H1,E8	- -
MW-03																			
	2/14/2018	1,143.4	µg/L	PDB	<0.5	1.7	<0.5	<1	<0.5	<0.5	<0.5	<0.5	0.037 E4	<0.5	<2	<0.5	2.2	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	5/8/2018	1,143.4	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	1.0	<0.5 E8	- -
	8/13/2018	1,142.4	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	0.049 E4	<0.5 E8	<2 E8	<0.5 E8	2.2	<0.5 E8	Analytical method for Naphthalene is PAHs by 8270C SIM
	11/15/2018	1,143.4	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	2.5 H1	<0.5 H1,E8	- -
MW-04																			
	2/14/2018	1,141.8	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.005 E8	<0.5	<2	<0.5	<0.5	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	6/21/2018	1,141.8	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<5	0.88	<2	<0.5	4.2	<0.5	- -
	8/13/2018	1,141.8	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	0.050 E4	<0.5 E8	<2 E8	<0.5 E8	0.44 E4	<0.5 E8	Analytical method for Naphthalene is PAHs by 8270C SIM
	11/15/2018	1,141.8	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<5 H1,E8	<0.5 H1,E8	0.44 H1,E4	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	- -
MW-05																			
	2/13/2018	1,141.1	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.005 E8	1.2	<2	<0.5	33	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	5/9/2018	1,141.1	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	31	<0.5 E8	- -
	8/14/2018	1,141.1	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	0.034 E4	0.40 E4	<2 E8	<0.5 E8	42	<0.5 E8	Analytical method for Naphthalene is PAHs by 8270C SIM
	11/15/2018	1,141.1	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	0.49 H1,E4	<5 H1,E8	0.41 H1,E4	<2 H1,E8	<0.5 H1,E8	59 H1	<0.5 H1,E8	- -
AWQS:					**N/A**	**7**	**5**	**80**	**N/A**	**100**	**80**	**70**	**N/A**	**5**	**1,000**	**100**	**5**	**2**	

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-06																			
	2/14/2018	1,140.7	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.005 E8	1.0	<2	<0.5	1.6	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	5/8/2018	1,140.7	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	0.43 E4	<0.5 E8	- -
	8/13/2018	1,140.7	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	0.035 E4	<0.5 E8	<2 E8	<0.5 E8	1.1	<0.5 E8	Analytical method for Naphthalene is PAHs by 8270C SIM
	11/15/2018	1,139.7	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	0.93 H1	<0.5 H1,E8	- -
MW-07																			
	2/14/2018	1,141.6	µg/L	PDB	<0.5	1.8	<0.5	<1	<0.5	<0.5	<0.5	0.92	0.032 E4	1.6	<2	<0.5	37	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	5/8/2018	1,141.6	µg/L	PDB	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<25 D1,E8	<2.5 D1,E8	<10 D1,E8	<2.5 D1,E8	31 D2	<2.5 D1,E8	- -
	8/13/2018	1,141.6	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	2.5	0.026 E4	0.71	<2 E8	<0.5 E8	36	<0.5 E8	Analytical method for Naphthalene is PAHs by 8270C SIM
	11/15/2018	1,141.6	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	0.97 H1	<5 H1,E8	0.45 H1,E4	<2 H1,E8	<0.5 H1,E8	30 H1	<0.5 H1,E8	- -
MW-08																			
	2/16/2018	1,148.1	µg/L	PDB	1.8	7.0	<0.5	<1	<0.5	<0.5	<0.5	1.1	0.031 E4	2.3	<2	<0.5	150 D2	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	2/16/2018	1,148.1	µg/L	PDB	1.8	7.1	<0.5	<1	<0.5	<0.5	<0.5	1.1	0.036 E4	2.6	<2	<0.5	140 D2	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	5/7/2018	1,148.1	µg/L	PDB	<5 D1,E8	<5 D1,E8	<5 D1,E8	<10 D1,E8	<5 D1,E8	<5 D1,E8	<5 D1,E8	<5 D1,E8	<50 D1,E8	<5 D1,E8	<20 D1,E8	<5 D1,E8	150 D2	<5 D1,E8	- -
	5/7/2018	1,148.1	µg/L	PDB	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<25 D1,E8	<2.5 D1,E8	<10 D1,E8	<2.5 D1,E8	150 D2	<2.5 D1,E8	Duplicate
	8/14/2018	1,147.1	µg/L	PDB	1.6	<0.5 E8	0.67	<1 E8	<0.5 E8	<0.5 E8	1.6 B1	2.6	0.039 E4	1.7	<2 E8	<0.5 E8	130 D2	<0.5 E8	Duplicate
	8/14/2018	1,147.1	µg/L	PDB	1.7	<0.5 E8	0.69	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	2.6	0.033 E4	1.5	<2 E8	<0.5 E8	130 D2	<0.5 E8	Analytical method for Naphthalene is PAHs by 8270C SIM
	11/15/2018	1,147.1	µg/L	PDB	1.7 H1	<0.5 H1,E8	0.61 H1	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	0.93 H1	<5 H1,E8	1.2 H1	<2 H1,E8	<0.5 H1,E8	130 H1,D2	<0.5 H1,E8	Duplicate
	11/15/2018	1,147.1	µg/L	PDB	1.6 H1	<0.5 H1,E8	0.58 H1	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	0.90 H1	<5 H1,E8	1.1 H1	<2 H1,E8	<0.5 H1,E8	140 H1,D2	<0.5 H1,E8	- -
MW-09																			
	2/14/2018	1,146.8	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<5	1.1	<2	<0.5	7.4	<0.5	- -
	5/9/2018	1,146.8	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	17	<0.5 E8	- -
	8/14/2018	1,146.8	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	1.6 B1	2.8	<5 E8	0.65	<2 E8	<0.5 E8	18	<0.5 E8	- -
	11/16/2018	1,146.8	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 N1,E8,V1	<0.5 E8	<0.5 E8	0.64	<5 E8	0.50 E4	<2 E8	<0.5 E8	26	<0.5 N1,E8	- -
MW-10																			
	2/13/2018	1,144.3	µg/L	PDB	0.99	7.1	<0.5	<1	<0.5	<0.5	1.8	23	<5	9.0	<2	<0.5	380 D2	<0.5	- -
	5/9/2018	1,144.3	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	0.71	17	<5 E8	7.3	<2 E8	<0.5 E8	300 D2	<0.5 E8	- -
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-10																			
	8/14/2018	1,144.3	µg/L	PDB	1.8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	3.2 B1	27	<5 E8	9.2	<2 E8	<0.5 E8	350 D2	0.65	- -
	11/16/2018	1,143.3	µg/L	PDB	<5 D1,E8	<5 D1,E8	<5 D1,E8	<10 D1,E8	<5 N1,V1,E8	<5 D1,E8	4.4 E4,D2	22 D2	<50 D1,E8	10 D2	<20 D1,E8	<5 D1,E8	350 D2	<5 D1,N1,E8	- -
MW-11																			
	12/21/2018	1,130.8	µg/L	PDB	<5 E8	0.64 E4	<5 E8	<5 E8	<5 E8	<5 E8	0.32 E4	<5 E8	<10 E8	0.46 E4	<5 E8	<5 E8	16	<2 E8	Duplicate
	12/21/2018	1,130.8	µg/L	PDB	<5 E8	0.62 E4	<5 E8	<5 E8	<5 E8	<5 E8	0.31 E4	<5 E8	<10 E8	0.47 E4	<5 E8	<5 E8	16	<2 E8	- -
	12/21/2018	1,105.8	µg/L	PDB	<5 E8	0.63 E4	<5 E8	<5 E8	<5 E8	<5 E8	0.22 E4	<5 E8	<10 E8	0.53 E4	<5 E8	<5 E8	16	<2 E8	- -
	12/21/2018	1,084.8	µg/L	PDB	<5 E8	0.64 E4	<5 E8	<5 E8	<5 E8	<5 E8	0.20 E4	<5 E8	<10 E8	0.52 E4	<5 E8	<5 E8	16	<2 E8	- -
MW-12																			
	12/21/2018	1,143.2	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<10 E8	<5 E8	<5 E8	<5 E8	2.4 E4	<2 E8	- -
	12/21/2018	1,118.2	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<10 E8	<5 E8	<5 E8	<5 E8	1.7 E4	<2 E8	- -
	12/21/2018	1,103.2	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<10 E8	<5 E8	<5 E8	<5 E8	1.4 E4	<2 E8	- -
MW-13																			
	12/21/2018	1,148.7	µg/L	PDB	0.29 E4	5.8	<5 E8	<5 E8	<5 E8	<5 E8	0.40 E4	1.0 E4	<10 E8	3.2 E4	<5 E8	<5 E8	11	<2 E8	- -
	12/21/2018	1,128.7	µg/L	PDB	<5 E8	2.3 E4	<5 E8	<5 E8	<5 E8	<5 E8	0.30 E4	0.33 E4	<10 E8	0.99 E4	<5 E8	<5 E8	4.5 E4	<2 E8	- -
	12/21/2018	1,113.7	µg/L	PDB	<5 E8	2.0 E4	<5 E8	<5 E8	<5 E8	<5 E8	0.34 E4	0.25 E4	<10 E8	1.1 E4	<5 E8	<5 E8	4.1 E4	<2 E8	- -
PW																			
	2/16/2018	1,149.0	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	0.031 E4	<0.5	<2	<0.5	1.1	<0.5	Analytical method for Naphthalene is PAHs by 8270C SIM
	5/10/2018	1,148.0	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	17	<0.5 E8	- -
	8/15/2018	1,148.0	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	0.79 E4	0.034 E4	<5 E8	<5 E8	<5 E8	10	<2 E8	- -
	11/15/2018	1,148.0	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	2.3 H1	<0.5 H1,E8	- -
TSSV-02-PZ																			
	2/15/2018	1,148.2	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<2	<0.5	<0.5	<0.5	- -
	5/9/2018	1,148.2	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	<0.5 E8	<0.5 E8	- -
	8/15/2018	1,147.2	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<10 E8	<5 E8	<5 E8	<5 E8	<5 E8	<2 E8	- -
	11/19/2018	1,147.2	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,N1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	- -
AWQS:					**N/A**	**7**	**5**	**80**	**N/A**	**100**	**80**	**70**	**N/A**	**5**	**1,000**	**100**	**5**	**2**	

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
TSSV-03-PZ																			
	2/15/2018	1,144.7	µg/L	PDB	2.7	5.7	<0.5	<1	<0.5	<0.5	0.72	18	<5	8.7	<2	<0.5	660 D2	<0.5	Duplicate
	2/15/2018	1,144.7	µg/L	PDB	3.1	6.5	<0.5	<1	<0.5	<0.5	0.84	19	<5	8.8	<2	<0.5	670 D2	<0.5	- -
	5/9/2018	1,144.7	µg/L	PDB	0.83	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	11	<5 E8	5.5	<2 E8	<0.5 E8	400 D2	<0.5 E8	Duplicate
	5/9/2018	1,144.7	µg/L	PDB	0.90	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	11	<5 E8	5.2	<2 E8	<0.5 E8	440 D2	<0.5 E8	- -
	8/15/2018	1,142.7	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	0.49 E4	11	<10 E8	5.8	<5 E8	<5 E8	260 D2	<2 E8	Duplicate
	8/15/2018	1,142.7	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	0.58 E4	12	<10 E8	5.7	<5 E8	<5 E8	300 D2	<2 E8	- -
	11/19/2018	1,142.7	µg/L	PDB	1.3 H1	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,N1,E8	<0.5 H1,E8	0.40 H1,E4	9.8 H1	<5 H1,E8	3.3 H1	<2 H1,E8	<0.5 H1,E8	260 H1,D2	<0.5 H1,E8	Duplicate
	11/19/2018	1,142.7	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,N1,E8	<0.5 H1,E8	0.51 H1	12 H1	<5 H1,E8	3.4 H1	<2 H1,E8	<0.5 H1,E8	270 H1,D2	<0.5 H1,E8	- -
TSSV-04-PZ																			
	2/15/2018	1,146.0	µg/L	PDB	<0.5	2.8	<0.5	<1	<0.5	<0.5	<0.5	4.7	<5	3.4	<2	<0.5	60	<0.5	- -
	5/8/2018	1,146.0	µg/L	PDB	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<2.5 D1,E8	<25 D1,E8	<2.5 D1,E8	<10 D1,E8	<2.5 D1,E8	55 D2	<2.5 D1,E8	- -
	8/15/2018	1,146.0	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	0.35 E4	<5 E8	<10 E8	<5 E8	<5 E8	<5 E8	62	<2 E8	- -
	11/20/2018	1,146.0	µg/L	PDB	<5 H1,E8	3.6 H1,E4	<5 H1,E8	<5 H1,E8	<5 H1,E8	<5 H1,E8	0.45 H1,E4	7.3 H1	<10 H1,E8	4.2 H1,E4	<5 H1,E8	<5 H1,E8	84 H1	<2 H1,E8	- -
TSSV-05-PZ																			
	2/15/2018	1,145.7	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	0.92	<5	1.1	<2	<0.5	4.8	<0.5	- -
	5/9/2018	1,145.7	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	4.0	<0.5 E8	- -
	8/15/2018	1,145.7	µg/L	PDB	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	<5 E8	0.78 E4	<10 E8	<5 E8	<5 E8	<5 E8	<5 E8	<2 E8	- -
	11/19/2018	1,145.7	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,N1,E8	<0.5 H1,E8	<0.5 H1,E8	0.88 H1	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	4.1 H1	<0.5 H1,E8	- -
TSSV-06-PZ																			
	2/13/2018	1,147.9	µg/L	PDB	<0.5	1.9	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<5	2.7	<2	<0.5	14	<0.5	- -
	5/7/2018	1,147.9	µg/L	PDB	<5 D1,E8	<5 D1,E8	<5 D1,E8	<10 D1,E8	<5 D1,E8	<5 D1,E8	<5 D1,E8	<5 D1,E8	<50 D1,E8	<5 D1,E8	<20 D1,E8	<5 D1,E8	5.2 D2	<5 D1,E8	- -
	8/14/2018	1,147.9	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	1.6	<2 E8	<0.5 E8	7.0	<0.5 E8	- -
	11/19/2018	1,147.9	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,N1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<5 H1,E8	1.4 H1	<2 H1,E8	<0.5 H1,E8	9.5 H1	<0.5 H1,E8	- -
TSSV-07-PZ																			
	2/15/2018	1,147.9	µg/L	PDB	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<2	<0.5	0.89	<0.5	- -
	5/8/2018	1,147.9	µg/L	PDB	<0.5 E8	<0.5 E8	<0.5 E8	<1 E8	<0.5 E8	<0.5 E8	<0.5 E8	<0.5 E8	<5 E8	<0.5 E8	<2 E8	<0.5 E8	<0.5 E8	<0.5 E8	- -
AWQS:					**N/A**	**7**	**5**	**80**	**N/A**	**100**	**80**	**70**	**N/A**	**5**	**1,000**	**100**	**5**	**2**	

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
TSSV-07-PZ																			
	8/14/2018	1,147.9	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	0.79 H1	<0.5 H1,E8	- -
	11/19/2018	1,146.9	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,N1,E8	<0.5 H1,E8	<0.5 H1,E8	0.70 H1	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	1.3 H1	<0.5 H1,E8	- -
	11/19/2018	1,146.9	µg/L	PDB	<0.5 H1,E8	<0.5 H1,E8	<0.5 H1,E8	<1 H1,E8	<0.5 H1,N1,E8	<0.5 H1,E8	<0.5 H1,E8	0.66 H1	<5 H1,E8	<0.5 H1,E8	<2 H1,E8	<0.5 H1,E8	1.1 H1	<0.5 H1,E8	Duplicate
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									
	2/13/2018	1,142.0	mg/L	-	17	0.30	0.15	3.1	--
	8/15/2018	1,142.0	mg/L	350	19	<0.5	0.30	2.6	--
MW-03									
	2/14/2018	1,143.4	mg/L	-	18	0.39	0.28	<1	--
	8/13/2018	1,142.4	mg/L	160	19	<0.5	0.040 E4	0.74	--
MW-04									
	2/14/2018	1,141.8	mg/L	-	22	0.41	0.34	6.4	--
	8/13/2018	1,141.8	mg/L	230	22	<0.5	0.12	9.0	--
MW-05									
	2/13/2018	1,141.1	mg/L	-	18 M1	0.45 M1	0.27	8.8 M1	--
	8/14/2018	1,141.1	mg/L	230	19	<0.5	0.069 E4	8.9	--
MW-06									
	2/14/2018	1,140.7	mg/L	-	16	0.36	0.25	12	--
	8/13/2018	1,140.7	mg/L	240	17	<0.5	0.092	20	--
MW-07									
	2/14/2018	1,141.6	mg/L	-	19	0.35	0.32	1.4	--
	8/13/2018	1,141.6	mg/L	160	21	<0.5	0.085 E4	1.9	--
MW-08									
	2/16/2018	1,148.1	mg/L	-	21 M1	0.37 M1	0.35	1.1	Duplicate
	2/16/2018	1,148.1	mg/L	-	21	0.37	12 D2	1.1	--
	8/14/2018	1,147.1	mg/L	130	21	0.042 E4	0.15	0.77	Duplicate
	8/14/2018	1,147.1	mg/L	130	21	0.039 E4	0.20	0.59	--
AWQS:				**N/A**	**N/A**	**4**	**10**	**N/A**	

Well Name	Sample Date	Sample Elevation (ft amsl)	Units	Alkalinity, (as CaCO3)	Chloride	Fluoride	Nitrate (As N)	Sulfate	Comments
PW									
	2/16/2018	1,149.0	mg/L	-	20	0.49	1.4	16	--
	8/15/2018	1,148.0	mg/L	230	21	<0.5	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																			
	2/13/2018	1,142.0	mg/L	<0.02	<0.02	0.027	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	0.29	--
	8/15/2018	1,142.0	mg/L	<0.02 E8	<0.02 E8	0.027	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	<0.09 E8	0.20	--
MW-03																			
	2/14/2018	1,143.4	mg/L	<0.02	<0.02	0.022	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	1.7	--
	8/13/2018	1,142.4	mg/L	0.0059 E4	<0.02 E8	0.015	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	<0.09 E8	0.32	--
MW-04																			
	2/14/2018	1,141.8	mg/L	<0.02	<0.02	0.012	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	0.35	--
	8/13/2018	1,141.8	mg/L	<0.02 E8	<0.02 E8	0.0097 E4	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	0.0074 E4	<0.03 E8	<0.02 E8	0.011 E4	0.30	--
MW-05																			
	2/13/2018	1,141.1	mg/L	<0.02	<0.02	0.024	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	1.1	--
	8/14/2018	1,141.1	mg/L	<0.02 E8	<0.02 E8	0.013	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	0.0065 E4	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	0.0060 E4	0.43	--
MW-06																			
	2/14/2018	1,140.7	mg/L	<0.02	<0.02	<0.01	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	0.40	--
	8/13/2018	1,140.7	mg/L	<0.02 E8	<0.02 E8	0.0069 E4	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	<0.09 E8	0.31	--
MW-07																			
	2/14/2018	1,141.6	mg/L	<0.02	<0.02	0.010	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	0.25	--
	8/13/2018	1,141.6	mg/L	<0.02 E8	<0.02 E8	0.011	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	<0.09 E8	0.30	--
MW-08																			
	2/16/2018	1,148.1	mg/L	<0.02	<0.02	<0.01	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	0.38	Duplicate
	2/16/2018	1,148.1	mg/L	<0.02	<0.02	<0.01	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	0.29	--
	8/14/2018	1,147.1	mg/L	<0.02 E8	<0.02 E8	0.011	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	<0.09 E8	0.17	Duplicate
	8/14/2018	1,147.1	mg/L	<0.02 E8	<0.02 E8	0.013	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	<0.09 E8	0.28	--
PW																			
	2/16/2018	1,149.0	mg/L	<0.02	<0.02	<0.01	<0.004	<0.01	<0.01	<0.01	<0.02	<0.015	<0.01	<0.03	<0.03	<0.02	<0.09	0.057	--
	8/15/2018	1,148.0	mg/L	<0.02 E8	0.014 E4	0.0041 E4	<0.004	<0.01 E8	<0.01 E8	<0.01 E8	<0.02 E8	<0.015 E8	<0.01 E8	<0.03 E8	<0.03 E8	<0.02 E8	0.016 E4	0.052	--
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
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																					
	3/15/2018	1,179.2	µg/m3	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	<562	<990	827	<1,390	2,450	<1,180	53,700	<256	- -
	6/8/2018	1,179.2	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	12,000	5,110	<1,980	<2,810	<4,950	45,600	<6,940	26,200	<5,900	1,010,000	<1,280	- -
	9/6/2018	1,179.2	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	<9,930	<9,900	<9,900	<14,100	<24,800	55,500	<34,700	<33,900	<29,500	757,000	<6,400	- -
	9/6/2018	1,179.2	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	<9,930	<9,900	<9,900	<14,100	<24,800	58,600	<34,700	<33,900	<29,500	983,000	<6,400	Duplicate
	12/11/2018	1,179.2	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	<99.0	98.0	<139	<136	<118	1,650	<25.6	- -
MW-09-S																					
	3/15/2018	1,724.2	µg/m3	<238	<295	<46.0	<48.8	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	<99.0	<76.6	<139	683	<118	5,080	<25.6	- -
	6/8/2018	1,724.2	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	<4,950	<3,830	<6,940	36,100	<5,900	6,180	<1,280	- -
	9/6/2018	1,724.2	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	<562	<990	<766	<1,390	1,740	<1,180	16,200	<256	- -
	12/11/2018	1,724.2	µg/m³	<59.5	<73.8	<11.5	<12.2	<10.1	<10.1	<9.93	<9.90	<9.90	68.0	48.0	48.6	<34.7	304	<29.5	<13.4	<6.40	- -
MW-09-M																					
	3/15/2018	1,524.2	µg/m3	<23.8	<29.5	<4.60	<4.88	<4.05	<4.05	<3.97	<3.96	<3.96	8.21	<9.90	44.0	<13.9	35.5	<11.8	27.0	<2.56	- -
	6/8/2018	1,524.2	µg/m³	<2,380	<2,950	<460	<488	413	<405	<397	<396	<396	2,530	3,030	13,500	<1,390	6,440	<1,180	3,050	<256	- -
	9/6/2018	1,524.2	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	<198	<198	1,210	1,340	5,340	<694	2,260	<590	5,480	<128	- -
	12/11/2018	1,524.2	µg/m³	<119	<148	<23.0	41.0	379	<20.3	36.5	51.9	<19.8	1,130	924	2,860	576	1,300	<59.0	683	31.5	- -
MW-09-D																					
	3/15/2018	1,329.2	µg/m3	<1,190	<1,480	<230	<244	<203	<203	<199	<198	<198	472	1,070	23,400	<694	936	<590	16,400	<128	- -
	6/8/2018	1,329.2	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	<562	<990	21,500	<1,390	2,180	<1,180	19,500	<256	- -
	9/6/2018	1,329.2	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	<198	<198	<281	<495	6,110	<694	1,650	<590	8,540	<128	- -
	12/11/2018	1,329.2	µg/m³	<119	<148	<23.0	<24.4	<20.3	<20.3	<19.9	<19.8	<19.8	60.7	117	1,150	<69.4	231	<59.0	1,600	<12.8	- -
	12/11/2018	1,329.2	µg/m³	<119	<148	<23.0	<24.4	<20.3	<20.3	<19.9	<19.8	<19.8	56.8	114	1,060	<69.4	193	<59.0	1,440	<12.8	Duplicate
MW-10																					
	3/15/2018	1,177.4	µg/m3	<2,380	<2,950	<460	<488	2,120	<405	397	<396	<396	6,860	9,210	1,650	<1,390	2,520	<1,180	6,710	-	- -

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-10																					
	6/6/2018	1,177.4	µg/m³	<2,380	<2,950	<460	<488	5,670	<405	2,050	<396	<396	14,900	22,700	3,370	<1,390	3,270	<1,180	10,900	<256	--
	9/5/2018	1,177.4	µg/m³	<2,380	<2,950	<460	<488	3,270	<405	<397	<396	<396	6,860	10,700	1,590	<1,390	7,120	<1,180	22,300	<256	--
	12/10/2018	1,177.4	µg/m³	<23.8	<29.5	<4.60	<4.88	25.5	<4.05	4.21	<3.96	<3.96	20.7	29.8	<7.66	<13.9	29.7	<11.8	82.1	<2.56	--
MW-10-S																					
	3/19/2018	1,727.4	µg/m3	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	6,130	14,600	2,110	<1,390	1,450	<1,180	<537	<256	--
	6/6/2018	1,727.4	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	8,090	28,500	2,500	<1,390	3,170	<1,180	580	<256	--
	9/5/2018	1,727.4	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	5,100	16,000	1,390	<1,390	3,130	<1,180	2,090	<256	--
	12/10/2018	1,727.4	µg/m³	<238	<295	<46.0	<48.8	85.1	<40.5	<39.7	<39.6	<39.6	2,430	9,060	542	<139	2,040	<118	<53.7	<25.6	--
MW-10-M																					
	3/19/2018	1,527.4	µg/m3	<5,950	<7,380	<1,150	<1,220	3,100	<1,010	1,050	<990	<990	10,300	25,200	2,990	<3,470	3,730	<2,950	<1,340	<640	--
	6/6/2018	1,527.4	µg/m³	<2,380	<2,950	<460	<488	2,800	<405	1,560	491	<396	10,100	35,900	2,510	2,220	5,440	<1,180	1,050	<256	--
	9/5/2018	1,527.4	µg/m³	<2,380	<2,950	<460	<488	3,400	<405	1,320	539	<396	12,500	36,800	2,990	1,740	5,030	<1,180	1,460	<256	--
	12/10/2018	1,527.4	µg/m³	<2,380	<2,950	<460	<488	3,140	<405	1,730	<396	<396	14,300	38,500	2,560	1,850	5,570	<1,180	881	<256	--
MW-10-D																					
	3/19/2018	1,327.4	µg/m3	<238	<295	<46.0	<48.8	360	<40.5	50.8	<39.6	<39.6	566	1,080	116	<139	578	<118	359	<25.6	--
	6/6/2018	1,327.4	µg/m³	<2,380	<2,950	<460	<488	7,450	<405	1,560	<396	<396	13,000	31,100	2,410	<1,390	7,590	<1,180	4,510	<256	--
	9/5/2018	1,327.4	µg/m³	<2,380	<2,950	<460	<488	11,600	<405	1,270	<396	<396	14,300	34,500	2,600	<1,390	9,970	<1,180	5,690	<256	--
	12/10/2018	1,327.4	µg/m³	<2,380	<2,950	<460	<488	12,000	<405	1,910	<396	<396	15,100	36,200	2,180	2,000	7,590	<1,180	3,560	<256	--
PW																					
	3/26/2018	1,201.4	µg/m³	<2,380	<2,950	708	<488	<405	<405	794	950	<396	<562	<990	3,520	<1,390	6,350	<1,180	37,100	<256	--
	6/20/2018	1,201.4	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	246	<198	<281	<495	620	<694	881	<590	13,200	<128	--
	9/12/2018	1,201.4	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	372	<198	<281	<495	758	<694	1,240	<590	16,700	<128	--
	12/19/2018	1,201.4	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	<198	<198	<281	<495	1,090	<694	1,020	<590	9,080	<128	--

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-01																					
	3/26/2018	1,762.1	µg/m³	<476	<590	304	117	<81.0	<81.0	<79.4	101	<79.2	178	<198	386	<278	616	<236	5,910	<51.2	--
	6/20/2018	1,762.1	µg/m³	<1,190	<1,480	8,370	307	<203	<203	508	1,400	<198	<281	<495	1,290	<694	2,810	<590	19,300	<128	--
	9/12/2018	1,762.1	µg/m³	<1,190	<1,480	8,460	366	<203	<203	413	1,070	<198	287	<495	1,190	<694	2,100	<590	16,500	<128	--
	12/19/2018	1,762.1	µg/m³	<1,190	<1,480	6,440	386	<203	<203	298	1,020	<198	<281	<495	973	<694	1,780	<590	15,400	<128	--
SVE-01-S																					
	3/23/2018	1,702.1	µg/m³	<238	<295	72.7	62.5	<40.5	<40.5	41.3	60.2	<39.6	215	<99.0	322	<139	354	<118	2,380	<25.6	--
	6/18/2018	1,702.1	µg/m³	<1,190	<1,480	800	<244	<203	<203	<199	<198	<198	<281	<495	<383	<694	1,400	<590	8,060	<128	--
	9/10/2018	1,702.1	µg/m³	<238	<295	90.2	102	<40.5	<40.5	<39.7	<39.6	<39.6	288	<99.0	239	<139	408	<118	3,170	<25.6	--
	12/14/2018	1,702.1	µg/m³	<1,190	<1,480	759	346	<203	<203	<199	669	<198	<281	<495	689	<694	963	<590	11,300	<128	--
SVE-01-M																					
	3/23/2018	1,522.1	µg/m³	<11,900	<14,800	8,000	<2,440	<2,030	<2,030	3,530	<1,980	<1,980	<2,810	<4,950	9,120	<6,940	<6,780	<5,900	61,200	<1,280	--
	6/18/2018	1,522.1	µg/m³	<1,190	<1,480	695	<244	<203	<203	<199	<198	<198	<281	<495	<383	<694	922	<590	6,500	<128	--
	9/10/2018	1,522.1	µg/m³	<2,380	<2,950	30,600	664	<405	<405	1,110	3,270	<396	<562	<990	2,680	<1,390	4,680	<1,180	48,300	<256	--
	12/14/2018	1,522.1	µg/m³	<1,190	<1,480	1,470	273	<203	<203	<199	681	<198	<281	<495	567	<694	963	<590	9,560	<128	--
SVE-01-D																					
	3/23/2018	1,402.1	µg/m³	<11,900	<14,800	20,600	<2,440	<2,030	<2,030	2,540	<1,980	<1,980	<2,810	<4,950	7,890	<6,940	<6,780	<5,900	70,400	<1,280	--
	6/18/2018	1,402.1	µg/m³	<1,190	<1,480	883	<244	<203	<203	206	301	<198	<281	<495	758	<694	895	<590	9,880	<128	--
	9/10/2018	1,402.1	µg/m³	<595	<738	2,500	156	<101	<101	<99.3	287	<99.0	230	<248	394	<347	597	<295	8,220	<64.0	--
	12/14/2018	1,402.1	µg/m³	<1,190	<1,480	1,770	273	<203	<203	<199	479	<198	<281	<495	751	<694	1,140	<590	10,200	<128	--
SVE-02																					
	3/26/2018	1,500.4	µg/m³	<2,380	<2,950	690	<488	<405	<405	683	3,910	<396	<562	<990	16,900	<1,390	5,820	<1,180	82,200	<256	--
	6/20/2018	1,500.4	µg/m³	<5,950	<7,380	<1,150	<1,220	<1,010	<1,010	<993	1,430	<990	<1,410	<2,480	11,600	<3,470	<3,390	<2,950	31,000	<640	--
	9/12/2018	1,500.4	µg/m³	<2,380	<2,950	478	781	<405	<405	810	1,710	<396	<562	<990	9,420	<1,390	6,160	<1,180	53,700	<256	--

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																					
	12/19/2018	1,500.4	µg/m³	<2,380	<2,950	<460	576	<405	<405	476	<396	<396	<562	<990	3,110	<1,390	2,850	<1,180	24,700	<256	--
SVE-02-S																					
	3/26/2018	1,750.4	µg/m³	<238	<295	51.5	74.2	<40.5	<40.5	<39.7	2,460	<39.6	305	553	98.0	<139	1,220	<118	1,830	646	--
	6/20/2018	1,750.4	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	<39.7	1,430	<39.6	120	234	<76.6	<139	353	<118	829	327	--
	9/10/2018	1,750.4	µg/m³	428	<295	425	70.3	<40.5	<40.5	<39.7	2,630	<39.6	232	573	88.9	<139	1,040	<118	1,810	809	--
	12/19/2018	1,750.4	µg/m³	479	<295	66.2	65.4	<40.5	<40.5	<39.7	4,480	48.3	252	552	87.3	<139	1,050	<118	1,240	1,060	--
SVE-02-M																					
	3/26/2018	1,600.4	µg/m³	<238	<295	<46.0	207	<40.5	<40.5	<39.7	94.2	<39.6	333	359	879	<139	1,470	<118	1,900	<25.6	--
	6/20/2018	1,600.4	µg/m³	<238	<295	<46.0	134	<40.5	<40.5	<39.7	91.9	<39.6	182	304	464	<139	1,250	<118	1,400	27.6	--
	9/10/2018	1,600.4	µg/m³	<238	<295	<46.0	152	<40.5	<40.5	<39.7	94.2	<39.6	218	527	265	<139	1,110	<118	1,340	69.6	--
	12/19/2018	1,600.4	µg/m³	<238	<295	<46.0	182	<40.5	<40.5	<39.7	157	<39.6	391	868	155	<139	1,460	<118	1,520	296	--
SVE-03																					
	3/26/2018	1,375.1	µg/m³	<23,800	<29,500	<4,600	<4,880	<4,050	<4,050	6,510	<3,960	<3,960	<5,620	<9,900	33,400	<13,900	<13,600	<11,800	158,000	<2,560	--
	6/20/2018	1,375.1	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	2,860	3,170	<1,980	<2,810	<4,950	14,100	<6,940	<6,780	<5,900	94,500	<1,280	--
	9/12/2018	1,375.1	µg/m³	<23,800	<29,500	<4,600	<4,880	<4,050	<4,050	4,920	4,360	<3,960	<5,620	<9,900	27,700	<13,900	<13,600	<11,800	121,000	2,560	--
	12/19/2018	1,375.1	µg/m³	<1,190	<1,480	<230	517	774	<203	6,910	6,970	<198	2,660	5,740	20,100	788	5,680	<590	65,500	131	--
	12/19/2018	1,375.1	µg/m³	<1,190	<1,480	<230	517	697	<203	6,390	6,340	<198	2,530	5,740	18,800	833	4,980	<590	45,200	141	Duplicate
SVE-03-S																					
	3/26/2018	1,725.1	µg/m³	<238	<295	<46.0	52.7	<40.5	<40.5	<39.7	<39.6	<39.6	438	367	297	<139	858	<118	474	<25.6	--
	6/20/2018	1,725.1	µg/m³	<119	<148	<23.0	<24.4	<20.3	<20.3	<19.9	28.9	<19.8	77.6	113	95.8	<69.4	600	<59.0	331	<12.8	--
	9/12/2018	1,725.1	µg/m³	<59.5	<73.8	<11.5	34.4	<10.1	<10.1	<9.93	44.0	<9.90	128	314	169	<34.7	1,260	<29.5	662	10.4	--
SVE-03-M																					
	3/26/2018	1,525.1	µg/m³	<238	<295	<46.0	105	142	<40.5	<39.7	57.8	<39.6	3,110	2,490	1,680	1,670	1,630	<118	2,270	<25.6	--
	6/20/2018	1,525.1	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	39.7	<39.6	<39.6	723	695	458	451	1,380	<118	1,730	<25.6	--

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-03-M																					
	9/12/2018	1,525.1	µg/m³	<238	<295	<46.0	113	69.7	<40.5	<39.7	53.9	<39.6	1,590	1,670	789	1,170	1,200	<118	1,830	<25.6	--
	12/19/2018	1,525.1	µg/m³	<238	<295	<46.0	175	85.1	<40.5	<39.7	54.6	<39.6	1,150	1,050	530	1,300	1,250	<118	1,640	<25.6	--
SVE-04																					
	3/26/2018	1,376.8	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	306,000	34,500	<9,900	<14,100	<24,800	260,000	267,000	85,400	<29,500	442,000	<6,400	--
	3/26/2018	1,376.8	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	302,000	37,200	<9,900	<14,100	<24,800	259,000	270,000	92,900	<29,500	446,000	<6,400	Duplicate
	6/20/2018	1,376.8	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	253,000	49,900	<9,900	<14,100	<24,800	196,000	229,000	97,600	<29,500	471,000	<6,400	--
	6/20/2018	1,376.8	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	187,000	37,600	<9,900	<14,100	<24,800	151,000	167,000	82,700	<29,500	373,000	<6,400	Duplicate
	9/12/2018	1,376.8	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	228,000	32,700	<9,900	<14,100	<24,800	141,000	243,000	85,400	<29,500	386,000	<6,400	--
	12/19/2018	1,376.8	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	242,000	<9,900	<9,900	<14,100	<24,800	126,000	337,000	78,600	<29,500	329,000	<6,400	--
SVE-04-S																					
	3/26/2018	1,725.8	µg/m³	<238	<295	796	<48.8	<40.5	<40.5	<39.7	211	<39.6	348	110	147	<139	343	<118	1,130	<25.6	--
	6/20/2018	1,725.8	µg/m³	<238	<295	774	<48.8	<40.5	<40.5	<39.7	300	<39.6	439	247	116	<139	302	<118	956	<25.6	--
	9/12/2018	1,725.8	µg/m³	<119	<148	853	27.3	20.3	<20.3	<19.9	223	<19.8	472	219	102	<69.4	315	<59.0	937	<12.8	--
SVE-04-M																					
	3/26/2018	1,525.8	µg/m³	<5,950	<7,380	17,700	<1,220	<1,010	<1,010	14,400	1,780	<990	<1,410	<2,480	4,210	<3,470	18,100	<2,950	28,100	<640	--
	6/20/2018	1,525.8	µg/m³	1,880	<295	2,160	<48.8	<40.5	<40.5	545	367	<39.6	229	122	<76.6	169	354	<118	1,270	89.6	--
	9/12/2018	1,525.8	µg/m³	<2,380	<2,950	17,300	<488	<405	<405	3,500	2,030	<396	<562	<990	<766	<1,390	4,080	<1,180	8,490	<256	--
	12/19/2018	1,525.8	µg/m³	157	<148	1,120	<24.4	<20.3	<20.3	69.5	190	<19.8	56.2	103	<38.3	<69.4	201	<59.0	286	17.2	--
TSSV-01-S																					
	3/23/2018	1,731.0	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	<562	<990	1,070	<1,390	1,860	<1,180	14,300	<256	Duplicate
	3/23/2018	1,731.0	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	467	<396	<562	<990	1,040	<1,390	<1,360	<1,180	11,400	<256	--
	6/15/2018	1,731.0	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	586	<396	<562	<990	<766	<1,390	1,600	<1,180	20,100	<256	--
	9/8/2018	1,731.0	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	832	<396	<562	<990	1,390	<1,390	3,240	<1,180	39,600	<256	--

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

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-01-S																					
	12/13/2018	1,731.0	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	249	<198	<281	<495	1,030	<694	1,090	<590	11,700	<128	--
TSSV-01-M																					
	3/23/2018	1,531.0	µg/m³	<11,900	<14,800	8,100	<2,440	<2,030	<2,030	6,950	<1,980	<1,980	<2,810	<4,950	4,900	<6,940	13,400	<5,900	76,300	<1,280	--
	6/15/2018	1,531.0	µg/m³	<2,380	<2,950	11,900	1,230	<405	<405	1,300	855	<396	<562	<990	1,060	<1,390	6,510	11,900	41,700	<256	--
	9/8/2018	1,531.0	µg/m³	<5,950	<7,380	6,440	<1,220	<1,010	<1,010	<993	<990	<990	<1,410	<2,480	<1,920	<3,470	6,580	10,500	27,000	<640	--
	12/13/2018	1,531.0	µg/m³	<2,380	<2,950	8,880	1,260	<405	<405	<397	570	<396	<562	<990	889	<1,390	2,320	<1,180	24,000	<256	--
TSSV-01-D																					
	3/23/2018	1,332.0	µg/m³	<23,800	<29,500	6,620	<4,880	<4,050	<4,050	<3,970	11,100	<3,960	<5,620	<9,900	108,000	<13,900	<13,600	<11,800	200,000	<2,560	--
	6/15/2018	1,332.0	µg/m³	<23,800	<29,500	<4,600	<4,880	<4,050	<4,050	7,860	22,300	<3,960	<5,620	<9,900	166,000	15,600	13,700	<11,800	346,000	<2,560	--
	9/8/2018	1,332.0	µg/m³	<23,800	<29,500	5,340	<4,880	<4,050	<4,050	<3,970	12,000	<3,960	<5,620	<9,900	76,000	<13,900	16,000	<11,800	377,000	2,560	Duplicate
	9/8/2018	1,332.0	µg/m³	<23,800	<29,500	<4,600	<4,880	<4,050	<4,050	<3,970	13,500	<3,960	<5,620	<9,900	70,900	<13,900	<13,600	<11,800	310,000	2,560	--
	12/13/2018	1,332.0	µg/m³	<5,950	<7,380	2,710	2,150	<1,010	<1,010	1,630	6,890	<990	<1,410	<2,480	10,600	<3,470	4,780	<2,950	80,600	<640	--
TSSV-02-S																					
	3/21/2018	1,731.2	µg/m3	7,160	9,620	<1,150	<1,220	<1,010	<1,010	<993	<990	<990	<1,410	<2,480	<1,920	<3,470	<3,390	55,200	16,900	<640	--
	6/15/2018	1,731.2	µg/m³	<2,380	<2,950	<460	<488	<405	<405	<397	<396	<396	<562	<990	<766	<1,390	1,790	3,740	14,800	<256	--
	9/8/2018	1,731.2	µg/m³	<238	<295	394	<48.8	<40.5	<40.5	152	219	<39.6	<56.2	<99.0	109	<139	800	2,950	4,960	<25.6	--
	12/14/2018	1,731.2	µg/m³	<595	<738	<115	<122	<101	<101	<99.3	<99.0	<99.0	<141	<248	253	<347	1,360	4,780	8,810	<64.0	--
TSSV-02-M																					
	3/21/2018	1,531.2	µg/m3	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	9,610	<1,980	<1,980	<2,810	<4,950	15,600	<6,940	<6,780	85,600	144,000	<1,280	Duplicate
	3/21/2018	1,531.2	µg/m3	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	3,890	<1,980	<1,980	<2,810	<4,950	12,600	<6,940	<6,780	81,400	139,000	<1,280	--
	6/15/2018	1,531.2	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	166	<39.6	<39.6	<56.2	<99.0	453	<139	194	1,080	10,500	<25.6	--
	9/8/2018	1,531.2	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	1,990	<1,980	<1,980	<2,810	<4,950	6,510	<6,940	<6,780	6,810	133,000	<1,280	--
	12/14/2018	1,531.2	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	198	39.7	<2.56	--

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-02-M																					
	12/14/2018	1,531.2	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	243	44.1	<2.56	Duplicate
TSSV-02-D																					
	3/21/2018	1,331.9	µg/m3	<11,900	<14,800	10,500	<2,440	<2,030	<2,030	5,240	12,600	<1,980	<2,810	<4,950	13,800	<6,940	9,700	<5,900	132,000	<1,280	- -
	6/15/2018	1,331.9	µg/m³	<5,950	<7,380	1,610	<1,220	<1,010	<1,010	<993	5,110	<990	<1,410	<2,480	4,830	<3,470	<3,390	<2,950	64,400	<640	- -
	9/8/2018	1,331.9	µg/m³	<2,380	<2,950	4,540	<488	<405	<405	<397	2,910	<396	<562	<990	797	<1,390	4,370	<1,180	53,600	<256	- -
	12/14/2018	1,331.9	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	<1,990	9,350	<1,980	<2,810	<4,950	4,060	<6,940	<6,780	<5,900	63,900	<1,280	- -
TSSV-02-PZ																					
	3/21/2018	1,181.9	µg/m3	<238	<295	<46.0	<48.8	<40.5	<40.5	163	432	<39.6	<56.2	<99.0	87.3	<139	435	<118	2,920	<25.6	- -
	6/15/2018	1,181.9	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	181	863	<39.6	<56.2	<99.0	<76.6	<139	1,910	<118	2,300	<25.6	- -
	9/8/2018	1,181.9	µg/m³	<238	<295	<46.0	<48.8	42.9	<40.5	108	2,660	<39.6	<56.2	<99.0	<76.6	<139	273	<118	4,520	<25.6	- -
	12/14/2018	1,181.9	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	2,380	118,000	<1,980	<2,810	<4,950	<3,830	<6,940	<6,780	<5,900	74,600	<1,280	- -
TSSV-03-S																					
	12/12/2018	1,731.3	µg/m³	514	<295	<46.0	<48.8	205	<40.5	<39.7	110	<39.6	411	3,130	257	453	1,180	<118	187	<25.6	- -
TSSV-03-M																					
	12/12/2018	1,531.3	µg/m³	<1,190	<1,480	<230	<244	3,720	<203	278	606	<198	7,140	20,400	2,310	3,920	4,500	<590	2,440	<128	- -
TSSV-03-D																					
	3/19/2018	1,332.3	µg/m3	<119	<148	<23.0	<24.4	209	<20.3	<19.9	<19.8	<19.8	196	548	133	<69.4	404	<59.0	124	<12.8	- -
	6/11/2018	1,332.3	µg/m³	<238	<295	<46.0	<48.8	86.7	<40.5	<39.7	<39.6	<39.6	94.4	325	98.0	<139	302	<118	670	<25.6	- -
	9/6/2018	1,332.3	µg/m³	<23.8	<29.5	5.06	<4.88	40.3	<4.05	<3.97	<3.96	<3.96	48.4	160	16.5	<13.9	198	<11.8	100	<2.56	- -
TSSV-03-PZ																					
	3/19/2018	1,182.3	µg/m3	<238	<295	<46.0	<48.8	442	<40.5	250	<39.6	<39.6	4,140	6,440	2,390	<139	1,550	<118	12,600	<25.6	- -
	6/11/2018	1,182.3	µg/m³	<2,380	<2,950	<460	<488	875	<405	<397	<396	<396	8,660	14,300	4,210	<1,390	3,380	<1,180	21,800	<256	- -
	9/6/2018	1,182.3	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	<39.7	65.7	<39.6	215	487	<76.6	<139	205	<118	946	<25.6	- -
	9/6/2018	1,182.3	µg/m³	<238	<295	<46.0	<48.8	46.2	<40.5	<39.7	61.8	<39.6	209	497	<76.6	<139	235	<118	990	<25.6	Duplicate

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-PZ																					
	12/12/2018	1,182.3	µg/m³	<238	<295	<46.0	<48.8	104	<40.5	73.8	<39.6	<39.6	1,240	1,860	435	<139	331	<118	1,540	<25.6	--
TSSV-04-S																					
	12/13/2018	1,730.9	µg/m³	<59.5	<73.8	<11.5	<12.2	<10.1	<10.1	116	74.3	<9.90	<14.1	<24.8	103	<34.7	142	<29.5	495	<6.40	--
TSSV-04-M																					
	6/15/2018	1,530.9	µg/m³	<119	<148	104	<24.4	<20.3	<20.3	<19.9	68.9	<19.8	41.0	<49.5	101	<69.4	908	<59.0	1,630	<12.8	--
	9/10/2018	1,530.9	µg/m³	<59.5	<73.8	50.8	81.5	18.0	<10.1	<9.93	14.3	<9.90	371	364	694	<34.7	1,210	<29.5	559	<6.40	--
TSSV-04-D																					
	3/26/2018	1,330.0	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	2,860	5,230	<1,980	<2,810	<4,950	14,700	<6,940	11,100	<5,900	147,000	<1,280	--
	6/18/2018	1,330.0	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	<39.7	73.7	<39.6	<56.2	<99.0	121	<139	290	<118	2,440	<25.6	--
	6/18/2018	1,330.0	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	<39.7	74.4	<39.6	<56.2	<99.0	121	<139	287	<118	2,580	<25.6	Duplicate
	9/10/2018	1,330.0	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	<1,990	3,210	<1,980	<2,810	<4,950	6,130	<6,940	<6,780	<5,900	56,900	<1,280	--
	12/13/2018	1,330.0	µg/m³	<1,190	<1,480	<230	<244	<203	<203	246	784	<198	<281	<495	2,430	<694	1,060	<590	12,700	<128	--
TSSV-04-PZ																					
	3/20/2018	1,182.2	µg/m3	<23.8	<29.5	9.94	<4.88	<4.05	<4.05	<3.97	<3.96	<3.96	<5.62	<9.90	<7.66	<13.9	<13.6	<11.8	85.8	<2.56	--
	6/15/2018	1,182.2	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	170	301	<39.6	<56.2	<99.0	849	<139	312	<118	2,140	<25.6	--
	6/15/2018	1,182.2	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	176	315	<39.6	<56.2	<99.0	878	<139	336	<118	2,250	<25.6	Duplicate
	9/10/2018	1,182.2	µg/m³	<2,380	<2,950	<460	<488	<405	<405	2,600	3,390	<396	<562	<990	14,000	<1,390	3,020	<1,180	24,400	<256	--
	12/13/2018	1,182.2	µg/m³	<59.5	<73.8	<11.5	<12.2	<10.1	<10.1	53.6	92.7	<9.90	<14.1	<24.8	172	<34.7	160	<29.5	677	<6.40	--
TSSV-05-D																					
	3/19/2018	1,335.1	µg/m3	<238	<295	<46.0	<48.8	194	<40.5	<39.7	<39.6	<39.6	1,740	2,080	525	<139	1,530	<118	533	<25.6	--
	6/11/2018	1,335.1	µg/m³	<1,190	<1,480	<230	<244	664	<203	<199	<198	<198	7,810	15,400	1,940	<694	2,950	<590	1,430	<128	--
	9/7/2018	1,335.1	µg/m³	<119	<148	<23.0	<24.4	27.5	<20.3	<19.9	<19.8	<19.8	323	692	64.3	<69.4	195	<59.0	77.9	<12.8	--
	12/13/2018	1,335.1	µg/m³	<2,380	<2,950	<460	<488	3,020	<405	540	<396	<396	14,800	31,500	2,770	<1,390	4,710	<1,180	2,620	<256	--

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-05-PZ																					
	3/20/2018	1,185.1	µg/m3	<5,950	<7,380	<1,150	<1,220	<1,010	<1,010	<993	<990	<990	<1,410	<2,480	<1,920	<3,470	<3,390	<2,950	41,900	<640	--
	6/11/2018	1,185.1	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	<9,930	<9,900	<9,900	<14,100	<24,800	<19,200	<34,700	<33,900	<29,500	313,000	<6,400	--
	9/12/2018	1,185.1	µg/m³	<1,190	<1,480	<230	<244	<203	<203	222	<198	<198	933	1,580	965	<694	848	<590	23,000	<128	--
	12/13/2018	1,185.1	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	244	105	<39.6	<56.2	<99.0	218	<139	180	<118	1,390	<25.6	--
TSSV-06-S																					
	3/20/2018	1,726.5	µg/m3	<1,190	<1,480	<230	<244	<203	<203	<199	<198	<198	<281	<495	1,520	<694	956	<590	12,000	<128	--
	6/13/2018	1,726.5	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	<99.0	110	<139	<136	<118	1,010	<25.6	--
	9/7/2018	1,726.5	µg/m³	<238	<295	<46.0	110	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	<99.0	1,650	<139	1,170	<118	10,600	<25.6	--
	12/11/2018	1,726.5	µg/m³	<238	<295	<46.0	82.0	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	<99.0	896	<139	580	<118	4,390	<25.6	--
	12/11/2018	1,726.5	µg/m³	<238	<295	<46.0	104	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	<99.0	1,080	<139	614	<118	5,220	<25.6	Duplicate
TSSV-06-M																					
	3/20/2018	1,526.5	µg/m3	<1,190	<1,480	<230	<244	<203	<203	<199	360	<198	<281	<495	<383	<694	1,110	<590	17,900	<128	--
	6/13/2018	1,526.5	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	206	<198	<281	<495	<383	<694	<678	<590	7,140	<128	--
	9/7/2018	1,526.5	µg/m³	35.9	<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	<5.37	<2.56	--
	12/11/2018	1,526.5	µg/m³	<238	<295	<46.0	217	<40.5	<40.5	58.8	435	<39.6	<56.2	<99.0	473	<139	1,200	<118	15,700	30.7	--
TSSV-06-D																					
	3/20/2018	1,326.5	µg/m3	<11,900	<14,800	<2,300	2,440	<2,030	<2,030	<1,990	11,500	<1,980	<2,810	<4,950	33,400	<6,940	<6,780	<5,900	164,000	<1,280	--
	6/13/2018	1,326.5	µg/m³	<1,190	<1,480	<230	<244	<203	<203	<199	380	<198	<281	<495	820	<694	685	<590	8,160	<128	--
	9/7/2018	1,326.5	µg/m³	<1,190	<1,480	377	1,480	<203	<203	<199	6,220	<198	<281	<495	9,580	822	3,370	<590	40,800	<128	--
	12/11/2018	1,326.5	µg/m³	<5,950	<7,380	<1,150	1,490	<1,010	<1,010	<993	4,200	<990	<1,410	<2,480	20,400	<3,470	<3,390	<2,950	44,400	<640	--
TSSV-07-S																					
	3/21/2018	1,729.5	µg/m3	<119	<29.5	5.80	11.0	-	<4.05	16.9	5.15	<3.96	50.9	11.4	43.8	<13.9	38.8	<11.8	295	<2.56	--
	6/13/2018	1,729.5	µg/m³	<238	<295	<46.0	<48.8	<40.5	<40.5	61.1	<39.6	<39.6	281	<99.0	87.3	<139	160	<118	1,030	<25.6	--

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

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-S																					
	9/7/2018	1,729.5	µg/m³	<238	<295	<46.0	79.1	<40.5	<40.5	<39.7	<39.6	<39.6	425	<99.0	88.9	<139	289	<118	1,970	<25.6	- -
	12/11/2018	1,729.5	µg/m³	<238	<295	<46.0	120	<40.5	<40.5	<39.7	<39.6	<39.6	673	140	142	<139	247	<118	1,660	<25.6	- -
TSSV-07-M																					
	3/21/2018	1,529.5	µg/m3	<2,380	<2,950	<460	<488	502	<405	48,800	475	<396	<562	2,020	9,800	1,770	7,660	<1,180	69,300	<256	- -
	6/13/2018	1,529.5	µg/m³	<1,190	<1,480	294	<244	<203	<203	8,810	210	<198	<281	614	1,110	756	2,200	<590	11,700	<128	- -
	9/7/2018	1,529.5	µg/m³	<1,190	<1,480	1,100	<244	<203	<203	6,000	380	<198	422	787	452	<694	2,240	<590	8,700	<128	- -
	12/11/2018	1,529.5	µg/m³	<238	<295	1,190	68.3	77.0	<40.5	1,100	425	<39.6	505	1,600	176	336	1,150	<118	2,850	<25.6	- -
TSSV-07-D																					
	3/21/2018	1,329.5	µg/m3	<23,800	<29,500	<4,600	<4,880	<4,050	<4,050	236,000	19,000	<3,960	<5,620	<9,900	134,000	21,700	35,300	<11,800	362,000	4,920	- -
	3/21/2018	1,329.5	µg/m3	<23,800	<29,500	<4,600	<4,880	<4,050	<4,050	223,000	20,800	<3,960	<5,620	<9,900	109,000	13,900	33,100	<11,800	266,000	4,860	Duplicate
	6/13/2018	1,329.5	µg/m³	<5,950	<7,380	<1,150	<1,220	<1,010	<1,010	5,840	<990	<990	<1,410	<2,480	2,910	<3,470	<3,390	<2,950	17,300	<640	- -
	9/8/2018	1,329.5	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	69,500	<9,900	<9,900	<14,100	<24,800	45,200	<34,700	<33,900	<29,500	494,000	<6,400	- -
	12/11/2018	1,329.5	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	115,000	11,700	<9,900	<14,100	<24,800	86,600	<34,700	<33,900	<29,500	470,000	<6,400	- -
	12/11/2018	1,329.5	µg/m³	<59,500	<73,800	<11,500	<12,200	<10,100	<10,100	122,000	11,300	<9,900	<14,100	<24,800	85,800	<34,700	<33,900	<29,500	524,000	<6,400	Duplicate
TSSV-07-PZ																					
	3/21/2018	1,179.0	µg/m3	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	9,960	3,480	<1,980	<2,810	<4,950	19,400	<6,940	8,410	<5,900	78,900	2,280	- -
	6/13/2018	1,179.0	µg/m³	<5,950	<7,380	<1,150	<1,220	<1,010	<1,010	3,450	2,850	<990	<1,410	<2,480	5,750	<3,470	4,030	<2,950	23,700	<640	Duplicate
	6/13/2018	1,179.0	µg/m³	<5,950	<7,380	<1,150	<1,220	<1,010	<1,010	3,380	2,670	<990	<1,410	<2,480	5,820	<3,470	6,440	<2,950	26,600	<640	- -
	9/8/2018	1,179.0	µg/m³	<11,900	<14,800	<2,300	<2,440	<2,030	<2,030	33,400	31,000	<1,980	<2,810	<4,950	54,400	<6,940	18,900	<5,900	214,000	4,630	- -
	12/11/2018	1,179.0	µg/m³	<11,900	<14,800	<2,300	2,490	6,080	<2,030	344,000	137,000	<1,980	3,090	11,700	237,000	7,980	76,000	<5,900	806,000	17,400	- -

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

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																					
	1/17/2018	-	µg/m³	<59,500	<73,800	<12,200	<11,500	<10,100	<10,100	158,000	24,600	<9,900	<14,100	<24,800	168,000	72,200	<33,900	<29,500	277,000	<6,400	- -
	2/23/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	110,000	13,600	<3,960	<5,620	<9,900	129,000	84,700	15,100	<11,800	293,000	<2,560	- -
	3/19/2018	-	µg/m³	<47,600	<59,000 L5	<9,760	<9,200	<8,100	<8,100	191,000	26,500	<7,920	<11,200	<19,800	164,000	180,000	38,200	<23,600 L5	312,000	<5,120	- -
	4/23/2018	-	µg/m³	<59,500	<73,800	<12,200	<11,500	<10,100	<10,100	210,000	32,300	<9,900	<14,100	<24,800	161,000	185,000	70,500	<29,500	418,000	<6,400	- -
	5/23/2018	-	µg/m³	<59,500	<73,800	<12,200	<11,500	<10,100	<10,100	189,000	23,000	<9,900	<14,100	<24,800	143,000	195,000	39,300	<29,500	324,000	<6,400	- -
	6/20/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	106,000	21,100	<3,960	<5,620	<9,900	108,000	88,800	59,900	<11,800	271,000	<2,560	- -
	7/18/2018	-	µg/m³	<23,800	<29,500	<4,880	6,620	<4,050	<4,050	192,000	38,900	<3,960	<5,620	<9,900	130,000	200,000	89,500	<11,800	644,000	3,280	- -
	8/15/2018	-	µg/m³	<59,500	<73,800	<12,200	<11,500	<10,100	<10,100	162,000	33,100	<9,900	<14,100	<24,800	121,000	192,000	86,100	<29,500	490,000	<6,400	- -
	9/19/2018	-	µg/m³	<59,500	<73,800	<12,200	<11,500	<10,100	<10,100	182,000	28,900	<9,900	<14,100	<24,800	143,000	243,000	97,600	<29,500	580,000	<6,400	- -
	10/17/2018	-	µg/m³	<59,500	<73,800	<12,200	<11,500	<10,100	<10,100	118,000	26,700	<9,900	<14,100	<24,800	82,000	160,000	66,400	<29,500	321,000	<6,400	- -
	11/14/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	115,000	22,900	<3,960	<5,620	<9,900 R6	85,800	165,000	65,200	<11,800	342,000	<2,560 R6	- -
	12/19/2018	-	µg/m³	<23,800	<29,500	<4,880	5,890	4,050	<4,050	177,000	35,200	<3,960	<5,620	<9,900	110,000	243,000	92,900	<11,800	372,000	<2,560	- -
SP-02																					
	1/17/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	5,240	<3,960	<3,960	<5,620	<9,900	<7,660	100,000	<13,600	<11,800	<5,370	3,790	- -
	2/23/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	<3,970	<3,960	<3,960	<5,620	<9,900	<7,660	205,000	<13,600	<11,800	<5,370	2,660	- -
	3/19/2018	-	µg/m³	<23,800 L5	<29,500 L5	<4,880	<4,600	<4,050	<4,050	223,000	<3,960	<3,960	<5,620	11,600	14,100	437,000	<13,600	<11,800 L5	<5,370	5,380	- -
	4/23/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	<3,970	<3,960	<3,960	<5,620	<9,900	<7,660	190,000	<13,600	<11,800	<5,370	<2,560	- -
	5/23/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	13,100	<3,830	357,000	<6,780	<5,900	<2,690	4,100	- -
	6/20/2018	-	µg/m³	<4,760	<5,900	<976	<920	<810	<810	<794	<792	<792	<1,120	5,200	<1,530	152,000	27,900	<2,360	<1,070	1,090	- -
	7/18/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	305,000	<1,980	<1,980	3,200	7,330	<3,830	249,000	<6,780	<5,900	<2,690	3,330	- -
	8/15/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	128,000	2,100	<1,980	<2,810	5,100	<3,830	132,000	<6,780	<5,900	<2,690	1,280	- -
	9/19/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	6,680	<3,830	192,000	<6,780	<5,900	<2,690	1,560	- -

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-02																					
	10/17/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	4,670	8,660	<3,830	251,000	<6,780	<5,900	<2,690	1,890	- -
	11/14/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	8,660	<3,830	219,000	<6,780	<5,900	<2,690	1,660	- -
	12/19/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	5,690	<3,830	90,200	<6,780	<5,900 L5	<2,690	<1,280	- -
SP-03																					
	1/17/2018	-	µg/m³	<5,950	<7,380	<1,220	<1,150	<1,010	<1,010	<993	<990	<990	<1,410	13,800	<1,920	52,700	<3,390	<2,950	<1,340	5,630	- -
	2/23/2018	-	µg/m³	<23.8	<29.5	<4.88	<4.60	<4.05	<4.05	<3.97	<3.96	<3.96	<5.62	<9.90	<7.66	147	<13.6	<11.8	<5.37	<2.56	- -
	3/19/2018	-	µg/m³	<11,900 L5	<14,800 L5	<2,440	<2,300	<2,030	<2,030	3,140	<1,980	<1,980	<2,810	11,100	<3,830	423,000	<6,780	<5,900 L5	<2,690	4,710	- -
	4/23/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	<3,970	<3,960	<3,960	<5,620	<9,900	<7,660	200,000	<13,600	<11,800	<5,370	3,230	- -
	5/23/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	11,000	<3,830	103,000	<6,780	<5,900	<2,690	3,560	- -
	6/20/2018	-	µg/m³	<23.8	<29.5	<4.88	<4.60	<4.05	<4.05	4.13	<3.96	<3.96	<5.62	623	<7.66	16.4	<13.6	<11.8	<5.37	61.2	- -
	7/18/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	7,080	<3,830	293,000	<6,780	<5,900	<2,690	3,380	- -
	8/15/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	7,670	<3,830	253,000	<6,780	<5,900	<2,690	1,640	- -
	9/19/2018	-	µg/m³	<238	<295	<48.8	<46.0	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	9,950	<76.6	2,130	<136	<118	<53.7	1,780	- -
	10/17/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	8,510	<3,830	262,000	<6,780	<5,900	<2,690	1,870	- -
	11/14/2018	-	µg/m³	<23.8	<29.5	<4.88	<4.60	<4.05	<4.05	<3.97	<3.96	<3.96	<5.62	<9.90 R6	<7.66	<13.9	<13.6	<11.8	<5.37	<2.56 R6	- -
	12/19/2018	-	µg/m³	<2,380	<2,950	<488	<460	<405	<405	<397	<396	<396	<562	6,090	<766	17,200	<1,360	<1,180 L5	<537	1,020	- -
SP-04																					
	1/17/2018	-	µg/m³	<5,950	<7,380	<1,220	<1,150	<1,010	<1,010	<993	<990	<990	<1,410	14,900	<1,920	50,300	<3,390	<2,950	<1,340	3,790	- -
	2/23/2018	-	µg/m³	<23.8	<29.5	<4.88	<4.60	<4.05	<4.05	<3.97	<3.96	<3.96	<5.62	<9.90	<7.66	119	<13.6	<11.8	<5.37	<2.56	- -
	3/19/2018	-	µg/m³	<5,950 L5	<7,380 L5	<1,220	<1,150	<1,010	<1,010	4,490	<990	<990	<1,410	12,800	<1,920	392,000	<3,390	<2,950 L5	<1,340	4,810	- -
	4/23/2018	-	µg/m³	<23,800	<29,500	<4,880	<4,600	<4,050	<4,050	<3,970	<3,960	<3,960	<5,620	<9,900	<7,660	233,000	<13,600	<11,800	<5,370	<2,560	- -
	5/23/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	17,400	<3,830	256,000	<6,780	<5,900	<2,690	<1,280	- -

Table 7. Soil Vapor Analytical Results - Pro

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-04																					
	6/20/2018	-	µg/m³	<238	<295	<48.8	<46.0	<40.5	<40.5	<39.7	<39.6	<39.6	<56.2	641	<76.6	<139	2,220	<118	<53.7	<25.6	- -
	7/18/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	6,730	<3,830	319,000	<6,780	<5,900	<2,690	<1,280	- -
	8/15/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	6,580	<3,830	171,000	<6,780	<5,900	<2,690	<1,280	- -
	9/19/2018	-	µg/m³	<2,380	<14,800	<488	524	<2,030	<2,030	5,360	974	<396	<562	8,370	4,570	9,540	7,390	<1,180	2,690	1,240	- -
	10/17/2018	-	µg/m³	<11,900	<14,800	<2,440	<2,300	<2,030	<2,030	<1,990	<1,980	<1,980	<2,810	8,810	<3,830	263,000	<6,780	<5,900	<2,690	1,540	- -
	11/14/2018	-	µg/m³	<23.8	<29.5	<4.88	<4.60	<4.05	<4.05	<3.97	<3.96	<3.96	<5.62	<9.90 R6	<7.66	80.9	<13.6	<11.8	<5.37	<2.56 R6	- -
	12/19/2018	-	µg/m³	<2,380	<2,950	<488	<460	<405	<405	<397	<396	<396	<562	7,480	<766	20,100	<1,360	<1,180 L5	<537	1,170	- -

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]
1/17/2018	15,758	273	41	460	944	1.63	358	25,413
2/23/2018	16,385	627	71	417	932	1.46	1,019	26,432
3/19/2018	16,908	524	91	503	933	1.76	762	27,194
4/23/2018	17,481	573	68	628	918	2.16	1,006	28,200
5/23/2018	18,124	642	89	535	889	1.78	1,387	29,588
6/20/2018	18,353	229	34	398	910	1.36	408	29,996
7/18/2018	18,900	548	82	875	899	2.95	744	30,739
8/15/2018	19,506	606	90	685	914	2.35	1,786	32,525
9/19/2018	20,080	574	68	791	917	2.72	1,346	33,871
10/17/2018	20,607	527	78	466	913	1.59	1,431	35,303
11/14/2018	21,227	620	92	480	913	1.64	989	36,291
12/19/2018	21,845	618	74	584	919	2.01	1,015	37,306

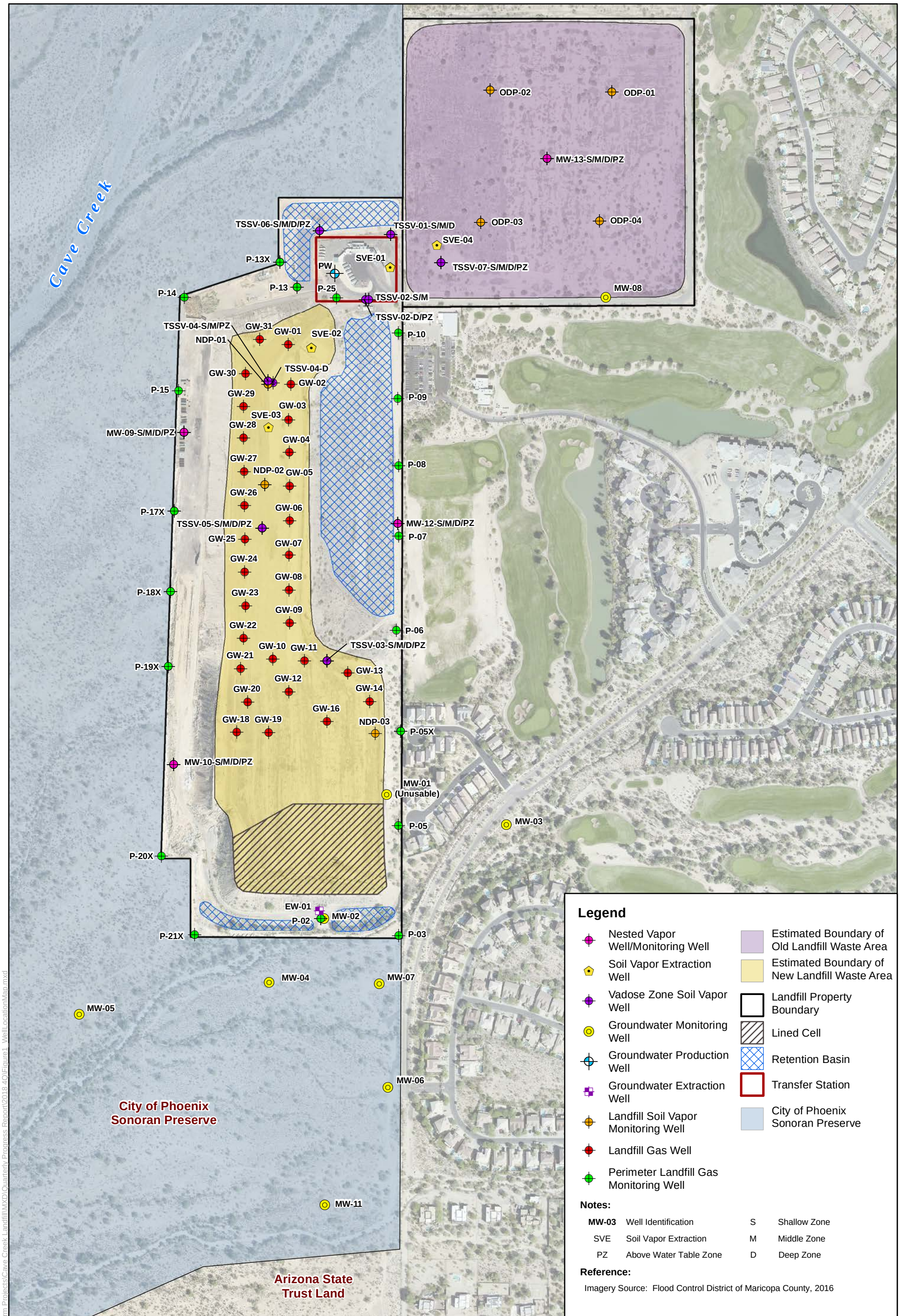
Notes:

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



Job No.	1420192004
PM:	NC
Date:	3/8/2019
Scale:	1" = 400'

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. Project Number 1420192004. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

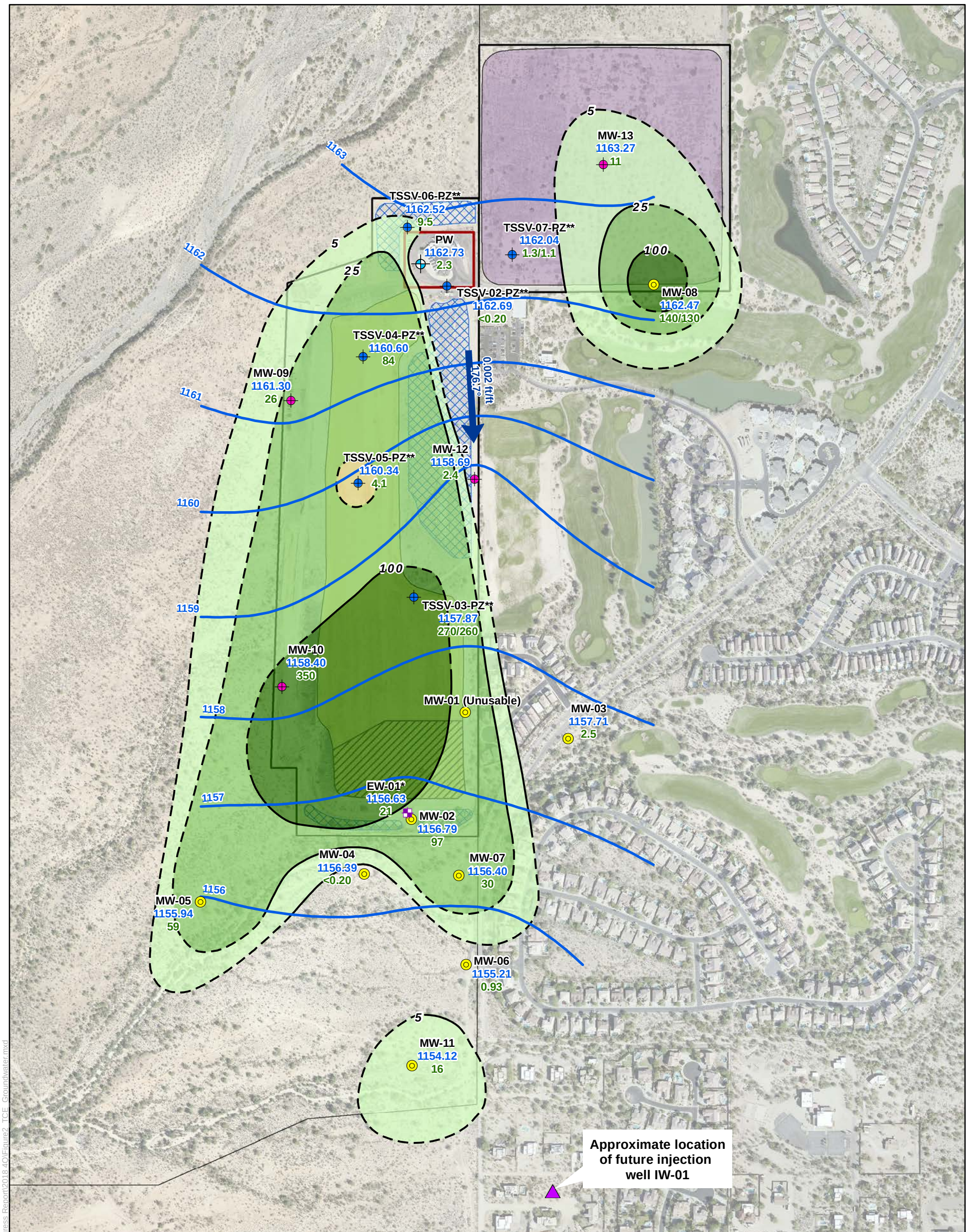
2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona

Well Map

FIGURE
1

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2018 4Q\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 November 2018 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
1155.21	Groundwater Elevation (ft amsl) collected in November 2018
0.93	TCE Concentration (µg/L) collected in November/December 2018
1.3/1.1	Original/Duplicate Results
*	EW-01 has a different screen interval and concentrations in this well are not comparable to the others on this figure.
**	Not used to generate water level elevation contours or gradient
µg/L	microgram per liter
ft amsl	feet above mean sea level
TCE	Trichloroethene

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

0 200 400 800 Feet

Job No.	1420192004
PM:	NC
Date:	3/8/2019
Scale:	1" = 400'

N

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions Inc. Project Number 1420192004. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

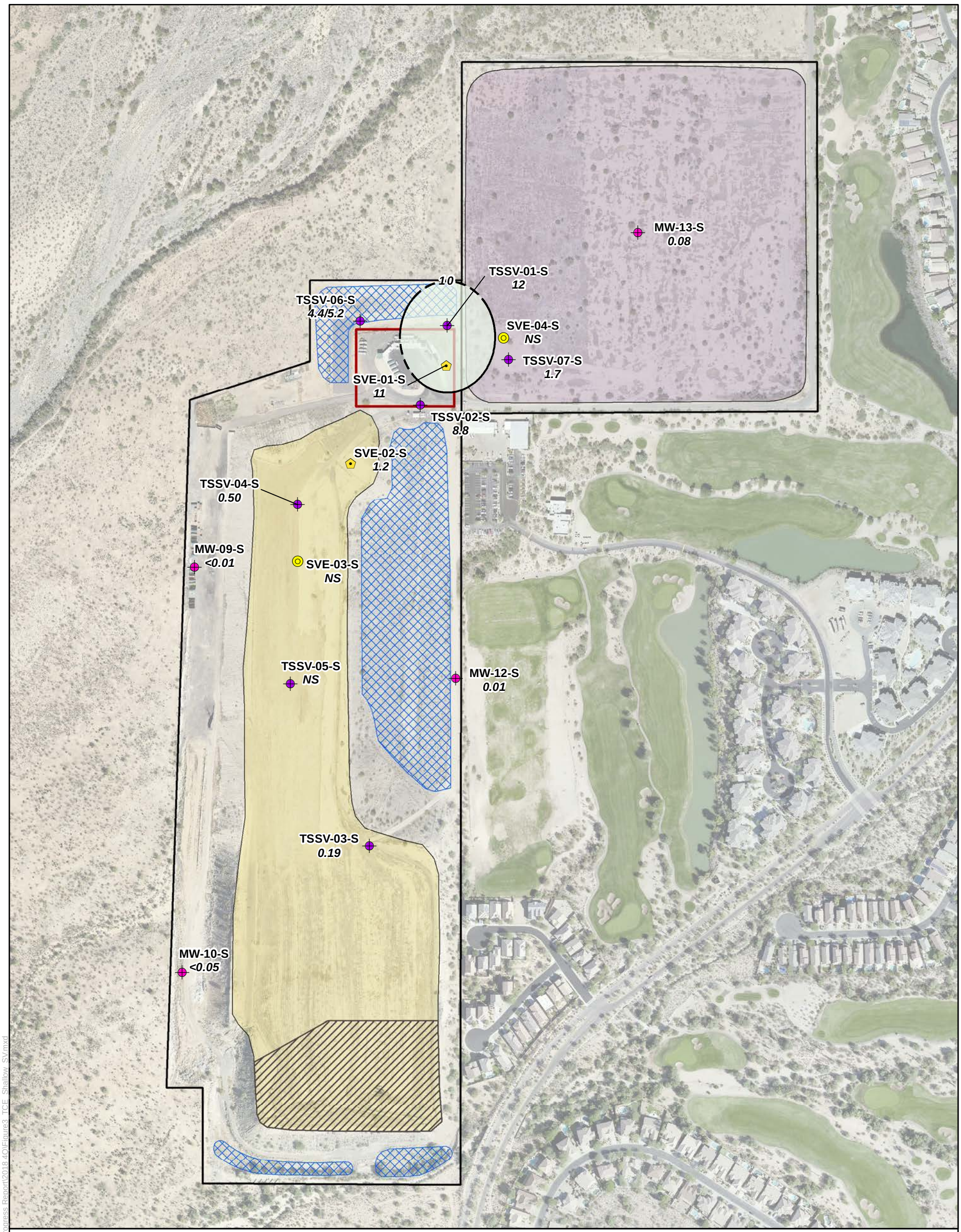
2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona

Estimated Extent of TCE Plume in Groundwater November/December 2018

FIGURE **2**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\WXD\Quarterly Progress Report\2018 4Q\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
8.8	TCE soil gas result (mg/m³) collected December 2018
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:	3/8/2019
Scale:	1" = 350'

N

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. Project Number 1420192004. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

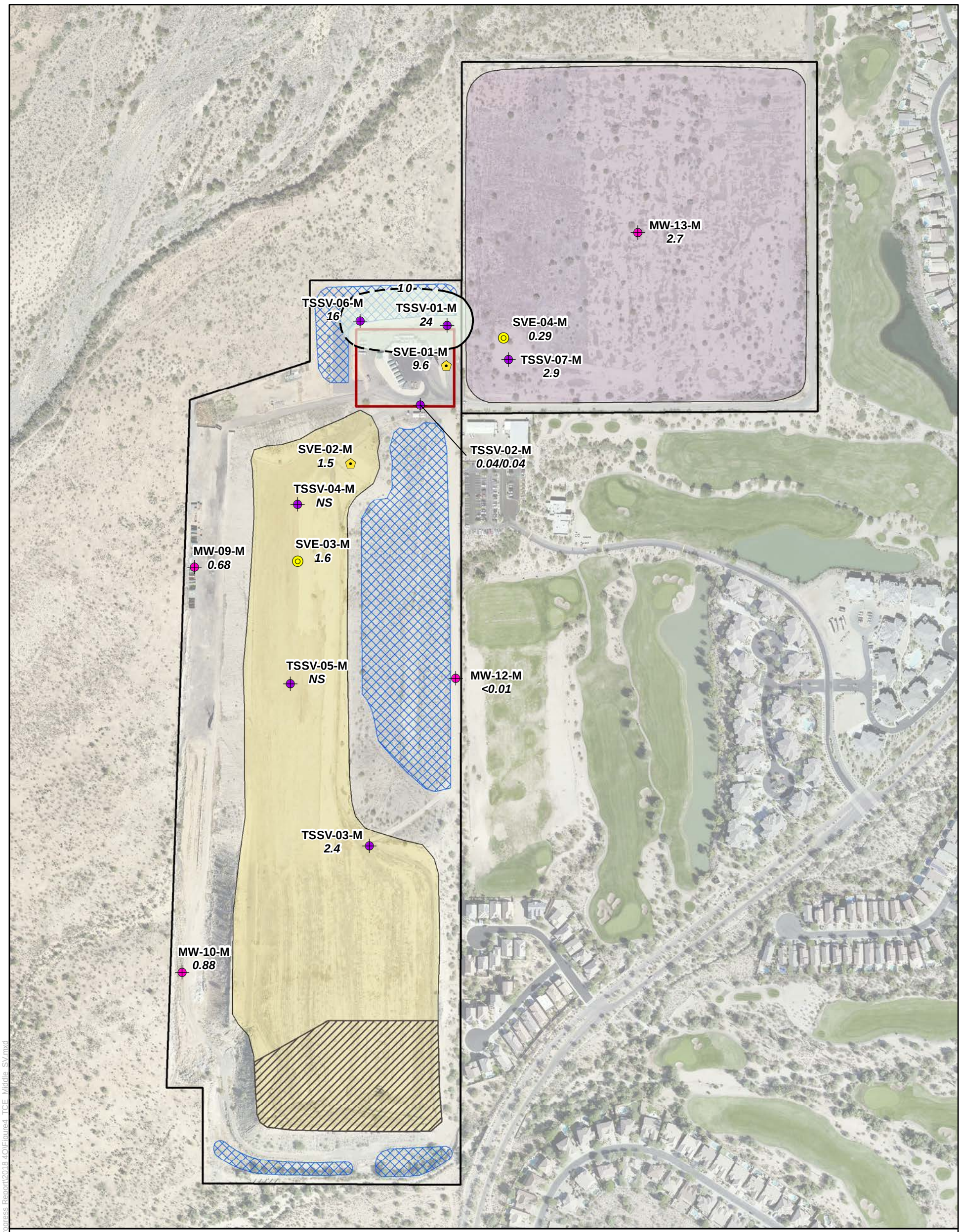
2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona

Shallow Zone TCE Soil Vapor Concentrations December 2018

FIGURE **3**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2018 4Q\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-01-M	Well Identification
24	TCE soil gas result (mg/m³) collected December 2018
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:	3/8/2019
Scale:	1" = 350'

N

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. Project Number 1420192004. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

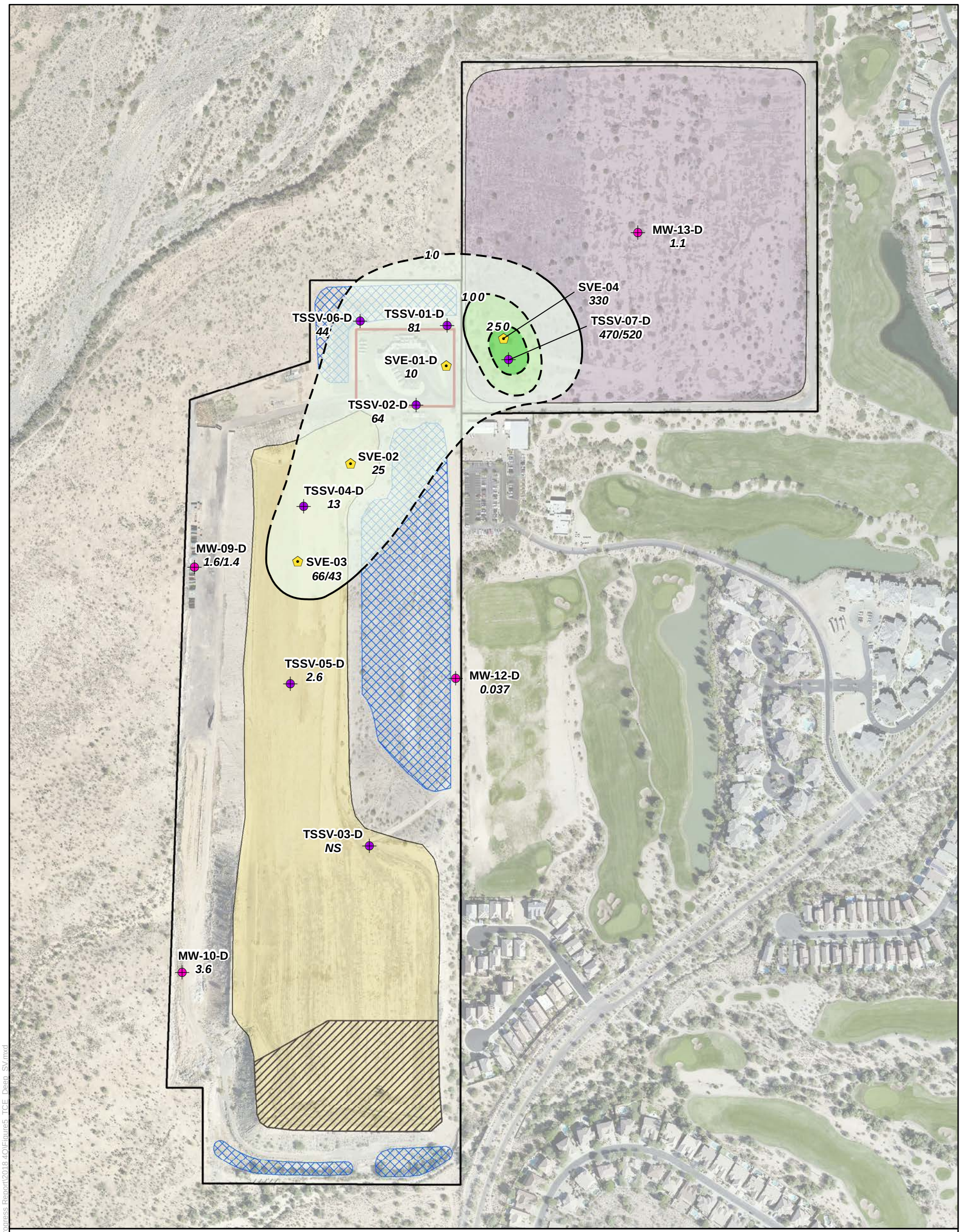
2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona

Middle Zone TCE Soil Vapor Concentrations
December 2018

FIGURE
4

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2018 4Q\Figure4_TCE_Middle_SV.mxd



Legend

TCE Concentrations (mg/m³) in Soil Vapor

(Dashed Where Inferred)

10-100 | 100-250 | 250-500

- 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
10	TCE soil gas result (mg/m³) December 2018
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:	3/8/2019
Scale:	1" = 350'

N

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. Project Number 1420192004. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

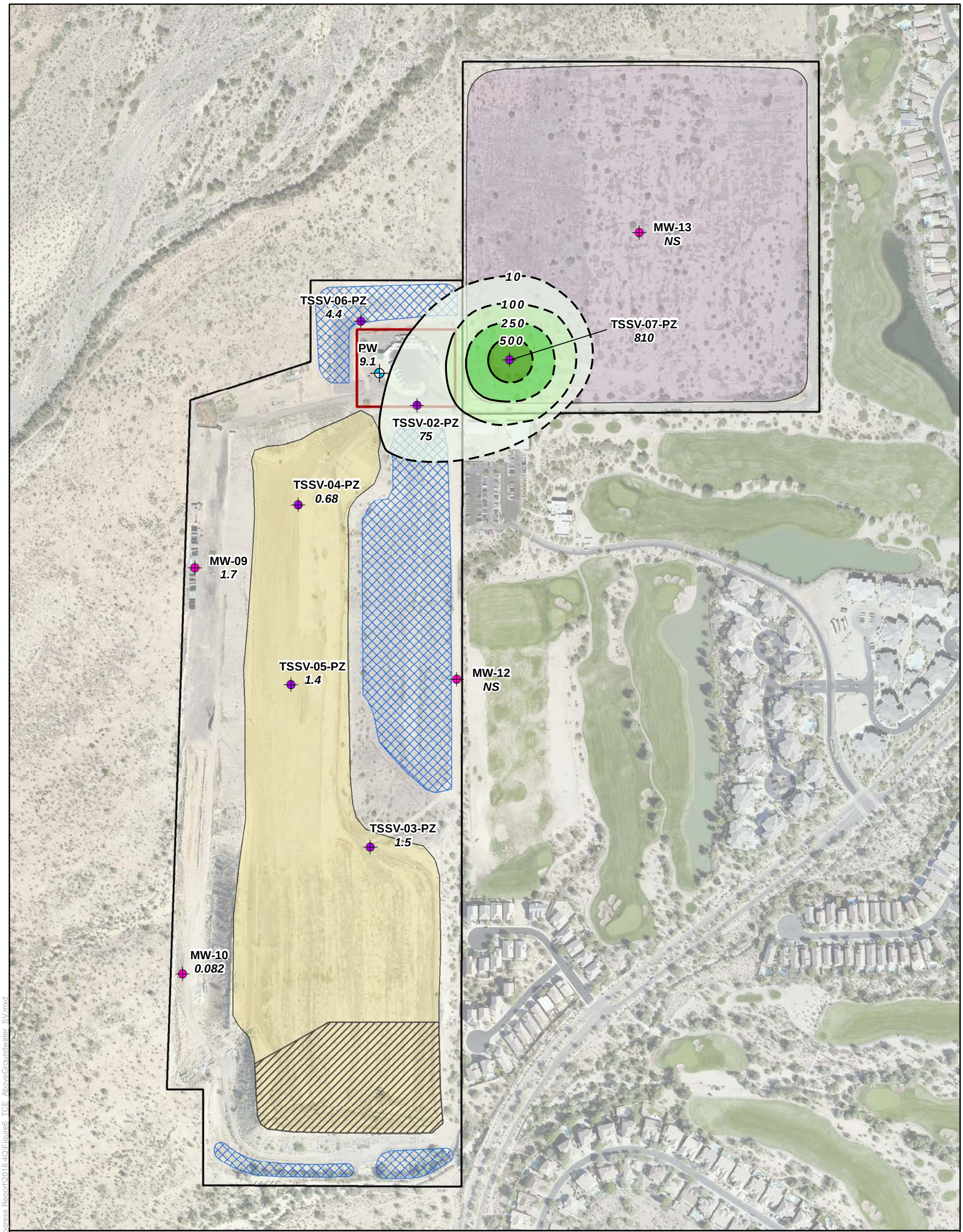
2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona

Deep Zone TCE Soil Vapor Concentrations
December 2018

FIGURE
5

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2018 4Q\Figure5_TCE_Deep_SV.mxd



Legend

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

10-100 | 100-250 | 250-500 | ≥500

- 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:

TSSV-02-PZ	Well Identification
75	TCE soil gas result (mg/m³) collected December 2018
760/980	Original/Duplicate Results
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:	3/8/2019
Scale:	1" = 350'

N

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. Project Number 1420192004. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

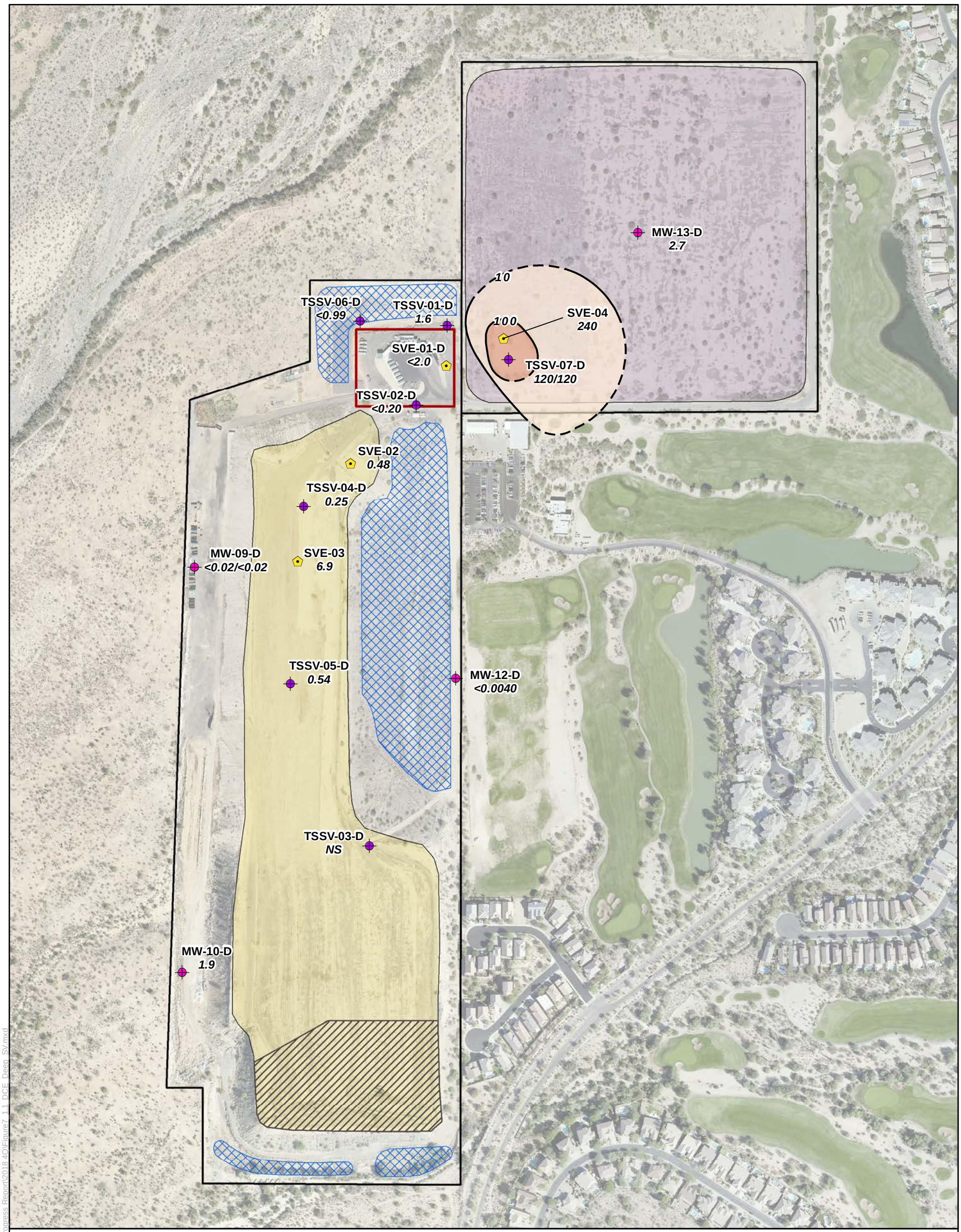
2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona

Above Water Table TCE Soil Vapor Concentrations December 2018

FIGURE **6**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2018 4Q\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:

SVE-03	Well Identification
6.9	1,1-DCE soil gas result (mg/m³) collected December 2018
ft amsl	Feet above mean sea level
1,1-DCE	1,1-Dichloroethene
mg/m³	Milligram per cubic meter
NS	Not Sampled

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:	3/8/2019
Scale:	1" = 350'

N

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. Project Number 1420192004. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona

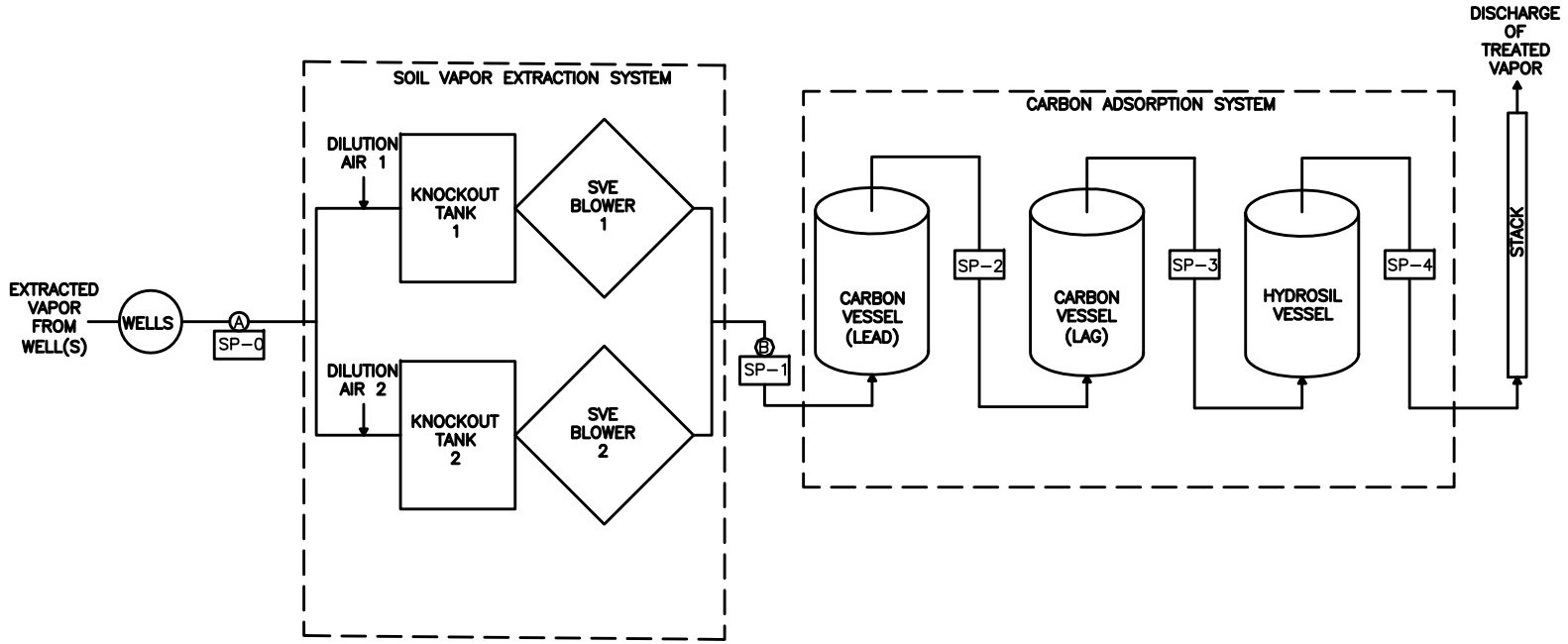
Deep Zone 1,1-DCE Soil Vapor Concentrations December 2018

FIGURE **7**

wood.

Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2018 4QF\Figure7_1,1_DCE_Deep_SV.mxd

PRESSURE FLOW THROUGH CARBON ADSORPTION SYSTEM



LEGEND

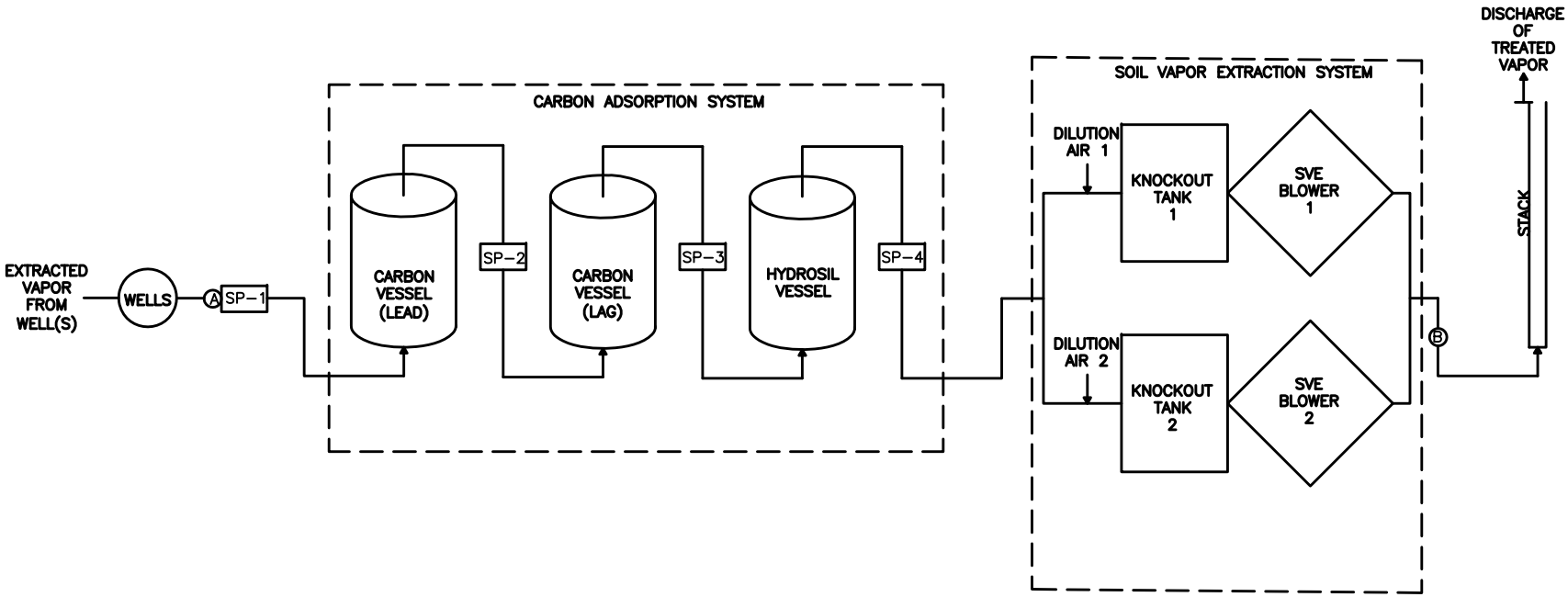
- Ⓐ SYSTEM FLOW MEASUREMENT (PRE-DILUTION LOCATION)
- Ⓑ SYSTEM FLOW MEASUREMENT (POST-DILUTION LOCATION)
- SP-0 SYSTEM INLET SAMPLE LOCATION
- SP-1 CAS INLET SAMPLE LOCATION
- SP-2 CAS LEAD VESSEL OUTLET SAMPLE LOCATION
- SP-3 CAS LAG VESSEL OUTLET SAMPLE LOCATION
- SP-4 CAS OUTLET SAMPLE LOCATION

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

VACUUM 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 – VACUUM 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. 8.2	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

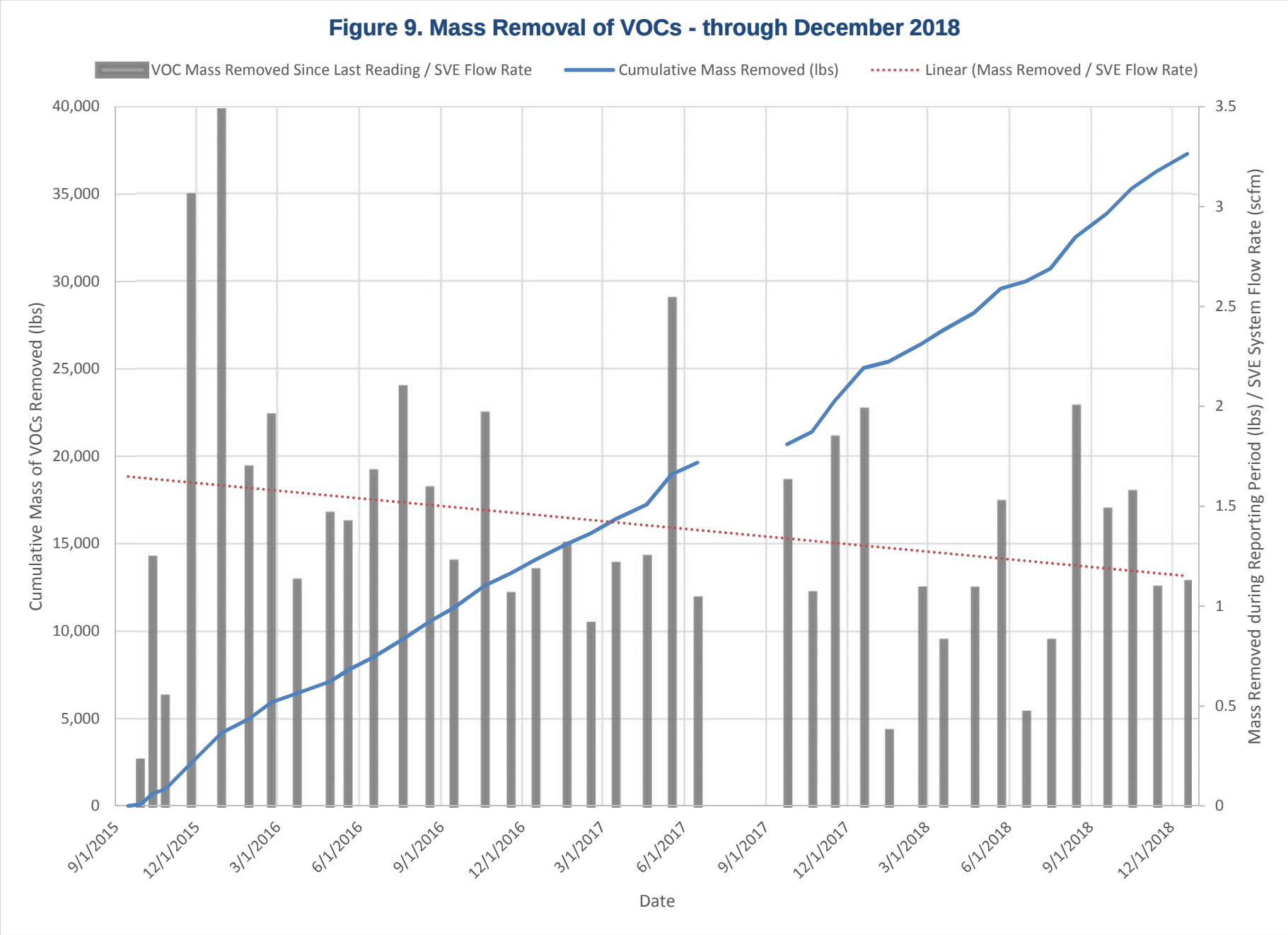


Figure 9. Mass Removal of VOCs - through December 2018
VOC Mass Removed Since Last Reading / SVE Flow Rate
Cumulative Mass Removed (lbs)
Linear (Mass Removed / SVE Flow Rate)
Cumulative Mass of VOCs Removed (lbs)
Mass Removed during Reporting Period (lbs) / SVE System Flow Rate (scfm)
Date
40,000
35,000
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

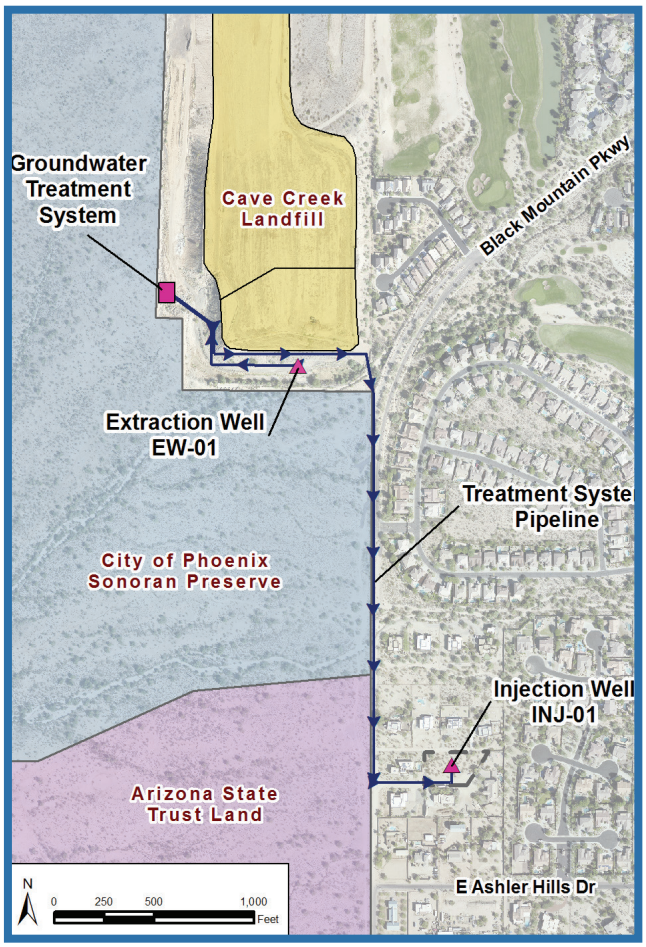
APPENDIX A

COMMUNITY NOTICE FLYER

NOTIFICATION OF UPDATED SCHEDULE TO CONSTRUCTION AND DRILLING PLANS

Construction Activities on 4050 E. Sleepy Ranch Road, Cave Creek 85331

You previously received a flyer in the mail giving notice of upcoming construction and drilling activities at 4050 E. Sleepy Ranch Road. This flyer is being sent to inform you of a revision to the schedule. Due to the high volume of drilling jobs occurring this summer in and around Phoenix, the drilling contractor was unable to staff the well construction until November 2018. Rather than schedule the drilling to overlap with the holidays, the drilling schedule has been delayed until January 2019. A reiteration of the project background and the updated schedule is provided below.



Map 1. Planned infrastructure supporting cleanup of groundwater at Cave Creek Landfill

Groundwater cleanup from the Cave Creek landfill started in 2016 after the final plan was approved by the Arizona Department of Environmental Quality (ADEQ). You might have seen drilling rigs and other machinery at the landfill and surrounding area. The contaminated water is more than 600 feet below the surface and is not currently used for drinking water. However, Maricopa County is required to clean the water and remove the contaminating vapors from under the landfill.

The approved Remedial Action Plan has led the county contractors to drill wells in strategic areas around the landfill. Some of these are for monitoring water quality while others will pull contaminated water to the surface where it will be filtered and cleaned in a Groundwater Treatment System. The well planned for 4050 E Sleepy Ranch Rd is an injection well. Water cleaned in the Groundwater Treatment System will be piped to the injection well site and pumped deep below the surface to return clean water to the aquifer and slow the migration of contaminated water towards water supply wells.

There are several phases of this project that will start with building an eight foot wall on the property similar to those surrounding area homes. Picture 1, on reverse shows what it will look like, and Picture 3 details the 20-foot buffer from the property line.

PHASE DETAILS

Please see the reverse side or visit:
www.maricopa.gov/2383/Groundwater

QUESTIONS

Email: cavecreeklandfill@mail.maricopa.gov
Call: Stephanie Bracken, Public Information Officer for the City of Phoenix (602) 534-1209.

PHASE ONE
Expected Construction Time: November 2018

Wall construction begins. Every effort will be made to restrict equipment and parking to the property.

Picture 1. Conceptual rendering of wall and access gate on injection well property.

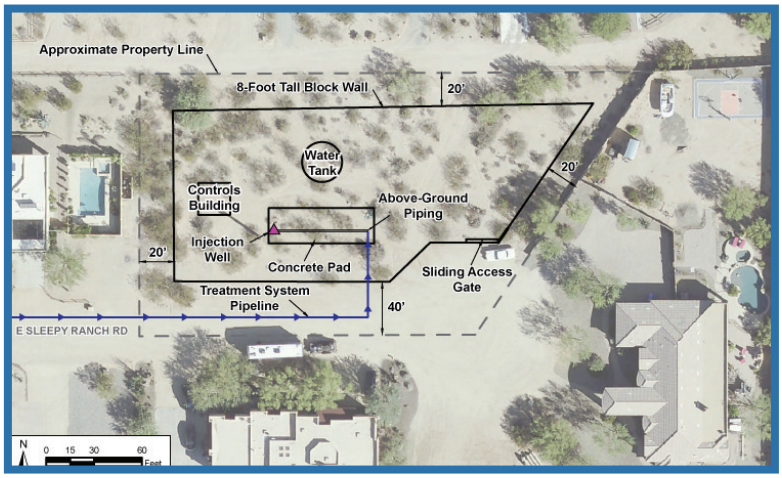
Picture 2. Typical well site during well installation.

PHASE TWO
Expected Construction Time: January through April 2019

A truck mounted drilling rig will drill, develop and test the well. The company uses sound barriers to reduce noise and light pollution, but the drilling portion of this work will be a noisy operation for three to four weeks, 24 hours per day.
We apologize in advance for the disturbance.

PHASE THREE
Expected Construction Time: Spring 2019

An eight inch diameter pipe will be run from the Groundwater Treatment System to the injection well in your neighborhood. Access to your property will be maintained. The construction will only take place during the day, but there will be times where traffic flow is interrupted. The crews will take all necessary safety precautions to cover trenches and direct traffic.



Picture 3. Planned injection well site layout.

Picture 4. Typical wellhead piping at an injection well site.

PHASE FOUR
Expected Construction Time: Fall 2019

Construction at the well site begins. A pump is installed along with all the mechanical and electrical components. This will take a small number of people and every effort will be made to keep activities within the walls on the property.

APPENDIX B

LABORATORY REPORTS OF ANALYSIS
(ON CD ONLY)

Analytical Report 605620

for

Wood Environment & Infrastructure Solutions, Inc.

Project Manager: Natalie Chrisman

Cave Creek Landfill - Maricopa

1420172034.**.021**

20-DEC-18

Collected By: Client

2525 West Huntington Drive, Suite 102
Tempe, AZ 85282
Ph: (480) 355-0900

Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Houston (EPA Lab code: TX00122): Arizona (AZ0765)
Xenco-Dallas (EPA Lab code: TX01468): Arizona (AZ0809)

20-DEC-18

Project Manager: **Natalie Chrisman**
Wood Environment & Infrastructure Solutions, Inc.
4600 E. Washington Suite 600
Phoenix, AZ 85034

Reference: TWA Report No(s): **605620**
Cave Creek Landfill - Maricopa
Project Address:

Natalie Chrisman :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the TWA Report Number(s) 605620. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the ADHS certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with ADHS standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and ADHS Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by TransWest Analytical. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 605620 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting TransWest Analytical to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Skip Harden
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

CASE NARRATIVE

Client Name: Wood Environment & Infrastructure Solutions, Inc.
Project Name: Cave Creek Landfill - Maricopa

Project ID: *1420172034.****.021*
Work Order Number(s): *605620*

Report Date: *20-DEC-18*
Date Received: *11/15/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3072450 VOCs by SW 8260B
R2:
The RPD for the target analyte was outside of acceptance criteria in the MS/MSD.

Batch: LBA-3073056 VOCs by SW 8260B
R2:
The RPD for the target analyte was outside of acceptance criteria in the MS/MSD.

Flagging Criteria

Arizona Flags

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order except as detailed below or on the Data Qualifier page of this report. Data Qualifiers used in this report are in accordance with ADHS Data Qualifiers, Revision 4.0 9/05/2012.
Data qualifiers (flags) contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

D2 Sample required dilution due to high concentration of target analyte.

E4 Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL).

E8 Analyte reported to MDL per project specification. Target analyte was not detected in sample.

H1 Sample analysis performed past holding time.

L2 The associated blank spike recovery was below laboratory acceptance limits.

M1 Matrix spike recovery was high; the associated blank spike recovery was acceptable.

M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The associated blank spike recovery was acceptable.

R2 RPD/RSD exceeded the laboratory acceptance limit. See case narrative.

R7 LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

S6 Surrogate recovery was below laboratory and method acceptance limits. Re-extraction and/or reanalysis confirms low recovery caused by matrix effect.

T4 Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Sample Cross Reference 605620

Wood Environment & Infrastructure Solutions, Inc., Phoen

Cave Creek Landfill - Maricopa

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW02-714-111518	W	11-15-18 09:00		605620-001
MW03-723-111518	W	11-15-18 14:30		605620-002
MW04-708-111518	W	11-15-18 12:30		605620-003
MW05-704-111518	W	11-15-18 09:35		605620-004
MW06-721-111518	W	11-15-18 13:50		605620-005
MW07-718-111518	W	11-15-18 13:10		605620-006
MW08-742-111518	W	11-15-18 11:25		605620-007
PW-734-111518	W	11-15-18 10:30		605620-008
PDB Blank	W	11-15-18 14:35		605620-009
Trip Blank	W	11-15-18 14:40		605620-010
DUP01-111518	W	11-15-18 13:00		605620-011

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW02-714-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-001 Date Collected: 11.15.18 09.00

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 00.31	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 00.31	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 00.31	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 00.31	H1E8	1
1,1-Dichloroethane	75-34-3	**2.14**	0.500	0.0700	ug/L	12.10.18 00.31	H1	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 00.31	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 00.31	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 00.31	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 00.31	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 00.31	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 00.31	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 00.31	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 00.31	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 00.31	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 00.31	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 00.31	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 00.31	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 00.31	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 00.31	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 00.31	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 00.31	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 00.31	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 00.31	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 00.31	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 00.31	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 00.31	H1E8	1
Acetone	67-64-1	<0.600	20.0	0.600	ug/L	12.10.18 00.31	H1L2E8	1
Benzene	71-43-2	**0.490**	0.500	0.100	ug/L	12.10.18 00.31	H1E4	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 00.31	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 00.31	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 00.31	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 00.31	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 00.31	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 00.31	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 00.31	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 00.31	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 00.31	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 00.31	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW02-714-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-001 Date Collected: 11.15.18 09.00

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 00.31	H1E8	1
cis-1,2-Dichloroethene	156-59-2	**4.30**	0.500	0.200	ug/L	12.10.18 00.31	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 00.31	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 00.31	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 00.31	H1E8	1
Dichlorodifluoromethane	75-71-8	**1.65**	2.00	0.200	ug/L	12.10.18 00.31	H1E4	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 00.31	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 00.31	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 00.31	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 00.31	H1E8	1
m,p-Xylenes	179601-23-1	**0.450**	2.00	0.0900	ug/L	12.10.18 00.31	H1E4	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 00.31	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 00.31	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 00.31	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 00.31	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 00.31	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 00.31	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 00.31	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 00.31	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 00.31	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 00.31	H1E8	1
Tetrachloroethylene	127-18-4	**3.34**	0.500	0.0800	ug/L	12.10.18 00.31	H1	1
Toluene	108-88-3	**0.530**	2.00	0.0700	ug/L	12.10.18 00.31	H1E4	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 00.31	H1E8	1
Total Xylenes	1330-20-7	**0.450**	1.00	0.0900	ug/L	12.10.18 00.31	H1E4	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 00.31	H1E8	1
Trichloroethene	79-01-6	**97.2**	0.500	0.200	ug/L	12.10.18 00.31	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 00.31	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 00.31	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 00.31	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 00.31	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 00.31	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 00.31	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 00.31	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 00.31	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 00.31	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 00.31	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 00.31	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW02-714-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-001 Date Collected: 11.15.18 09.00

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 00.31	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	111	%	70-130	12.10.18 00.31	
Dibromofluoromethane	98	%	70-130	12.10.18 00.31	
1,2-Dichloroethane-D4	89	%	59-138	12.10.18 00.31	
Toluene-D8	111	%	70-130	12.10.18 00.31	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.09
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000450	0.000500	0.00000451	mg/L	11.20.18 19.14	E8	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	89	%	41-128	11.20.18 19.14	
2-Fluorobiphenyl	82	%	55-135	11.20.18 19.14	
Terphenyl-D14	86	%	54-131	11.20.18 19.14	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW03-723-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-002 Date Collected: 11.15.18 14.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 00.57	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 00.57	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 00.57	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 00.57	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 00.57	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 00.57	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 00.57	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 00.57	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 00.57	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 00.57	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 00.57	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 00.57	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 00.57	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 00.57	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 00.57	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 00.57	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 00.57	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 00.57	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 00.57	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 00.57	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 00.57	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 00.57	H1E8	1
Acetone	67-64-1	**11.2**	20.0	0.600	ug/L	12.10.18 00.57	H1L2E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 00.57	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 00.57	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 00.57	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 00.57	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 00.57	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 00.57	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 00.57	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 00.57	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 00.57	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW03-723-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-002 Date Collected: 11.15.18 14.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 00.57	H1E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 00.57	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 00.57	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 00.57	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 00.57	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 00.57	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 00.57	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 00.57	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 00.57	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 00.57	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 00.57	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 00.57	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 00.57	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 00.57	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 00.57	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 00.57	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 00.57	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 00.57	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 00.57	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 00.57	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.10.18 00.57	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 00.57	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 00.57	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 00.57	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 00.57	H1E8	1
Trichloroethene	79-01-6	**2.48**	0.500	0.200	ug/L	12.10.18 00.57	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 00.57	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 00.57	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 00.57	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 00.57	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 00.57	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 00.57	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 00.57	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 00.57	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 00.57	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 00.57	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 00.57	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW03-723-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-002 Date Collected: 11.15.18 14.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 00.57	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	94	%	70-130	12.10.18 00.57	
Dibromofluoromethane	82	%	70-130	12.10.18 00.57	
1,2-Dichloroethane-D4	86	%	59-138	12.10.18 00.57	
Toluene-D8	88	%	70-130	12.10.18 00.57	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.12
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000460	0.000505	0.00000455	mg/L	11.20.18 19.32	E8	1.01

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	51	%	41-128	11.20.18 19.32	
2-Fluorobiphenyl	44	%	55-135	11.20.18 19.32	S6
Terphenyl-D14	46	%	54-131	11.20.18 19.32	S6

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW04-708-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-003 Date Collected: 11.15.18 12.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 01.22	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 01.22	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 01.22	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 01.22	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 01.22	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 01.22	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 01.22	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 01.22	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	**0.550**	2.00	0.0700	ug/L	12.10.18 01.22	H1E4	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 01.22	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 01.22	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 01.22	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 01.22	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 01.22	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 01.22	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 01.22	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 01.22	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 01.22	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 01.22	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 01.22	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 01.22	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 01.22	H1E8	1
Acetone	67-64-1	**8.52**	20.0	0.600	ug/L	12.10.18 01.22	H1L2E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 01.22	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 01.22	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 01.22	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 01.22	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 01.22	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 01.22	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 01.22	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 01.22	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 01.22	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW04-708-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-003 Date Collected: 11.15.18 12.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 01.22	H1E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 01.22	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 01.22	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 01.22	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 01.22	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 01.22	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 01.22	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 01.22	H1E8	1
m,p-Xylenes	179601-23-1	**0.640**	2.00	0.0900	ug/L	12.10.18 01.22	H1E4	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 01.22	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 01.22	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 01.22	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 01.22	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 01.22	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 01.22	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 01.22	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 01.22	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 01.22	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 01.22	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.10.18 01.22	H1E8	1
Toluene	108-88-3	**0.440**	2.00	0.0700	ug/L	12.10.18 01.22	H1E4	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 01.22	H1E8	1
Total Xylenes	1330-20-7	**0.640**	1.00	0.0900	ug/L	12.10.18 01.22	H1E4	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 01.22	H1E8	1
Trichloroethene	79-01-6	<0.200	0.500	0.200	ug/L	12.10.18 01.22	H1E8	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 01.22	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 01.22	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 01.22	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 01.22	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 01.22	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 01.22	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 01.22	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 01.22	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 01.22	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 01.22	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 01.22	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW04-708-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-003 Date Collected: 11.15.18 12.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 01.22	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	98	%	70-130	12.10.18 01.22	
Dibromofluoromethane	90	%	70-130	12.10.18 01.22	
1,2-Dichloroethane-D4	74	%	59-138	12.10.18 01.22	
Toluene-D8	94	%	70-130	12.10.18 01.22	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.15
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000460	0.000505	0.00000455	mg/L	11.20.18 19.50	E8	1.01

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	77	%	41-128	11.20.18 19.50	
2-Fluorobiphenyl	76	%	55-135	11.20.18 19.50	
Terphenyl-D14	84	%	54-131	11.20.18 19.50	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW05-704-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-004 Date Collected: 11.15.18 09.35

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 01.49	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 01.49	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 01.49	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 01.49	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 01.49	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 01.49	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 01.49	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 01.49	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 01.49	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 01.49	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 01.49	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 01.49	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 01.49	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 01.49	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 01.49	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 01.49	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 01.49	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 01.49	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 01.49	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 01.49	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 01.49	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 01.49	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 01.49	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 01.49	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 01.49	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 01.49	H1E8	1
Acetone	67-64-1	**1.33**	20.0	0.600	ug/L	12.10.18 01.49	H1L2E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 01.49	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 01.49	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 01.49	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 01.49	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 01.49	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 01.49	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 01.49	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 01.49	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 01.49	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 01.49	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 01.49	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW05-704-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-004 Date Collected: 11.15.18 09.35

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 01.49	H1E8	1
cis-1,2-Dichloroethene	156-59-2	**0.490**	0.500	0.200	ug/L	12.10.18 01.49	H1E4	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 01.49	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 01.49	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 01.49	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 01.49	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 01.49	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 01.49	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 01.49	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 01.49	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 01.49	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 01.49	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 01.49	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 01.49	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 01.49	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 01.49	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 01.49	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 01.49	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 01.49	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 01.49	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 01.49	H1E8	1
Tetrachloroethylene	127-18-4	**0.410**	0.500	0.0800	ug/L	12.10.18 01.49	H1E4	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 01.49	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 01.49	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 01.49	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 01.49	H1E8	1
Trichloroethene	79-01-6	**59.0**	0.500	0.200	ug/L	12.10.18 01.49	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 01.49	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 01.49	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 01.49	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 01.49	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 01.49	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 01.49	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 01.49	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 01.49	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 01.49	H1E8	1
n-Hexane	110-54-3	**1.13**	5.00	0.0920	ug/L	12.10.18 01.49	H1E4	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 01.49	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW05-704-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-004 Date Collected: 11.15.18 09.35

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 01.49	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	106	%	70-130	12.10.18 01.49	
Dibromofluoromethane	98	%	70-130	12.10.18 01.49	
1,2-Dichloroethane-D4	78	%	59-138	12.10.18 01.49	
Toluene-D8	126	%	70-130	12.10.18 01.49	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.18
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000450	0.000500	0.00000451	mg/L	11.20.18 20.08	E8	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	57	%	41-128	11.20.18 20.08	
2-Fluorobiphenyl	52	%	55-135	11.20.18 20.08	S6
Terphenyl-D14	62	%	54-131	11.20.18 20.08	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW06-721-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-005 Date Collected: 11.15.18 13.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 02.14	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 02.14	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 02.14	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 02.14	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 02.14	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 02.14	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 02.14	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 02.14	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 02.14	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 02.14	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 02.14	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 02.14	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 02.14	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 02.14	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 02.14	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 02.14	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 02.14	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 02.14	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 02.14	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 02.14	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 02.14	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 02.14	H1E8	1
Acetone	67-64-1	**11.1**	20.0	0.600	ug/L	12.10.18 02.14	H1L2E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 02.14	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 02.14	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 02.14	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 02.14	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 02.14	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 02.14	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 02.14	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 02.14	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 02.14	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW06-721-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-005 Date Collected: 11.15.18 13.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 02.14	H1E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 02.14	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 02.14	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 02.14	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 02.14	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 02.14	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 02.14	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 02.14	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 02.14	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 02.14	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 02.14	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 02.14	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 02.14	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 02.14	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 02.14	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 02.14	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 02.14	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 02.14	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 02.14	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 02.14	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.10.18 02.14	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 02.14	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 02.14	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 02.14	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 02.14	H1E8	1
Trichloroethene	79-01-6	**0.930**	0.500	0.200	ug/L	12.10.18 02.14	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 02.14	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 02.14	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 02.14	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 02.14	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 02.14	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 02.14	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 02.14	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 02.14	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 02.14	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 02.14	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 02.14	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW06-721-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-005 Date Collected: 11.15.18 13.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 02.14	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	95	%	70-130	12.10.18 02.14	
Dibromofluoromethane	92	%	70-130	12.10.18 02.14	
1,2-Dichloroethane-D4	73	%	59-138	12.10.18 02.14	
Toluene-D8	117	%	70-130	12.10.18 02.14	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.21
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000450	0.000500	0.00000451	mg/L	11.20.18 20.26	E8	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	88	%	41-128	11.20.18 20.26	
2-Fluorobiphenyl	82	%	55-135	11.20.18 20.26	
Terphenyl-D14	88	%	54-131	11.20.18 20.26	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW07-718-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-006 Date Collected: 11.15.18 13.10

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 02.40	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 02.40	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 02.40	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 02.40	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 02.40	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 02.40	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 02.40	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 02.40	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 02.40	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 02.40	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 02.40	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 02.40	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 02.40	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 02.40	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 02.40	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 02.40	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 02.40	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 02.40	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 02.40	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 02.40	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 02.40	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 02.40	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 02.40	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 02.40	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 02.40	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 02.40	H1E8	1
Acetone	67-64-1	**18.4**	20.0	0.600	ug/L	12.10.18 02.40	H1L2E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 02.40	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 02.40	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 02.40	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 02.40	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 02.40	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 02.40	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 02.40	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 02.40	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 02.40	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 02.40	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 02.40	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW07-718-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-006 Date Collected: 11.15.18 13.10

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 02.40	H1E8	1
cis-1,2-Dichloroethene	156-59-2	**0.970**	0.500	0.200	ug/L	12.10.18 02.40	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 02.40	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 02.40	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 02.40	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 02.40	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 02.40	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 02.40	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 02.40	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 02.40	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 02.40	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 02.40	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 02.40	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 02.40	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 02.40	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 02.40	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 02.40	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 02.40	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 02.40	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 02.40	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 02.40	H1E8	1
Tetrachloroethylene	127-18-4	**0.450**	0.500	0.0800	ug/L	12.10.18 02.40	H1E4	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 02.40	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 02.40	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 02.40	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 02.40	H1E8	1
Trichloroethene	79-01-6	**29.8**	0.500	0.200	ug/L	12.10.18 02.40	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 02.40	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 02.40	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 02.40	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 02.40	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 02.40	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 02.40	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 02.40	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 02.40	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 02.40	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 02.40	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 02.40	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW07-718-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-006 Date Collected: 11.15.18 13.10

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 02.40	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	89	%	70-130	12.10.18 02.40	
Dibromofluoromethane	94	%	70-130	12.10.18 02.40	
1,2-Dichloroethane-D4	71	%	59-138	12.10.18 02.40	
Toluene-D8	88	%	70-130	12.10.18 02.40	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.24
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000450	0.000500	0.00000451	mg/L	11.20.18 20.45	E8	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	72	%	41-128	11.20.18 20.45	
2-Fluorobiphenyl	66	%	55-135	11.20.18 20.45	
Terphenyl-D14	77	%	54-131	11.20.18 20.45	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW08-742-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-007 Date Collected: 11.15.18 11.25

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:26 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 03.06	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 03.06	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 03.06	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.06	H1E8	1
1,1-Dichloroethane	75-34-3	**1.56**	0.500	0.0700	ug/L	12.10.18 03.06	H1	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 03.06	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 03.06	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 03.06	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 03.06	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 03.06	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 03.06	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 03.06	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 03.06	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 03.06	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 03.06	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.06	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 03.06	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 03.06	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 03.06	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 03.06	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 03.06	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 03.06	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 03.06	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 03.06	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 03.06	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 03.06	H1E8	1
Acetone	67-64-1	**43.8**	20.0	0.600	ug/L	12.10.18 03.06	H1L2	1
Benzene	71-43-2	**0.580**	0.500	0.100	ug/L	12.10.18 03.06	H1	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 03.06	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 03.06	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 03.06	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 03.06	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 03.06	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 03.06	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 03.06	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW08-742-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-007 Date Collected: 11.15.18 11.25

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:26 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 03.06	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 03.06	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 03.06	H1E8	1
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 03.06	H1E8	1
cis-1,2-Dichloroethene	156-59-2	**0.900**	0.500	0.200	ug/L	12.10.18 03.06	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 03.06	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 03.06	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 03.06	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 03.06	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 03.06	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 03.06	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 03.06	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 03.06	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 03.06	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 03.06	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 03.06	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 03.06	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 03.06	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 03.06	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 03.06	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 03.06	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 03.06	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 03.06	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 03.06	H1E8	1
Tetrachloroethylene	127-18-4	**1.14**	0.500	0.0800	ug/L	12.10.18 03.06	H1	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 03.06	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 03.06	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 03.06	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.06	H1E8	1
Trichloroethene	79-01-6	**135**	2.50	1.00	ug/L	12.11.18 20.26	H1D2	5
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 03.06	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 03.06	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 03.06	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 03.06	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 03.06	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **MW08-742-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-007 Date Collected: 11.15.18 11.25

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:26 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 03.06	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 03.06	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 03.06	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 03.06	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 03.06	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 03.06	T4	1
Propene	115-07-1	ND			ug/L	12.10.18 03.06	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	101	%	70-130	12.10.18 03.06	
Dibromofluoromethane	99	%	70-130	12.10.18 03.06	
1,2-Dichloroethane-D4	80	%	59-138	12.10.18 03.06	
Toluene-D8	101	%	70-130	12.10.18 03.06	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.27
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000450	0.000500	0.00000451	mg/L	11.20.18 21.03	E8	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	72	%	41-128	11.20.18 21.03	
2-Fluorobiphenyl	67	%	55-135	11.20.18 21.03	
Terphenyl-D14	82	%	54-131	11.20.18 21.03	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **PW-734-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-008 Date Collected: 11.15.18 10.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 03.32	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 03.32	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.32	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 03.32	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 03.32	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 03.32	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 03.32	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 03.32	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 03.32	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 03.32	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 03.32	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 03.32	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.32	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 03.32	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 03.32	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 03.32	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 03.32	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 03.32	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 03.32	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 03.32	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 03.32	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 03.32	H1E8	1
Acetone	67-64-1	**2.63**	20.0	0.600	ug/L	12.10.18 03.32	H1L2E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 03.32	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 03.32	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 03.32	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 03.32	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 03.32	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 03.32	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 03.32	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 03.32	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 03.32	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **PW-734-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-008 Date Collected: 11.15.18 10.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 03.32	H1E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 03.32	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 03.32	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 03.32	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 03.32	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 03.32	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 03.32	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 03.32	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 03.32	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 03.32	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 03.32	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 03.32	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 03.32	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 03.32	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 03.32	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 03.32	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 03.32	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 03.32	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 03.32	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 03.32	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.10.18 03.32	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 03.32	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 03.32	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 03.32	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.32	H1E8	1
Trichloroethene	79-01-6	**2.33**	0.500	0.200	ug/L	12.10.18 03.32	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 03.32	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 03.32	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 03.32	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 03.32	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 03.32	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 03.32	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 03.32	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 03.32	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 03.32	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 03.32	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 03.32	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **PW-734-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-008 Date Collected: 11.15.18 10.30

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 03.32	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	84	%	70-130	12.10.18 03.32	
Dibromofluoromethane	86	%	70-130	12.10.18 03.32	
1,2-Dichloroethane-D4	70	%	59-138	12.10.18 03.32	
Toluene-D8	88	%	70-130	12.10.18 03.32	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.30
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	<0.00000450	0.000500	0.00000451	mg/L	11.20.18 21.21	E8	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	76	%	41-128	11.20.18 21.21	
2-Fluorobiphenyl	70	%	55-135	11.20.18 21.21	
Terphenyl-D14	83	%	54-131	11.20.18 21.21	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **PDB Blank** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-009 Date Collected: 11.15.18 14.35

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 03.57	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 03.57	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.57	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 03.57	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 03.57	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 03.57	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 03.57	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 03.57	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 03.57	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 03.57	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
1,2-Dichlorobenzene	95-50-1	**0.430**	1.50	0.0800	ug/L	12.10.18 03.57	H1E4	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 03.57	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.57	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 03.57	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 03.57	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 03.57	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 03.57	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
2-Butanone	78-93-3	**11.4**	5.00	0.300	ug/L	12.10.18 03.57	H1	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 03.57	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 03.57	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 03.57	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 03.57	H1E8	1
Acetone	67-64-1	**101**	20.0	0.600	ug/L	12.10.18 03.57	H1L2	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 03.57	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 03.57	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 03.57	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 03.57	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 03.57	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 03.57	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 03.57	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 03.57	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 03.57	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **PDB Blank** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-009 Date Collected: 11.15.18 14.35

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 03.57	H1E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 03.57	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 03.57	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 03.57	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 03.57	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 03.57	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 03.57	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 03.57	H1E8	1
m,p-Xylenes	179601-23-1	**0.520**	2.00	0.0900	ug/L	12.10.18 03.57	H1E4	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 03.57	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 03.57	H1E8	1
Naphthalene	91-20-3	**2.41**	5.00	0.200	ug/L	12.10.18 03.57	H1E4	1
n-Butylbenzene	104-51-8	**0.450**	2.50	0.200	ug/L	12.10.18 03.57	H1E4	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 03.57	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 03.57	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 03.57	H1E8	1
Sec-Butylbenzene	135-98-8	**0.510**	1.50	0.100	ug/L	12.10.18 03.57	H1E4	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 03.57	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 03.57	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.10.18 03.57	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 03.57	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 03.57	H1E8	1
Total Xylenes	1330-20-7	**0.520**	1.00	0.0900	ug/L	12.10.18 03.57	H1E4	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 03.57	H1E8	1
Trichloroethene	79-01-6	<0.200	0.500	0.200	ug/L	12.10.18 03.57	H1E8	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 03.57	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 03.57	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 03.57	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 03.57	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 03.57	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 03.57	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 03.57	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 03.57	H1E8	1
Methylcyclohexane	108-87-2	**0.740**	5.00	0.117	ug/L	12.10.18 03.57	H1E4	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.10.18 03.57	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 03.57	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **PDB Blank**
Lab Sample Id: 605620-009

Matrix: Water
Date Collected: 11.15.18 14.35

Date Received:11.15.18 16.20

Analytical Method: VOCs by SW 8260B
Tech: MNI
Analyst: MNI
Seq Number: 3073056

Date Prep: 12.09.18 12.07

Prep Method: SW5030C
% Solids:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 03.57	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	95	%	70-130	12.10.18 03.57	
Dibromofluoromethane	95	%	70-130	12.10.18 03.57	
1,2-Dichloroethane-D4	73	%	59-138	12.10.18 03.57	
Toluene-D8	97	%	70-130	12.10.18 03.57	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **Trip Blank** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-010 Date Collected: 11.15.18 14.40

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 04.23	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 04.23	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 04.23	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.10.18 04.23	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 04.23	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 04.23	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 04.23	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 04.23	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 04.23	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 04.23	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 04.23	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 04.23	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 04.23	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 04.23	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 04.23	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 04.23	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 04.23	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 04.23	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 04.23	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 04.23	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 04.23	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 04.23	H1E8	1
Acetone	67-64-1	<0.600	20.0	0.600	ug/L	12.10.18 04.23	H1L2E8	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.10.18 04.23	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 04.23	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 04.23	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 04.23	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 04.23	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 04.23	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 04.23	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 04.23	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 04.23	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **Trip Blank** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-010 Date Collected: 11.15.18 14.40

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 04.23	H1E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 04.23	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 04.23	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 04.23	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 04.23	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 04.23	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 04.23	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 04.23	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 04.23	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 04.23	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 04.23	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 04.23	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 04.23	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 04.23	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 04.23	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 04.23	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 04.23	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 04.23	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 04.23	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.10.18 04.23	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 04.23	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 04.23	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 04.23	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 04.23	H1E8	1
Trichloroethene	79-01-6	<0.200	0.500	0.200	ug/L	12.10.18 04.23	H1E8	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 04.23	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 04.23	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 04.23	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 04.23	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 04.23	H1E8	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 04.23	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 04.23	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 04.23	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 04.23	H1E8	1
n-Hexane	110-54-3	**1.30**	5.00	0.0920	ug/L	12.10.18 04.23	H1E4	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 04.23	T4	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **Trip Blank**
Lab Sample Id: 605620-010

Matrix: Water
Date Collected: 11.15.18 14.40

Date Received:11.15.18 16.20

Analytical Method: VOCs by SW 8260B
Tech: MNI
Analyst: MNI
Seq Number: 3073056

Date Prep: 12.09.18 12.07

Prep Method: SW5030C
% Solids:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.10.18 04.23	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	93	%	70-130	12.10.18 04.23	
Dibromofluoromethane	93	%	70-130	12.10.18 04.23	
1,2-Dichloroethane-D4	71	%	59-138	12.10.18 04.23	
Toluene-D8	97	%	70-130	12.10.18 04.23	

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP01-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-011 Date Collected: 11.15.18 13.00

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:52 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.10.18 04.49	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.10.18 04.49	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.10.18 04.49	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.10.18 04.49	H1E8	1
1,1-Dichloroethane	75-34-3	**1.67**	0.500	0.0700	ug/L	12.10.18 04.49	H1	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.10.18 04.49	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.10.18 04.49	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.10.18 04.49	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.10.18 04.49	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.10.18 04.49	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.10.18 04.49	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.10.18 04.49	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.10.18 04.49	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.10.18 04.49	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.10.18 04.49	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.10.18 04.49	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.10.18 04.49	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.10.18 04.49	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.10.18 04.49	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.10.18 04.49	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.10.18 04.49	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.10.18 04.49	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.10.18 04.49	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.10.18 04.49	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.10.18 04.49	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.10.18 04.49	H1E8	1
Acetone	67-64-1	**42.1**	20.0	0.600	ug/L	12.10.18 04.49	H1L2	1
Benzene	71-43-2	**0.610**	0.500	0.100	ug/L	12.10.18 04.49	H1	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.10.18 04.49	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.10.18 04.49	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.10.18 04.49	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.10.18 04.49	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.10.18 04.49	H1E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.10.18 04.49	H1E8	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.10.18 04.49	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP01-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-011 Date Collected: 11.15.18 13.00

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:52 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.10.18 04.49	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.10.18 04.49	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.10.18 04.49	H1E8	1
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.10.18 04.49	H1E8	1
cis-1,2-Dichloroethene	156-59-2	**0.930**	0.500	0.200	ug/L	12.10.18 04.49	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.10.18 04.49	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.10.18 04.49	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.10.18 04.49	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.10.18 04.49	H1E8	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.10.18 04.49	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.10.18 04.49	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.10.18 04.49	H1E8	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.10.18 04.49	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.10.18 04.49	H1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.10.18 04.49	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.10.18 04.49	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.10.18 04.49	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.10.18 04.49	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.10.18 04.49	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.10.18 04.49	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.10.18 04.49	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.10.18 04.49	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.10.18 04.49	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.10.18 04.49	H1E8	1
Tetrachloroethylene	127-18-4	**1.19**	0.500	0.0800	ug/L	12.10.18 04.49	H1	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.10.18 04.49	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.10.18 04.49	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.10.18 04.49	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.10.18 04.49	H1E8	1
Trichloroethene	79-01-6	**129**	2.50	1.00	ug/L	12.11.18 20.52	H1D2	5
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.10.18 04.49	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.10.18 04.49	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.10.18 04.49	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.10.18 04.49	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.10.18 04.49	H1E8	1

Certificate of Analytical Results 605620

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP01-111518** Matrix: Water Date Received:11.15.18 16.20
Lab Sample Id: 605620-011 Date Collected: 11.15.18 13.00

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.09.18 12.07
Seq Number: 3073056

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:52 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.10.18 04.49	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.10.18 04.49	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.10.18 04.49	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.10.18 04.49	H1E8	1
n-Hexane	110-54-3	**1.24**	5.00	0.0920	ug/L	12.10.18 04.49	H1E4	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.10.18 04.49	T4	1
Propene	115-07-1	ND			ug/L	12.10.18 04.49	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	94	%	70-130	12.10.18 04.49	
Dibromofluoromethane	94	%	70-130	12.10.18 04.49	
1,2-Dichloroethane-D4	74	%	59-138	12.10.18 04.49	
Toluene-D8	96	%	70-130	12.10.18 04.49	

Analytical Method: PAHs by 8270D SIM Prep Method: SW3510C
Tech: RUO % Solids:
Analyst: EKL Date Prep: 11.20.18 09.33
Seq Number: 3070435 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Naphthalene	91-20-3	**0.0000845**	0.000500	0.00000451	mg/L	11.20.18 21.40	E4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Nitrobenzene-d5	83	%	41-128	11.20.18 21.40	
2-Fluorobiphenyl	81	%	55-135	11.20.18 21.40	
Terphenyl-D14	85	%	54-131	11.20.18 21.40	

QC Summary 605620

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3073056 Matrix: Water Date Prep: 12.09.18

MB Sample Id: 7668159-1-BLK LCS Sample Id: 7668159-1-BKS LCSD Sample Id: 7668159-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.100	20.0	19.6	98	17.8	89	70-130	10	25	ug/L	12.09.18 21:46	
1,1,1-Trichloroethane	<0.200	20.0	19.6	98	19.1	96	70-130	3	25	ug/L	12.09.18 21:46	
1,1,2,2-Tetrachloroethane	<0.100	20.0	17.8	89	16.9	85	66-129	5	25	ug/L	12.09.18 21:46	
1,1,2-Trichloroethane	<0.0900	20.0	17.2	86	18.2	91	70-130	6	25	ug/L	12.09.18 21:46	
1,1-Dichloroethane	<0.0700	20.0	18.4	92	16.5	83	70-130	11	25	ug/L	12.09.18 21:46	
1,1-Dichloroethene	<0.200	20.0	18.8	94	17.3	87	70-130	8	25	ug/L	12.09.18 21:46	
1,1-Dichloropropene	<0.200	20.0	20.2	101	18.2	91	70-130	10	25	ug/L	12.09.18 21:46	
1,2,3-Trichlorobenzene	<0.200	20.0	18.3	92	16.8	84	70-130	9	25	ug/L	12.09.18 21:46	
1,2,3-Trichloropropane	<0.200	20.0	18.2	91	17.2	86	70-130	6	25	ug/L	12.09.18 21:46	
1,2,4-Trichlorobenzene	<0.0700	20.0	19.7	99	17.3	87	70-130	13	25	ug/L	12.09.18 21:46	
1,2,4-Trimethylbenzene	<0.0700	20.0	19.4	97	18.6	93	70-130	4	25	ug/L	12.09.18 21:46	
1,2-Dibromo-3-Chloropropane	<0.300	20.0	19.0	95	18.7	94	57-120	2	25	ug/L	12.09.18 21:46	
1,2-Dibromoethane	<0.200	20.0	16.8	84	16.1	81	69-131	4	25	ug/L	12.09.18 21:46	
1,2-Dichlorobenzene	<0.0800	20.0	18.5	93	17.4	87	70-130	6	25	ug/L	12.09.18 21:46	
1,2-Dichloroethane	<0.100	20.0	17.9	90	16.7	84	70-130	7	25	ug/L	12.09.18 21:46	
1,2-Dichloropropane	<0.0900	20.0	20.4	102	20.2	101	70-130	1	25	ug/L	12.09.18 21:46	
1,3,5-Trimethylbenzene	<0.0700	20.0	19.5	98	18.3	92	70-130	6	25	ug/L	12.09.18 21:46	
1,3-Dichlorobenzene	<0.0600	20.0	19.4	97	17.8	89	70-130	9	25	ug/L	12.09.18 21:46	
1,3-Dichloropropane	<0.0700	20.0	18.0	90	17.4	87	70-130	3	25	ug/L	12.09.18 21:46	
1,4-Dichlorobenzene	<0.200	20.0	20.4	102	19.1	96	70-130	7	25	ug/L	12.09.18 21:46	
2,2-Dichloropropane	<0.200	20.0	17.6	88	15.7	79	70-130	11	25	ug/L	12.09.18 21:46	
2-Butanone	<0.300	40.0	32.8	82	25.9	65	48-135	24	25	ug/L	12.09.18 21:46	
2-Chlorotoluene	<0.0800	20.0	20.0	100	19.3	97	70-130	4	25	ug/L	12.09.18 21:46	
2-Hexanone	<0.200	40.0	32.1	80	32.3	81	50-133	1	25	ug/L	12.09.18 21:46	
4-Chlorotoluene	<0.0700	20.0	20.5	103	19.0	95	70-130	8	25	ug/L	12.09.18 21:46	
4-Methyl-2-Pentanone	<0.200	40.0	33.8	85	40.1	100	45-141	17	25	ug/L	12.09.18 21:46	
Acetone	<0.600	40.0	13.3	33	10.8	27	47-133	21	25	ug/L	12.09.18 21:46	L2
Benzene	<0.100	20.0	19.9	100	18.1	91	70-130	9	25	ug/L	12.09.18 21:46	
Bromobenzene	<0.0900	20.0	19.3	97	17.6	88	70-130	9	25	ug/L	12.09.18 21:46	
Bromochloromethane	<0.200	20.0	17.8	89	16.6	83	70-130	7	25	ug/L	12.09.18 21:46	
Bromodichloromethane	<0.0800	20.0	19.3	97	19.6	98	70-130	2	25	ug/L	12.09.18 21:46	
Bromoform	<0.100	20.0	16.8	84	15.4	77	53-124	9	25	ug/L	12.09.18 21:46	
Bromomethane	<0.300	20.0	14.9	75	19.9	100	59-131	29	25	ug/L	12.09.18 21:46	R7
Carbon Disulfide	<0.0900	20.0	17.0	85	16.1	81	62-128	5	25	ug/L	12.09.18 21:46	
Carbon Tetrachloride	<0.200	20.0	21.1	106	20.1	101	58-138	5	25	ug/L	12.09.18 21:46	
Chlorobenzene	<0.0700	20.0	19.6	98	18.1	91	70-130	8	25	ug/L	12.09.18 21:46	
Chloroethane	<0.600	20.0	18.5	93	19.8	99	57-142	7	25	ug/L	12.09.18 21:46	
Chloroform	<0.0700	20.0	18.6	93	17.4	87	70-130	7	25	ug/L	12.09.18 21:46	
Chloromethane	<0.200	20.0	23.4	117	23.7	119	52-142	1	25	ug/L	12.09.18 21:46	
cis-1,2-Dichloroethene	<0.200	20.0	20.5	103	18.4	92	70-130	11	25	ug/L	12.09.18 21:46	
cis-1,3-Dichloropropene	<0.0800	20.0	19.4	97	21.4	107	69-138	10	25	ug/L	12.09.18 21:46	
Dibromochloromethane	<0.0700	20.0	18.9	95	16.4	82	63-124	14	25	ug/L	12.09.18 21:46	
Dibromomethane	<0.200	20.0	18.4	92	18.0	90	70-130	2	25	ug/L	12.09.18 21:46	
Dichlorodifluoromethane	<0.200	20.0	14.4	72	15.5	78	40-148	7	25	ug/L	12.09.18 21:46	
Ethylbenzene	<0.0900	20.0	20.1	101	19.0	95	70-130	6	25	ug/L	12.09.18 21:46	
Hexachlorobutadiene	<0.200	20.0	20.0	100	18.6	93	70-130	7	25	ug/L	12.09.18 21:46	
Iodomethane (Methyl Iodide)	<0.300	20.0	15.6	78	15.2	76	51-138	3	25	ug/L	12.09.18 21:46	
isopropylbenzene	<0.0800	20.0	20.1	101	18.4	92	70-130	9	25	ug/L	12.09.18 21:46	
m,p-Xylenes	<0.0900	40.0	39.7	99	37.7	94	70-130	5	25	ug/L	12.09.18 21:46	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605620

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3073056 Matrix: Water Date Prep: 12.09.18

MB Sample Id: 7668159-1-BLK LCS Sample Id: 7668159-1-BKS LCSD Sample Id: 7668159-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<0.200	20.0	17.0	85	15.2	76	59-137	11	25	ug/L	12.09.18 21:46	
MTBE	<0.100	20.0	16.9	85	15.1	76	69-130	11	25	ug/L	12.09.18 21:46	
Naphthalene	<0.200	20.0	18.1	91	16.8	84	65-126	7	25	ug/L	12.09.18 21:46	
n-Butylbenzene	<0.200	20.0	21.5	108	20.8	104	70-130	3	25	ug/L	12.09.18 21:46	
n-Propylbenzene	<0.0800	20.0	20.5	103	20.0	100	70-130	2	25	ug/L	12.09.18 21:46	
o-Xylene	<0.0900	20.0	21.3	107	20.5	103	70-130	4	25	ug/L	12.09.18 21:46	
p-Cymene (p-Isopropyltoluene)	<0.100	20.0	19.7	99	19.0	95	70-130	4	25	ug/L	12.09.18 21:46	
Sec-Butylbenzene	<0.100	20.0	21.5	108	20.2	101	70-130	6	25	ug/L	12.09.18 21:46	
Styrene	<0.0800	20.0	20.3	102	19.4	97	70-130	5	25	ug/L	12.09.18 21:46	
tert-Butylbenzene	<0.200	20.0	19.9	100	18.8	94	70-130	6	25	ug/L	12.09.18 21:46	
Tetrachloroethylene	<0.0800	20.0	19.1	96	17.8	89	70-130	7	25	ug/L	12.09.18 21:46	
Toluene	<0.0700	20.0	18.8	94	18.1	91	70-130	4	25	ug/L	12.09.18 21:46	
trans-1,2-dichloroethene	<0.0900	20.0	19.2	96	17.8	89	70-130	8	25	ug/L	12.09.18 21:46	
Trichloroethene	<0.200	20.0	19.9	100	19.1	96	70-130	4	25	ug/L	12.09.18 21:46	
Trichlorofluoromethane	<0.400	20.0	16.6	83	17.0	85	63-142	2	25	ug/L	12.09.18 21:46	
Vinyl Acetate	<0.200	20.0	16.6	83	13.3	67	55-136	22	25	ug/L	12.09.18 21:46	
Vinyl Chloride	<0.100	20.0	17.7	89	16.2	81	62-136	9	25	ug/L	12.09.18 21:46	
trans-1,3-dichloropropene	<0.0600	20.0	16.6	83	17.1	86	68-130	3	25	ug/L	12.09.18 21:46	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.300	20.0	16.2	81	16.2	81	60-140	0	25	ug/L	12.09.18 21:46	
1,3-Butadiene	<0.276	20.0	20.4	102	19.8	99	52-140	3	20	ug/L	12.09.18 21:46	
Cyclohexane	<0.115	20.0	18.7	94	17.1	86	70-130	9	20	ug/L	12.09.18 21:46	
Dicyclopentadiene	<0.0540	20.0	21.0	105	21.8	109	70-130	4	20	ug/L	12.09.18 21:46	
Methylcyclohexane	<0.117	20.0	21.2	106	21.1	106	70-130	0	20	ug/L	12.09.18 21:46	
n-Hexane	<0.0920	20.0	18.9	95	16.6	83	70-132	13	20	ug/L	12.09.18 21:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	107		86		99		70-130	%	12.09.18 21:46
Dibromofluoromethane	88		80		92		70-130	%	12.09.18 21:46
1,2-Dichloroethane-D4	94		75		85		59-138	%	12.09.18 21:46
Toluene-D8	92		92		122		70-130	%	12.09.18 21:46

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605620

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030C

Seq Number: 3072450 Matrix: Water Date Prep: 12.11.18

MB Sample Id: 7667834-1-BLK LCS Sample Id: 7667834-1-BKS LCSD Sample Id: 7667834-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
m,p-Xylenes	<0.0900	40.0	42.4	106	38.0	95	70-130	11	25	ug/L	12.11.18 15:03	
o-Xylene	<0.0900	20.0	23.6	118	20.0	100	70-130	17	25	ug/L	12.11.18 15:03	
Trichloroethene	<0.200	20.0	20.5	103	18.8	94	70-130	9	25	ug/L	12.11.18 15:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		106		100		70-130	%	12.11.18 15:03
Dibromofluoromethane	87		91		87		70-130	%	12.11.18 15:03
1,2-Dichloroethane-D4	90		98		96		59-138	%	12.11.18 15:03
Toluene-D8	91		94		92		70-130	%	12.11.18 15:03

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605620

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030C

Seq Number: 3073056 Matrix: Ground Water Date Prep: 12.09.18

Parent Sample Id: 605998-001 MS Sample Id: 605998-001 S MSD Sample Id: 605998-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.100	20.0	22.9	115	19.7	99	58-137	15	20	ug/L	12.09.18 22:48	
1,1,1-Trichloroethane	<0.200	20.0	23.7	119	19.5	98	59-137	19	20	ug/L	12.09.18 22:48	
1,1,2,2-Tetrachloroethane	<0.100	20.0	21.3	107	17.4	87	61-132	20	20	ug/L	12.09.18 22:48	
1,1,2-Trichloroethane	<0.0900	20.0	20.2	101	21.1	106	70-130	4	20	ug/L	12.09.18 22:48	
1,1-Dichloroethane	<0.0700	20.0	18.9	95	21.2	106	65-138	11	20	ug/L	12.09.18 22:48	
1,1-Dichloroethene	<0.200	20.0	20.2	101	21.6	108	60-139	7	20	ug/L	12.09.18 22:48	
1,1-Dichloropropene	<0.200	20.0	22.4	112	21.1	106	70-130	6	20	ug/L	12.09.18 22:48	
1,2,3-Trichlorobenzene	<0.200	20.0	20.9	105	15.8	79	67-127	28	24	ug/L	12.09.18 22:48	R2
1,2,3-Trichloropropane	<0.200	20.0	20.4	102	18.4	92	56-130	10	20	ug/L	12.09.18 22:48	
1,2,4-Trichlorobenzene	<0.0700	20.0	21.9	110	18.1	91	66-133	19	20	ug/L	12.09.18 22:48	
1,2,4-Trimethylbenzene	3.07	20.0	24.8	109	23.1	100	44-157	7	22	ug/L	12.09.18 22:48	
1,2-Dibromo-3-Chloropropane	<0.300	20.0	22.9	115	19.7	99	49-122	15	22	ug/L	12.09.18 22:48	
1,2-Dibromoethane	<0.200	20.0	34.5	173	31.9	160	63-131	8	20	ug/L	12.09.18 22:48	M1
1,2-Dichlorobenzene	<0.0800	20.0	20.3	102	18.7	94	70-130	8	20	ug/L	12.09.18 22:48	
1,2-Dichloroethane	104	20.0	149	225	115	55	51-148	26	20	ug/L	12.09.18 22:48	M3R2
1,2-Dichloropropane	8.00	20.0	25.2	86	28.0	100	70-130	11	20	ug/L	12.09.18 22:48	
1,3,5-Trimethylbenzene	2.40	20.0	23.1	104	22.8	102	59-143	1	20	ug/L	12.09.18 22:48	
1,3-Dichlorobenzene	<0.0600	20.0	21.6	108	19.9	100	70-130	8	20	ug/L	12.09.18 22:48	
1,3-Dichloropropane	<0.0700	20.0	19.9	100	19.0	95	70-130	5	20	ug/L	12.09.18 22:48	
1,4-Dichlorobenzene	<0.200	20.0	22.8	114	21.0	105	70-130	8	20	ug/L	12.09.18 22:48	
2,2-Dichloropropane	<0.200	20.0	20.7	104	17.4	87	67-136	17	20	ug/L	12.09.18 22:48	
2-Butanone	<0.300	40.0	33.8	85	35.6	89	47-142	5	22	ug/L	12.09.18 22:48	
2-Chlorotoluene	<0.0800	20.0	23.2	116	21.9	110	70-130	6	20	ug/L	12.09.18 22:48	
2-Hexanone	<0.200	40.0	29.2	73	31.9	80	47-133	9	33	ug/L	12.09.18 22:48	
4-Chlorotoluene	<0.0700	20.0	22.4	112	21.5	108	70-130	4	20	ug/L	12.09.18 22:48	
4-Methyl-2-Pentanone	<0.200	40.0	33.8	85	36.1	90	46-139	7	20	ug/L	12.09.18 22:48	
Acetone	15.7	40.0	35.6	50	36.0	51	22-162	1	20	ug/L	12.09.18 22:48	
Benzene	143	20.0	120	0	134	0	70-130	11	20	ug/L	12.09.18 22:48	M3
Bromobenzene	<0.0900	20.0	21.0	105	19.3	97	65-138	8	20	ug/L	12.09.18 22:48	
Bromochloromethane	<0.200	20.0	19.6	98	17.5	88	64-135	11	22	ug/L	12.09.18 22:48	
Bromodichloromethane	<0.0800	20.0	23.1	116	18.8	94	65-130	21	20	ug/L	12.09.18 22:48	R2
Bromoform	<0.100	20.0	22.0	110	16.2	81	40-130	30	20	ug/L	12.09.18 22:48	R2
Bromomethane	<0.300	20.0	29.2	146	21.1	106	57-132	32	22	ug/L	12.09.18 22:48	M1R2
Carbon Disulfide	<0.0900	20.0	20.9	105	25.6	128	53-141	20	28	ug/L	12.09.18 22:48	
Carbon Tetrachloride	<0.200	20.0	27.4	137	20.4	102	49-139	29	20	ug/L	12.09.18 22:48	R2
Chlorobenzene	<0.0700	20.0	22.0	110	20.5	103	70-130	7	20	ug/L	12.09.18 22:48	
Chloroethane	<0.600	20.0	32.3	162	21.2	106	41-152	41	20	ug/L	12.09.18 22:48	M1R2
Chloroform	2.27	20.0	22.5	101	20.7	92	60-141	8	22	ug/L	12.09.18 22:48	
Chloromethane	151	20.0	104	0	148	0	36-168	35	22	ug/L	12.09.18 22:48	M3R2
cis-1,2-Dichloroethene	<0.200	20.0	20.8	104	22.5	113	68-137	8	20	ug/L	12.09.18 22:48	
cis-1,3-Dichloropropene	<0.0800	20.0	21.3	107	20.3	102	66-135	5	20	ug/L	12.09.18 22:48	
Dibromochloromethane	<0.0700	20.0	22.1	111	18.3	92	49-132	19	20	ug/L	12.09.18 22:48	
Dibromomethane	<0.200	20.0	20.0	100	17.4	87	67-134	14	20	ug/L	12.09.18 22:48	
Dichlorodifluoromethane	<0.200	20.0	19.8	99	15.3	77	36-143	26	33	ug/L	12.09.18 22:48	
Ethylbenzene	5.87	20.0	28.7	114	27.1	106	70-130	6	20	ug/L	12.09.18 22:48	
Hexachlorobutadiene	<0.200	20.0	24.8	124	19.9	100	64-135	22	20	ug/L	12.09.18 22:48	R2
Iodomethane (Methyl Iodide)	4.92	20.0	27.4	112	27.3	112	38-150	0	20	ug/L	12.09.18 22:48	
isopropylbenzene	0.840	20.0	25.4	123	21.3	102	70-130	18	20	ug/L	12.09.18 22:48	
m,p-Xylenes	6.95	40.0	51.7	112	48.2	103	61-145	7	20	ug/L	12.09.18 22:48	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605620

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3073056 Matrix: Ground Water Date Prep: 12.09.18

Parent Sample Id: 605998-001 MS Sample Id: 605998-001 S MSD Sample Id: 605998-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<0.200	20.0	17.4	87	20.0	100	45-153	14	20	ug/L	12.09.18 22:48	
MTBE	<0.100	20.0	18.5	93	17.9	90	58-139	3	20	ug/L	12.09.18 22:48	
Naphthalene	8.26	20.0	26.7	92	23.3	75	59-127	14	26	ug/L	12.09.18 22:48	
n-Butylbenzene	0.850	20.0	24.1	116	23.3	112	70-130	3	20	ug/L	12.09.18 22:48	
n-Propylbenzene	1.53	20.0	22.8	106	23.6	110	70-130	3	20	ug/L	12.09.18 22:48	
o-Xylene	15.0	20.0	41.1	131	37.2	111	66-140	10	20	ug/L	12.09.18 22:48	
p-Cymene (p-Isopropyltoluene)	<0.100	20.0	22.7	114	20.9	105	70-130	8	20	ug/L	12.09.18 22:48	
Sec-Butylbenzene	1.19	20.0	24.1	115	23.3	111	70-130	3	20	ug/L	12.09.18 22:48	
Styrene	<0.0800	20.0	23.4	117	21.4	107	31-165	9	37	ug/L	12.09.18 22:48	
tert-Butylbenzene	<0.200	20.0	22.1	111	20.0	100	70-138	10	20	ug/L	12.09.18 22:48	
Tetrachloroethylene	<0.0800	20.0	22.9	115	20.1	101	62-140	13	20	ug/L	12.09.18 22:48	
Toluene	16.1	20.0	35.0	95	36.5	102	70-130	4	20	ug/L	12.09.18 22:48	
trans-1,2-dichloroethene	<0.0900	20.0	20.9	105	22.2	111	64-137	6	20	ug/L	12.09.18 22:48	
Trichloroethene	0.580	20.0	22.6	110	20.4	99	69-134	10	20	ug/L	12.09.18 22:48	
Trichlorofluoromethane	<0.400	20.0	23.1	116	18.8	94	19-191	21	20	ug/L	12.09.18 22:48	R2
Vinyl Acetate	<0.200	20.0	16.4	82	20.4	102	34-148	22	23	ug/L	12.09.18 22:48	
Vinyl Chloride	<0.100	20.0	15.7	79	27.9	140	53-145	56	21	ug/L	12.09.18 22:48	R2
trans-1,3-dichloropropene	<0.0600	20.0	20.1	101	17.9	90	64-132	12	20	ug/L	12.09.18 22:48	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.300	20.0	21.2	106	19.5	98	38-131	8	20	ug/L	12.09.18 22:48	
1,3-Butadiene	<0.276	20.0	21.4	107	34.1	171	33-153	46	20	ug/L	12.09.18 22:48	M1R2
Cyclohexane	47.9	20.0	58.2	52	68.2	102	63-141	16	20	ug/L	12.09.18 22:48	M2
Dicyclopentadiene	<0.0540	20.0	23.7	119	23.3	117	15-171	2	20	ug/L	12.09.18 22:48	
Methylcyclohexane	32.6	20.0	54.9	112	59.0	132	62-144	7	20	ug/L	12.09.18 22:48	
n-Hexane	10.3	20.0	24.6	72	32.2	110	63-140	27	20	ug/L	12.09.18 22:48	R2

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	123		77		70-130	%	12.09.18 22:48
Dibromofluoromethane	101		74		70-130	%	12.09.18 22:48
1,2-Dichloroethane-D4	104		0	S6	59-138	%	12.09.18 22:48
Toluene-D8	110		79		70-130	%	12.09.18 22:48

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605620

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030C
Seq Number: 3072450 Matrix: Ground Water Date Prep: 12.11.18
Parent Sample Id: 606602-001 MS Sample Id: 606602-001 S MSD Sample Id: 606602-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
m,p-Xylenes	<0.0900	40.0	40.3	101	39.2	98	61-145	3	20	ug/L	12.12.18 00:53	
o-Xylene	<0.0900	20.0	21.5	108	20.5	103	66-140	5	20	ug/L	12.12.18 00:53	
Trichloroethene	<0.200	20.0	20.6	103	18.8	94	69-134	9	20	ug/L	12.12.18 00:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		107		70-130	%	12.12.18 00:53
Dibromofluoromethane	81		81		70-130	%	12.12.18 00:53
1,2-Dichloroethane-D4	116		115		59-138	%	12.12.18 00:53
Toluene-D8	84		87		70-130	%	12.12.18 00:53

Analytical Method: **PAHs by 8270D SIM** Prep Method: SW3510C
Seq Number: 3070435 Matrix: Water Date Prep: 11.20.18
MB Sample Id: 7666536-1-BLK LCS Sample Id: 7666536-1-BKS LCSD Sample Id: 7666536-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Naphthalene	<0.00000450	0.00100	0.000751	75	0.000767	77	35-116	2	25	mg/L	11.26.18 11:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Nitrobenzene-d5	87		82		82		41-128	%	11.26.18 11:29
2-Fluorobiphenyl	83		87		84		55-135	%	11.26.18 11:29
Terphenyl-D14	91		85		81		54-131	%	11.26.18 11:29

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

CHAIN OF CUSTODY

XENCO LABORATORIES

Page 1 Of 2

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

Xenco Quote #080717RK-AMECFW

Xenco Job # 6057620

Client / Reporting Information

Company Name / Branch: Maricopa County WR&R

Company Address: 2910 W Durango St Phoenix AZ 85009

Email: SAMANTHA.SARGENT@WOODPLC.COM, EMILY.LODOLCE@WOODPLC.COM

Phone No: 602.733.6030, 602.733.6081

Project Contact: Emily LoDolce - (602) 733-6081

Sampler's Name: Samantha Sargent

Project Information

Project Name/Number: Cave Creek Landfill 14-2017-2034.****.021

Project Location: Phoenix. AZ

Invoice To: attn: Kathryn Snyder
Maricopa County WR&R
2910 W Durango St Phoenix, AZ 85009

PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	8260B VOCs - three bottles	8270 SVOCs (Naphthalene only)	6020 Metals (See List)	300.0 General Chemistry (See List)	3000. Nitrate/Nitrite	SM2320B Alkalinity	SM2450C (TDS), SM2510B (Specific Conductivity), SM4500 (pH)				Field Comments
1	MW02-714-	714	11/15/18	0900	W	4	X							X	X	X									
2	MW03-723-	724		1430	W	4	X							X	X	X									
3	MW04-708-	708		1230	W	4	X							X	X	X									
4	MW05-704-	704		0935	W	4	X							X	X	X									
5	MW06-721-	721		1350	W	4	X							X	X	X									
6	MW07-718-	718		1310	W	4	X							X	X	X									
7	MW08-742-	742		1125	W	4	X							X	X	X									
8	PW-734-	734		1030	W	4	X							X	X	X									
9	PDB BLANK	NA		1435	W	3	X								X										
10	TRIP Blank	NA		1440	W	2	X								X										

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY STANDARD

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	11/15/18 4:20	1	2	11.15.18 @	2 16:20
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. 0.5 Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

1.000

CHAIN OF CUSTODY

Page 2 Of 2

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #080717RK-AMECFW
Xenco Job # 605620

Client / Reporting Information

Company Name / Branch: Maricopa County WR&R
Company Address: 2910 W Duango St Phoenix AZ 85009
Email: samantha.sargent@amecfw.com, emily.lodolce@amecfw.com
Phone No: 520.247.8736, 602.733.6081
Project Contact: Emily Lodolce/Samantha Sargent
Samplers's Name

Project Information

Project Name/Number: Cave Creek Landfill 1420172034.****.021
Project Location: Phoenix. AZ
Invoice To: attn: Kathryn Snyder, Maricopa County WR&R, 2910 W Durango St Phoenix, AZ 85009
PO Number: C01410574

Analytical Information

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	8260B VOCs	8270 SVOCs (Naphthalene only)	6020 Metals (See List)	300.0 General Chemistry (See List)	3000. Nitrate/Nitrite	SM2320B Alkalinity	SM2450C (TDS), SM2510B (Specific Conductivity), SM4500 (pH)				Field Comments
1	DUP01-111518	NA	11/15/18	1300	W	4	X							X	X	X									
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY Standard

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	11/15/18 @ 4:20p	1	2	11/15/18 @ 9:00	2 16:20
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X Cooler Temp. 0.5 Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO LABORATORIES

Sample Receipt Checklist

Client Name: Wood

Date and Time Received: 11/15/18 @16:20

Work Order Number: 605620

Checked by: GP

Checklist completed by: GP

Logged In by: GP Date: 11/16/18

Matrix: W Courier Name: (Client) TWA _____

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody signed when relinquished and received?	Yes ☐	No ☐	Not Present ☐
Chain of custody agrees with sample labels?	Yes ☐	No ☐	
Samples in proper container/bottle?	Yes ☐	No ☐	
Sample containers intact?	Yes ☐	No ☐	
Sufficient sample volume for indicated test?	Yes ☐	No ☐	
All samples received within holding time?	Yes ☐	No ☐	
All samples received same day of collection?	Yes ☐	No ☐	Temp: 5 Wet Ice Present ☒
Where was the temperature reading taken at?	Sample ☐	Temp Blank ☒	Other:
VOA Water – VOA vials have zero headspace?	Yes ☒	No ☐	N/A ☐
Water – Microbiological bottles have ≤ 2.5 cm headspace?	Yes ☐	No ☐	N/A ☒
Water – All sample pH's acceptable upon receipt?	Yes ☐	No ☐	N/A ☒ Checked by: GP

If **No**, list all samples and bottle types that are not acceptable in Additional Comments section. Also state any correction actions.

Dissolved Metals – Field Filtered?	Yes ☐	No ☐	N/A ☒

Additional Comments: _____

SRChecklist 2016.1

Inter-Office Shipment

IOS Number **117524**

Date/Time: 11/16/18 18:13
Lab# From: **Phoenix**
Lab# To: **Houston**

Created by: Emily Petrunia
Delivery Priority:
Air Bill No.: 773750765325

Please send report to: Skip Harden
Address: 2525 West Huntington Drive, Suite 102
E-Mail: skip.harden@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
605620-001	W	MW02-714-	11/15/18 09:00	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 09:00**	WWH	NAPH	
605620-002	W	MW03-723-	11/15/18 14:30	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 14:30**	WWH	NAPH	
605620-003	W	MW04-708-	11/15/18 12:30	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 12:30**	WWH	NAPH	
605620-004	W	MW05-704-	11/15/18 09:35	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 09:35**	WWH	NAPH	
605620-005	W	MW06-721-	11/15/18 13:50	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 13:50**	WWH	NAPH	
605620-006	W	MW07-718-	11/15/18 13:10	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 13:10**	WWH	NAPH	
605620-007	W	MW08-742-	11/15/18 11:25	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 11:25**	WWH	NAPH	
605620-008	W	PW-734-	11/15/18 10:30	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 10:30**	WWH	NAPH	
605620-009	W	PDB Blank	11/15/18 14:35	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 14:35**	WWH	NAPH	
605620-010	W	Trip Blank	11/15/18 14:40	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 14:40**	WWH	NAPH	
605620-011	W	DUP01-111518	11/15/18 13:00	SIM_PAH	PAHs by 8270C SIM	11/27/18	**11/22/18 13:00**	WWH	NAPH	

Inter Office Shipment or Sample Comments:

Relinquished By: Emily Petrunia

Date Relinquished: 11/16/2018

Received By: Rene Vandenberghe

Date Received: 11/17/2018 09:30

Cooler Temperature: 5.9

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 117524

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sent By: Emily Petrunia **Date Sent:** 11/16/2018 06:13 PM

Received By: Rene Vandenberghe **Date Received:** 11/17/2018 09:30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: _____ Date: 11/17/2018
Rene Vandenberghe

Analytical Report 605782

for

Wood Environment & Infrastructure Solutions, Inc.

Project Manager: Natalie Chrisman

Cave Creek Landfill

1420172034.**.021**

04-DEC-18

Collected By: Client

2525 West Huntington Drive, Suite 102
Tempe, AZ 85282
Ph: (480) 355-0900

Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Houston (EPA Lab code: TX00122): Arizona (AZ0765)
Xenco-Dallas (EPA Lab code: TX01468): Arizona (AZ0809)

04-DEC-18

Project Manager: **Natalie Chrisman**
Wood Environment & Infrastructure Solutions, Inc.
4600 E. Washington Suite 600
Phoenix, AZ 85034

Reference: TWA Report No(s): **605782**
Cave Creek Landfill
Project Address:

Natalie Chrisman :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the TWA Report Number(s) 605782. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the ADHS certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with ADHS standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and ADHS Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by TransWest Analytical. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 605782 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting TransWest Analytical to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Skip Harden
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

CASE NARRATIVE

Client Name: Wood Environment & Infrastructure Solutions, Inc.
Project Name: Cave Creek Landfill

Project ID: *1420172034.****.021*
Work Order Number(s): *605782*

Report Date: *04-DEC-18*
Date Received: *11/16/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3071475 VOCs by SW 8260B

N1:
Carbon Disulfide recovered above acceptance criteria in LCS/LCSD and MS/MSD. This equates to a potential high bias. Since the associated field samples were non-detecy for Iodomethane, no further action was required.

N1:
Dichlorodifluoromethane, Chloromethane, Vinyl Chloride and m,p-Xylenes recovered below acceptance criteria in LCS/LCSD and MS/MSD. This equates to a potential low bias. Due to holding time issues, samples could not be re-analyzed for confirmation.

R2:
The RPD for the Chloromethane and Vinyl Chloride was outside of acceptanec criteria in the both QC pairs.

Flagging Criteria

Arizona Flags

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order except as detailed below or on the Data Qualifier page of this report. Data Qualifiers used in this report are in accordance with ADHS Data Qualifiers, Revision 4.0 9/05/2012.
Data qualifiers (flags) contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

D1 Sample required dilution due to matrix.

D2 Sample required dilution due to high concentration of target analyte.

E4 Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL).

E8 Analyte reported to MDL per project specification. Target analyte was not detected in sample.

L1 The associated blank spike recovery was above laboratory acceptance limits.

L2 The associated blank spike recovery was below laboratory acceptance limits.

M1 Matrix spike recovery was high; the associated blank spike recovery was acceptable.

N1 See case narrative.

R2 RPD/RSD exceeded the laboratory acceptance limit. See case narrative.

R7 LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

T4 Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

V1 CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

V9 CCV recovery was below method acceptance limits.

Sample Cross Reference 605782

Wood Environment & Infrastructure Solutions, Inc., Phoen

Cave Creek Landfill

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
EW01-713-111618	W	11-16-18 09:32		605782-001
MW09-718-111618	W	11-16-18 12:45		605782-002
MW10-705-111618	W	11-16-18 12:12		605782-003

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **EW01-713-111618** Matrix: Water Date Received:11.16.18 15.00
Lab Sample Id: 605782-001 Date Collected: 11.16.18 09.32

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 11.30.18 14.47
Seq Number: 3071475

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	11.30.18 21.46	E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	11.30.18 21.46	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	11.30.18 21.46	E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	11.30.18 21.46	E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	11.30.18 21.46	E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	11.30.18 21.46	E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	11.30.18 21.46	E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	11.30.18 21.46	E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	11.30.18 21.46	E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	11.30.18 21.46	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	11.30.18 21.46	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	11.30.18 21.46	E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	11.30.18 21.46	E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	11.30.18 21.46	E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	11.30.18 21.46	E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	11.30.18 21.46	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	11.30.18 21.46	E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	11.30.18 21.46	E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	11.30.18 21.46	E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	11.30.18 21.46	E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	11.30.18 21.46	E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	11.30.18 21.46	E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	11.30.18 21.46	E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	11.30.18 21.46	E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	11.30.18 21.46	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	11.30.18 21.46	E8	1
Acetone	67-64-1	**127**	20.0	0.600	ug/L	11.30.18 21.46	L1V1	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	11.30.18 21.46	E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	11.30.18 21.46	E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	11.30.18 21.46	E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	11.30.18 21.46	E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	11.30.18 21.46	E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	11.30.18 21.46	E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	11.30.18 21.46	N1E8V	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	11.30.18 21.46	E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	11.30.18 21.46	E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	11.30.18 21.46	E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	11.30.18 21.46	E8	1

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **EW01-713-111618** Matrix: Water Date Received:11.16.18 15.00
Lab Sample Id: 605782-001 Date Collected: 11.16.18 09.32

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 11.30.18 14.47
Seq Number: 3071475

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	11.30.18 21.46	N1E8	1
cis-1,2-Dichloroethene	156-59-2	**1.48**	0.500	0.200	ug/L	11.30.18 21.46		1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	11.30.18 21.46	E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	11.30.18 21.46	E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	11.30.18 21.46	E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	11.30.18 21.46	N1V9E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	11.30.18 21.46	E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	11.30.18 21.46	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	11.30.18 21.46	V1M1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	11.30.18 21.46	E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	11.30.18 21.46	N1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	11.30.18 21.46	E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	11.30.18 21.46	E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	11.30.18 21.46	E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	11.30.18 21.46	E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	11.30.18 21.46	E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	11.30.18 21.46	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	11.30.18 21.46	L2E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	11.30.18 21.46	E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	11.30.18 21.46	E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	11.30.18 21.46	E8	1
Tetrachloroethylene	127-18-4	**0.640**	0.500	0.0800	ug/L	11.30.18 21.46		1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	11.30.18 21.46	E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	11.30.18 21.46	E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	11.30.18 21.46	E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	11.30.18 21.46	E8	1
Trichloroethene	79-01-6	**20.7**	0.500	0.200	ug/L	11.30.18 21.46		1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	11.30.18 21.46	E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	11.30.18 21.46	E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	11.30.18 21.46	N1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	11.30.18 21.46	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	11.30.18 21.46	T4	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	11.30.18 21.46	E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	11.30.18 21.46	E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	11.30.18 21.46	E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	11.30.18 21.46	E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	11.30.18 21.46	E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	11.30.18 21.46	T4	1

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **EW01-713-111618**
Lab Sample Id: 605782-001

Matrix: Water
Date Collected: 11.16.18 09.32

Date Received:11.16.18 15.00

Analytical Method: VOCs by SW 8260B
Tech: MNI
Analyst: MNI
Seq Number: 3071475

Date Prep: 11.30.18 14.47

Prep Method: SW5030C
% Solids:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	11.30.18 21.46	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	116	%	70-130	11.30.18 21.46	
Dibromofluoromethane	111	%	70-130	11.30.18 21.46	
1,2-Dichloroethane-D4	104	%	59-138	11.30.18 21.46	
Toluene-D8	107	%	70-130	11.30.18 21.46	

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW09-718-111618** Matrix: Water Date Received:11.16.18 15.00
Lab Sample Id: 605782-002 Date Collected: 11.16.18 12.45

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 11.30.18 14.47
Seq Number: 3071475

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	11.30.18 22.12	E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	11.30.18 22.12	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	11.30.18 22.12	E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	11.30.18 22.12	E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	11.30.18 22.12	E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	11.30.18 22.12	E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	11.30.18 22.12	E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	11.30.18 22.12	E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	11.30.18 22.12	E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	11.30.18 22.12	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	11.30.18 22.12	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	11.30.18 22.12	E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	11.30.18 22.12	E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	11.30.18 22.12	E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	11.30.18 22.12	E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	11.30.18 22.12	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	11.30.18 22.12	E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	11.30.18 22.12	E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	11.30.18 22.12	E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	11.30.18 22.12	E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	11.30.18 22.12	E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	11.30.18 22.12	E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	11.30.18 22.12	E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	11.30.18 22.12	E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	11.30.18 22.12	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	11.30.18 22.12	E8	1
Acetone	67-64-1	**56.9**	20.0	0.600	ug/L	11.30.18 22.12	L1V1	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	11.30.18 22.12	E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	11.30.18 22.12	E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	11.30.18 22.12	E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	11.30.18 22.12	E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	11.30.18 22.12	E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	11.30.18 22.12	E8	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	11.30.18 22.12	N1E8V	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	11.30.18 22.12	E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	11.30.18 22.12	E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	11.30.18 22.12	E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	11.30.18 22.12	E8	1

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW09-718-111618** Matrix: Water Date Received:11.16.18 15.00
Lab Sample Id: 605782-002 Date Collected: 11.16.18 12.45

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 11.30.18 14.47
Seq Number: 3071475

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	11.30.18 22.12	N1E8	1
cis-1,2-Dichloroethene	156-59-2	**0.640**	0.500	0.200	ug/L	11.30.18 22.12		1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	11.30.18 22.12	E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	11.30.18 22.12	E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	11.30.18 22.12	E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	11.30.18 22.12	N1V9E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	11.30.18 22.12	E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	11.30.18 22.12	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	11.30.18 22.12	E8V1	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	11.30.18 22.12	E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	11.30.18 22.12	N1E8	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	11.30.18 22.12	E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	11.30.18 22.12	E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	11.30.18 22.12	E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	11.30.18 22.12	E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	11.30.18 22.12	E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	11.30.18 22.12	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	11.30.18 22.12	L2E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	11.30.18 22.12	E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	11.30.18 22.12	E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	11.30.18 22.12	E8	1
Tetrachloroethylene	127-18-4	**0.500**	0.500	0.0800	ug/L	11.30.18 22.12	E4	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	11.30.18 22.12	E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	11.30.18 22.12	E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	11.30.18 22.12	E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	11.30.18 22.12	E8	1
Trichloroethene	79-01-6	**26.3**	0.500	0.200	ug/L	11.30.18 22.12		1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	11.30.18 22.12	E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	11.30.18 22.12	E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	11.30.18 22.12	N1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	11.30.18 22.12	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	11.30.18 22.12	T4	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	11.30.18 22.12	E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	11.30.18 22.12	E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	11.30.18 22.12	E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	11.30.18 22.12	E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	11.30.18 22.12	E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	11.30.18 22.12	T4	1

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW09-718-111618**
Lab Sample Id: 605782-002

Matrix: Water
Date Collected: 11.16.18 12.45

Date Received:11.16.18 15.00

Analytical Method: VOCs by SW 8260B
Tech: MNI
Analyst: MNI
Seq Number: 3071475

Date Prep: 11.30.18 14.47

Prep Method: SW5030C
% Solids:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	11.30.18 22.12	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	105	%	70-130	11.30.18 22.12	
Dibromofluoromethane	112	%	70-130	11.30.18 22.12	
1,2-Dichloroethane-D4	98	%	59-138	11.30.18 22.12	
Toluene-D8	100	%	70-130	11.30.18 22.12	

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW10-705-111618** Matrix: Water Date Received:11.16.18 15.00
Lab Sample Id: 605782-003 Date Collected: 11.16.18 12.12

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 11.30.18 14.47
Seq Number: 3071475

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<1.00	5.00	1.00	ug/L	11.30.18 22.38	D1E8	10
1,1,1-Trichloroethane	71-55-6	<2.00	5.00	2.00	ug/L	11.30.18 22.38	D1E8	10
1,1,2,2-Tetrachloroethane	79-34-5	<1.00	5.00	1.00	ug/L	11.30.18 22.38	D1E8	10
1,1,2-Trichloroethane	79-00-5	<0.900	5.00	0.900	ug/L	11.30.18 22.38	D1E8	10
1,1-Dichloroethane	75-34-3	<0.700	5.00	0.700	ug/L	11.30.18 22.38	D1E8	10
1,1-Dichloroethene	75-35-4	<2.00	5.00	2.00	ug/L	11.30.18 22.38	D1E8	10
1,1-Dichloropropene	563-58-6	<2.00	10.0	2.00	ug/L	11.30.18 22.38	D1E8	10
1,2,3-Trichlorobenzene	87-61-6	<2.00	50.0	2.00	ug/L	11.30.18 22.38	D1E8	10
1,2,3-Trichloropropane	96-18-4	<2.00	10.0	2.00	ug/L	11.30.18 22.38	D1E8	10
1,2,4-Trichlorobenzene	120-82-1	<0.700	50.0	0.700	ug/L	11.30.18 22.38	D1E8	10
1,2,4-Trimethylbenzene	95-63-6	<0.700	20.0	0.700	ug/L	11.30.18 22.38	D1E8	10
1,2-Dibromo-3-Chloropropane	96-12-8	<3.00	20.0	3.00	ug/L	11.30.18 22.38	D1E8	10
1,2-Dibromoethane	106-93-4	<2.00	5.00	2.00	ug/L	11.30.18 22.38	D1E8	10
1,2-Dichlorobenzene	95-50-1	<0.800	15.0	0.800	ug/L	11.30.18 22.38	D1E8	10
1,2-Dichloroethane	107-06-2	<1.00	5.00	1.00	ug/L	11.30.18 22.38	D1E8	10
1,2-Dichloropropane	78-87-5	<0.900	5.00	0.900	ug/L	11.30.18 22.38	D1E8	10
1,3,5-Trimethylbenzene	108-67-8	<0.700	15.0	0.700	ug/L	11.30.18 22.38	D1E8	10
1,3-Dichlorobenzene	541-73-1	<0.600	15.0	0.600	ug/L	11.30.18 22.38	D1E8	10
1,3-Dichloropropane	142-28-9	<0.700	10.0	0.700	ug/L	11.30.18 22.38	D1E8	10
1,4-Dichlorobenzene	106-46-7	<2.00	15.0	2.00	ug/L	11.30.18 22.38	D1E8	10
2,2-Dichloropropane	594-20-7	<2.00	5.00	2.00	ug/L	11.30.18 22.38	D1E8	10
2-Butanone	78-93-3	<3.00	50.0	3.00	ug/L	11.30.18 22.38	D1E8	10
2-Chlorotoluene	95-49-8	<0.800	15.0	0.800	ug/L	11.30.18 22.38	D1E8	10
2-Hexanone	591-78-6	<2.00	50.0	2.00	ug/L	11.30.18 22.38	D1E8	10
4-Chlorotoluene	106-43-4	<0.700	20.0	0.700	ug/L	11.30.18 22.38	D1E8	10
4-Methyl-2-Pentanone	108-10-1	<2.00	50.0	2.00	ug/L	11.30.18 22.38	D1E8	10
Acetone	67-64-1	**80.7**	200	6.00	ug/L	11.30.18 22.38	L1V1E4	10
Benzene	71-43-2	<1.00	5.00	1.00	ug/L	11.30.18 22.38	D1E8	10
Bromobenzene	108-86-1	<0.900	15.0	0.900	ug/L	11.30.18 22.38	D1E8	10
Bromochloromethane	74-97-5	<2.00	5.00	2.00	ug/L	11.30.18 22.38	D1E8	10
Bromodichloromethane	75-27-4	<0.800	5.00	0.800	ug/L	11.30.18 22.38	D1E8	10
Bromoform	75-25-2	<1.00	10.0	1.00	ug/L	11.30.18 22.38	D1E8	10
Bromomethane	74-83-9	<3.00	50.0	3.00	ug/L	11.30.18 22.38	D1E8	10
Carbon Disulfide	75-15-0	<0.900	5.00	0.900	ug/L	11.30.18 22.38	N1V1E	10
Carbon Tetrachloride	56-23-5	<2.00	5.00	2.00	ug/L	11.30.18 22.38	D1E8	10
Chlorobenzene	108-90-7	<0.700	5.00	0.700	ug/L	11.30.18 22.38	D1E8	10
Chloroethane	75-00-3	<6.00	40.0	6.00	ug/L	11.30.18 22.38	D1E8	10
Chloroform	67-66-3	**4.40**	5.00	0.700	ug/L	11.30.18 22.38	E4D2	10

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW10-705-111618** Matrix: Water Date Received:11.16.18 15.00

Lab Sample Id: 605782-003 Date Collected: 11.16.18 12.12

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Tech: MNI % Solids:

Analyst: MNI Date Prep: 11.30.18 14.47

Seq Number: 3071475

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<2.00	50.0	2.00	ug/L	11.30.18 22.38	D1N1E	10
cis-1,2-Dichloroethene	156-59-2	**21.8**	5.00	2.00	ug/L	11.30.18 22.38	D2	10
cis-1,3-Dichloropropene	10061-01-5	<0.800	10.0	0.800	ug/L	11.30.18 22.38	D1E8	10
Dibromochloromethane	124-48-1	<0.700	5.00	0.700	ug/L	11.30.18 22.38	D1E8	10
Dibromomethane	74-95-3	<2.00	5.00	2.00	ug/L	11.30.18 22.38	D1E8	10
Dichlorodifluoromethane	75-71-8	<2.00	20.0	2.00	ug/L	11.30.18 22.38	N1V9E	10
Ethylbenzene	100-41-4	<0.900	20.0	0.900	ug/L	11.30.18 22.38	D1E8	10
Hexachlorobutadiene	87-68-3	<2.00	50.0	2.00	ug/L	11.30.18 22.38	D1E8	10
Iodomethane (Methyl Iodide)	74-88-4	<3.00	20.0	3.00	ug/L	11.30.18 22.38	V1D1E	10
isopropylbenzene	98-82-8	<0.800	25.0	0.800	ug/L	11.30.18 22.38	D1E8	10
m,p-Xylenes	179601-23-1	<0.900	20.0	0.900	ug/L	11.30.18 22.38	D1N1E	10
Methylene Chloride	75-09-2	<2.00	30.0	2.00	ug/L	11.30.18 22.38	D1E8	10
MTBE	1634-04-4	<1.00	20.0	1.00	ug/L	11.30.18 22.38	D1E8	10
Naphthalene	91-20-3	<2.00	50.0	2.00	ug/L	11.30.18 22.38	D1E8	10
n-Butylbenzene	104-51-8	<2.00	25.0	2.00	ug/L	11.30.18 22.38	D1E8	10
n-Propylbenzene	103-65-1	<0.800	20.0	0.800	ug/L	11.30.18 22.38	D1E8	10
o-Xylene	95-47-6	**5.80**	10.0	0.900	ug/L	11.30.18 22.38	E4D2	10
p-Cymene (p-Isopropyltoluene)	99-87-6	<1.00	15.0	1.00	ug/L	11.30.18 22.38	D1L2E8	10
Sec-Butylbenzene	135-98-8	<1.00	15.0	1.00	ug/L	11.30.18 22.38	D1E8	10
Styrene	100-42-5	<0.800	10.0	0.800	ug/L	11.30.18 22.38	D1E8	10
tert-Butylbenzene	98-06-6	<2.00	25.0	2.00	ug/L	11.30.18 22.38	D1E8	10
Tetrachloroethylene	127-18-4	**10.0**	5.00	0.800	ug/L	11.30.18 22.38	D2	10
Toluene	108-88-3	<0.700	20.0	0.700	ug/L	11.30.18 22.38	D1E8	10
Total Trihalomethane		**4.40**	5.00	0.700	ug/L	11.30.18 22.38	E4D2	10
Total Xylenes	1330-20-7	**5.80**	10.0	0.900	ug/L	11.30.18 22.38	E4D2	10
trans-1,2-dichloroethene	156-60-5	<0.900	5.00	0.900	ug/L	11.30.18 22.38	D1E8	10
Trichloroethene	79-01-6	**347**	5.00	2.00	ug/L	11.30.18 22.38	D2	10
Trichlorofluoromethane	75-69-4	<4.00	20.0	4.00	ug/L	11.30.18 22.38	D1E8	10
Vinyl Acetate	108-05-4	<2.00	50.0	2.00	ug/L	11.30.18 22.38	D1E8	10
Vinyl Chloride	75-01-4	<1.00	5.00	1.00	ug/L	11.30.18 22.38	D1N1E	10
trans-1,3-dichloropropene	10061-02-6	<0.600	5.00	0.600	ug/L	11.30.18 22.38	D1E8	10
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<3.00	50.0	3.00	ug/L	11.30.18 22.38	T4	10
1,3-Butadiene	106-99-0	<2.76	50.0	2.76	ug/L	11.30.18 22.38	D1E8	10
Cyclohexane	110-82-7	<1.15	50.0	1.15	ug/L	11.30.18 22.38	D1E8	10
Dicyclopentadiene	77-73-6	<0.540	50.0	0.540	ug/L	11.30.18 22.38	D1E8	10
Methylcyclohexane	108-87-2	<1.17	50.0	1.17	ug/L	11.30.18 22.38	D1E8	10
n-Hexane	110-54-3	<0.920	50.0	0.920	ug/L	11.30.18 22.38	D1E8	10
4-Ethyltoluene	622-96-8	ND			ug/L	11.30.18 22.38	T4	10

Certificate of Analytical Results 605782

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW10-705-111618**
Lab Sample Id: 605782-003

Matrix: Water
Date Collected: 11.16.18 12.12

Date Received:11.16.18 15.00

Analytical Method: VOCs by SW 8260B
Tech: MNI
Analyst: MNI
Seq Number: 3071475

Date Prep: 11.30.18 14.47

Prep Method: SW5030C
% Solids:

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	11.30.18 22.38	T4	10

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	113	%	70-130	11.30.18 22.38	
Dibromofluoromethane	115	%	70-130	11.30.18 22.38	
1,2-Dichloroethane-D4	106	%	59-138	11.30.18 22.38	
Toluene-D8	108	%	70-130	11.30.18 22.38	

QC Summary 605782

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3071475 Matrix: Water Date Prep: 11.30.18

MB Sample Id: 7667257-1-BLK LCS Sample Id: 7667257-1-BKS LCSD Sample Id: 7667257-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.100	20.0	16.5	83	19.1	96	70-130	15	25	ug/L	11.30.18 19:10	
1,1,1-Trichloroethane	<0.200	20.0	16.6	83	18.9	95	70-130	13	25	ug/L	11.30.18 19:10	
1,1,2,2-Tetrachloroethane	<0.100	20.0	14.6	73	17.6	88	66-129	19	25	ug/L	11.30.18 19:10	
1,1,2-Trichloroethane	<0.0900	20.0	16.1	81	18.9	95	70-130	16	25	ug/L	11.30.18 19:10	
1,1-Dichloroethane	<0.0700	20.0	17.3	87	18.7	94	70-130	8	25	ug/L	11.30.18 19:10	
1,1-Dichloroethene	<0.200	20.0	16.4	82	18.4	92	70-130	11	25	ug/L	11.30.18 19:10	
1,1-Dichloropropene	<0.200	20.0	15.6	78	18.1	91	70-130	15	25	ug/L	11.30.18 19:10	
1,2,3-Trichlorobenzene	<0.200	20.0	15.4	77	19.2	96	70-130	22	25	ug/L	11.30.18 19:10	
1,2,3-Trichloropropane	<0.200	20.0	15.0	75	17.9	90	70-130	18	25	ug/L	11.30.18 19:10	
1,2,4-Trichlorobenzene	<0.0700	20.0	14.7	74	18.0	90	70-130	20	25	ug/L	11.30.18 19:10	
1,2,4-Trimethylbenzene	<0.0700	20.0	14.8	74	17.3	87	70-130	16	25	ug/L	11.30.18 19:10	
1,2-Dibromo-3-Chloropropane	<0.300	20.0	13.2	66	17.1	86	57-120	26	25	ug/L	11.30.18 19:10	R7
1,2-Dibromoethane	<0.200	20.0	17.2	86	19.8	99	69-131	14	25	ug/L	11.30.18 19:10	
1,2-Dichlorobenzene	<0.0800	20.0	15.4	77	18.5	93	70-130	18	25	ug/L	11.30.18 19:10	
1,2-Dichloroethane	<0.100	20.0	16.6	83	21.0	105	70-130	23	25	ug/L	11.30.18 19:10	
1,2-Dichloropropane	<0.0900	20.0	17.3	87	19.9	100	70-130	14	25	ug/L	11.30.18 19:10	
1,3,5-Trimethylbenzene	<0.0700	20.0	15.7	79	18.5	93	70-130	16	25	ug/L	11.30.18 19:10	
1,3-Dichlorobenzene	<0.0600	20.0	15.5	78	18.5	93	70-130	18	25	ug/L	11.30.18 19:10	
1,3-Dichloropropane	<0.0700	20.0	16.7	84	19.2	96	70-130	14	25	ug/L	11.30.18 19:10	
1,4-Dichlorobenzene	<0.200	20.0	15.0	75	18.3	92	70-130	20	25	ug/L	11.30.18 19:10	
2,2-Dichloropropane	<0.200	20.0	15.6	78	17.6	88	70-130	12	25	ug/L	11.30.18 19:10	
2-Butanone	<0.300	40.0	44.5	111	51.2	128	48-135	14	25	ug/L	11.30.18 19:10	
2-Chlorotoluene	<0.0800	20.0	16.4	82	19.4	97	70-130	17	25	ug/L	11.30.18 19:10	
2-Hexanone	<0.200	40.0	34.3	86	43.2	108	50-133	23	25	ug/L	11.30.18 19:10	
4-Chlorotoluene	<0.0700	20.0	15.8	79	18.5	93	70-130	16	25	ug/L	11.30.18 19:10	
4-Methyl-2-Pentanone	<0.200	40.0	30.9	77	37.7	94	45-141	20	25	ug/L	11.30.18 19:10	
Acetone	8.77	40.0	45.2	113	58.3	146	47-133	25	25	ug/L	11.30.18 19:10	V1L1
Benzene	<0.100	20.0	16.1	81	19.1	96	70-130	17	25	ug/L	11.30.18 19:10	
Bromobenzene	<0.0900	20.0	16.7	84	19.6	98	70-130	16	25	ug/L	11.30.18 19:10	
Bromochloromethane	<0.200	20.0	16.1	81	18.9	95	70-130	16	25	ug/L	11.30.18 19:10	
Bromodichloromethane	<0.0800	20.0	16.5	83	19.4	97	70-130	16	25	ug/L	11.30.18 19:10	
Bromoform	<0.100	20.0	15.6	78	18.7	94	53-124	18	25	ug/L	11.30.18 19:10	
Bromomethane	<0.300	20.0	18.6	93	22.1	111	59-131	17	25	ug/L	11.30.18 19:10	
Carbon Disulfide	<0.0900	20.0	29.0	145	32.3	162	62-128	11	25	ug/L	11.30.18 19:10	N1V1
Carbon Tetrachloride	<0.200	20.0	17.2	86	20.1	101	58-138	16	25	ug/L	11.30.18 19:10	
Chlorobenzene	<0.0700	20.0	17.0	85	19.4	97	70-130	13	25	ug/L	11.30.18 19:10	
Chloroethane	<0.600	20.0	18.6	93	22.4	112	57-142	19	25	ug/L	11.30.18 19:10	
Chloroform	<0.0700	20.0	16.8	84	19.3	97	70-130	14	25	ug/L	11.30.18 19:10	
Chloromethane	<0.200	20.0	13.6	68	2.09	10	52-142	147	25	ug/L	11.30.18 19:10	N1R2
cis-1,2-Dichloroethene	<0.200	20.0	17.4	87	19.5	98	70-130	11	25	ug/L	11.30.18 19:10	
cis-1,3-Dichloropropene	<0.0800	20.0	16.0	80	19.3	97	69-138	19	25	ug/L	11.30.18 19:10	
Dibromochloromethane	<0.0700	20.0	15.6	78	18.8	94	63-124	19	25	ug/L	11.30.18 19:10	
Dibromomethane	<0.200	20.0	17.1	86	20.4	102	70-130	18	25	ug/L	11.30.18 19:10	
Dichlorodifluoromethane	<0.200	20.0	5.02	25	4.83	24	40-148	4	25	ug/L	11.30.18 19:10	N1V9
Ethylbenzene	<0.0900	20.0	16.7	84	19.0	95	70-130	13	25	ug/L	11.30.18 19:10	
Hexachlorobutadiene	<0.200	20.0	16.0	80	19.5	98	70-130	20	25	ug/L	11.30.18 19:10	
Iodomethane (Methyl Iodide)	<0.300	20.0	25.7	129	25.2	126	51-138	2	25	ug/L	11.30.18 19:10	
isopropylbenzene	<0.0800	20.0	16.6	83	18.9	95	70-130	13	25	ug/L	11.30.18 19:10	
m,p-Xylenes	<0.0900	40.0	17.2	43	19.4	49	70-130	12	25	ug/L	11.30.18 19:10	N1

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605782

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3071475 Matrix: Water Date Prep: 11.30.18

MB Sample Id: 7667257-1-BLK LCS Sample Id: 7667257-1-BKS LCSD Sample Id: 7667257-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<0.200	20.0	16.1	81	17.8	89	59-137	10	25	ug/L	11.30.18 19:10	
MTBE	<0.100	20.0	20.7	104	24.1	121	69-130	15	25	ug/L	11.30.18 19:10	
Naphthalene	<0.200	20.0	14.9	75	18.8	94	65-126	23	25	ug/L	11.30.18 19:10	
n-Butylbenzene	<0.200	20.0	15.8	79	19.1	96	70-130	19	25	ug/L	11.30.18 19:10	
n-Propylbenzene	<0.0800	20.0	15.3	77	18.0	90	70-130	16	25	ug/L	11.30.18 19:10	
o-Xylene	0.590	20.0	18.2	91	20.6	103	70-130	12	25	ug/L	11.30.18 19:10	
p-Cymene (p-Isopropyltoluene)	<0.100	20.0	13.8	69	16.2	81	70-130	16	25	ug/L	11.30.18 19:10	L2
Sec-Butylbenzene	<0.100	20.0	15.7	79	18.2	91	70-130	15	25	ug/L	11.30.18 19:10	
Styrene	<0.0800	20.0	18.1	91	20.5	103	70-130	12	25	ug/L	11.30.18 19:10	
tert-Butylbenzene	<0.200	20.0	14.5	73	16.8	84	70-130	15	25	ug/L	11.30.18 19:10	
Tetrachloroethylene	<0.0800	20.0	17.3	87	20.4	102	70-130	16	25	ug/L	11.30.18 19:10	
Toluene	<0.0700	20.0	15.9	80	18.4	92	70-130	15	25	ug/L	11.30.18 19:10	
trans-1,2-dichloroethene	<0.0900	20.0	16.6	83	18.7	94	70-130	12	25	ug/L	11.30.18 19:10	
Trichloroethene	<0.200	20.0	16.3	82	18.6	93	70-130	13	25	ug/L	11.30.18 19:10	
Trichlorofluoromethane	<0.400	20.0	15.8	79	18.0	90	63-142	13	25	ug/L	11.30.18 19:10	
Vinyl Acetate	<0.200	20.0	15.9	80	18.9	95	55-136	17	25	ug/L	11.30.18 19:10	
Vinyl Chloride	<0.100	20.0	20.2	101	11.8	59	62-136	53	25	ug/L	11.30.18 19:10	N1R2
trans-1,3-dichloropropene	<0.0600	20.0	18.2	91	20.7	104	68-130	13	25	ug/L	11.30.18 19:10	
1,3-Butadiene	<0.276	20.0	19.2	96	11.9	60	52-140	47	20	ug/L	11.30.18 19:10	R7
Cyclohexane	<0.115	20.0	16.5	83	17.9	90	70-130	8	20	ug/L	11.30.18 19:10	
Dicyclopentadiene	<0.0540	20.0	16.9	85	19.3	97	70-130	13	20	ug/L	11.30.18 19:10	
Methylcyclohexane	<0.117	20.0	18.6	93	21.1	106	70-130	13	20	ug/L	11.30.18 19:10	
n-Hexane	<0.0920	20.0	17.7	89	19.7	99	70-132	11	20	ug/L	11.30.18 19:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	122		96		105		70-130	%	11.30.18 19:10
Dibromofluoromethane	125		99		105		70-130	%	11.30.18 19:10
1,2-Dichloroethane-D4	113		85		98		59-138	%	11.30.18 19:10
Toluene-D8	115		87		95		70-130	%	11.30.18 19:10

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605782

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3071475 Matrix: Water Date Prep: 11.30.18

Parent Sample Id: 605782-001 MS Sample Id: 605782-001 S MSD Sample Id: 605782-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.100	20.0	18.8	94	20.3	102	58-137	8	20	ug/L	11.30.18 20:03	
1,1,1-Trichloroethane	<0.200	20.0	18.9	95	20.6	103	59-137	9	20	ug/L	11.30.18 20:03	
1,1,2,2-Tetrachloroethane	<0.100	20.0	17.0	85	18.3	92	61-132	7	20	ug/L	11.30.18 20:03	
1,1,2-Trichloroethane	<0.0900	20.0	19.5	98	20.6	103	70-130	5	20	ug/L	11.30.18 20:03	
1,1-Dichloroethane	<0.0700	20.0	18.3	92	20.4	102	65-138	11	20	ug/L	11.30.18 20:03	
1,1-Dichloroethene	<0.200	20.0	17.3	87	18.9	95	60-139	9	20	ug/L	11.30.18 20:03	
1,1-Dichloropropene	<0.200	20.0	18.1	91	17.8	89	70-130	2	20	ug/L	11.30.18 20:03	
1,2,3-Trichlorobenzene	<0.200	20.0	19.4	97	18.9	95	67-127	3	24	ug/L	11.30.18 20:03	
1,2,3-Trichloropropane	<0.200	20.0	18.2	91	19.5	98	56-130	7	20	ug/L	11.30.18 20:03	
1,2,4-Trichlorobenzene	<0.0700	20.0	18.6	93	19.4	97	66-133	4	20	ug/L	11.30.18 20:03	
1,2,4-Trimethylbenzene	<0.0700	20.0	17.4	87	18.9	95	44-157	8	22	ug/L	11.30.18 20:03	
1,2-Dibromo-3-Chloropropane	<0.300	20.0	17.4	87	16.7	84	49-122	4	22	ug/L	11.30.18 20:03	
1,2-Dibromoethane	<0.200	20.0	19.8	99	21.3	107	63-131	7	20	ug/L	11.30.18 20:03	
1,2-Dichlorobenzene	<0.0800	20.0	18.8	94	19.7	99	70-130	5	20	ug/L	11.30.18 20:03	
1,2-Dichloroethane	<0.100	20.0	20.2	101	22.0	110	51-148	9	20	ug/L	11.30.18 20:03	
1,2-Dichloropropane	<0.0900	20.0	19.3	97	21.6	108	70-130	11	20	ug/L	11.30.18 20:03	
1,3,5-Trimethylbenzene	<0.0700	20.0	19.0	95	20.6	103	59-143	8	20	ug/L	11.30.18 20:03	
1,3-Dichlorobenzene	<0.0600	20.0	18.8	94	20.4	102	70-130	8	20	ug/L	11.30.18 20:03	
1,3-Dichloropropane	<0.0700	20.0	19.6	98	21.5	108	70-130	9	20	ug/L	11.30.18 20:03	
1,4-Dichlorobenzene	<0.200	20.0	18.3	92	19.6	98	70-130	7	20	ug/L	11.30.18 20:03	
2,2-Dichloropropane	<0.200	20.0	17.7	89	18.3	92	67-136	3	20	ug/L	11.30.18 20:03	
2-Butanone	<0.300	40.0	48.5	121	45.5	114	47-142	6	22	ug/L	11.30.18 20:03	
2-Chlorotoluene	<0.0800	20.0	19.0	95	21.1	106	70-130	10	20	ug/L	11.30.18 20:03	
2-Hexanone	<0.200	40.0	46.8	117	43.5	109	47-133	7	33	ug/L	11.30.18 20:03	
4-Chlorotoluene	<0.0700	20.0	18.6	93	20.5	103	70-130	10	20	ug/L	11.30.18 20:03	
4-Methyl-2-Pentanone	<0.200	40.0	39.3	98	41.7	104	46-139	6	20	ug/L	11.30.18 20:03	
Acetone	127	40.0	167	100	187	150	22-162	11	20	ug/L	11.30.18 20:03	V1
Benzene	<0.100	20.0	19.0	95	20.9	105	70-130	10	20	ug/L	11.30.18 20:03	
Bromobenzene	<0.0900	20.0	19.8	99	21.1	106	65-138	6	20	ug/L	11.30.18 20:03	
Bromochloromethane	<0.200	20.0	17.8	89	19.7	99	64-135	10	22	ug/L	11.30.18 20:03	
Bromodichloromethane	<0.0800	20.0	20.1	101	22.0	110	65-130	9	20	ug/L	11.30.18 20:03	
Bromoform	<0.100	20.0	18.8	94	19.7	99	40-130	5	20	ug/L	11.30.18 20:03	
Bromomethane	<0.300	20.0	23.5	118	26.1	131	57-132	10	22	ug/L	11.30.18 20:03	
Carbon Disulfide	<0.0900	20.0	31.4	157	34.6	173	53-141	10	28	ug/L	11.30.18 20:03	N1V1
Carbon Tetrachloride	<0.200	20.0	20.5	103	23.4	117	49-139	13	20	ug/L	11.30.18 20:03	
Chlorobenzene	<0.0700	20.0	19.6	98	21.3	107	70-130	8	20	ug/L	11.30.18 20:03	
Chloroethane	<0.600	20.0	19.1	96	22.1	111	41-152	15	20	ug/L	11.30.18 20:03	
Chloroform	<0.0700	20.0	19.6	98	20.8	104	60-141	6	22	ug/L	11.30.18 20:03	
Chloromethane	<0.200	20.0	0.770	4	3.57	18	36-168	129	22	ug/L	11.30.18 20:03	N1R2
cis-1,2-Dichloroethene	1.48	20.0	20.6	96	22.7	106	68-137	10	20	ug/L	11.30.18 20:03	
cis-1,3-Dichloropropene	<0.0800	20.0	19.7	99	21.3	107	66-135	8	20	ug/L	11.30.18 20:03	
Dibromochloromethane	<0.0700	20.0	18.7	94	19.5	98	49-132	4	20	ug/L	11.30.18 20:03	
Dibromomethane	<0.200	20.0	19.8	99	21.2	106	67-134	7	20	ug/L	11.30.18 20:03	
Dichlorodifluoromethane	<0.200	20.0	4.82	24	5.82	29	36-143	19	33	ug/L	11.30.18 20:03	N1V9
Ethylbenzene	<0.0900	20.0	19.0	95	21.3	107	70-130	11	20	ug/L	11.30.18 20:03	
Hexachlorobutadiene	<0.200	20.0	19.5	98	20.7	104	64-135	6	20	ug/L	11.30.18 20:03	
Iodomethane (Methyl Iodide)	<0.300	20.0	27.3	137	31.7	159	38-150	15	20	ug/L	11.30.18 20:03	M1
isopropylbenzene	<0.0800	20.0	18.6	93	20.8	104	70-130	11	20	ug/L	11.30.18 20:03	
m,p-Xylenes	<0.0900	40.0	19.5	49	21.5	54	61-145	10	20	ug/L	11.30.18 20:03	N1

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605782

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3071475 Matrix: Water Date Prep: 11.30.18

Parent Sample Id: 605782-001 MS Sample Id: 605782-001 S MSD Sample Id: 605782-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<0.200	20.0	17.9	90	19.1	96	45-153	6	20	ug/L	11.30.18 20:03	
MTBE	<0.100	20.0	23.5	118	24.7	124	58-139	5	20	ug/L	11.30.18 20:03	
Naphthalene	<0.200	20.0	19.5	98	19.7	99	59-127	1	26	ug/L	11.30.18 20:03	
n-Butylbenzene	<0.200	20.0	19.4	97	20.7	104	70-130	6	20	ug/L	11.30.18 20:03	
n-Propylbenzene	<0.0800	20.0	18.5	93	20.5	103	70-130	10	20	ug/L	11.30.18 20:03	
o-Xylene	<0.0900	20.0	20.4	102	22.2	111	66-140	8	20	ug/L	11.30.18 20:03	
p-Cymene (p-Isopropyltoluene)	<0.100	20.0	16.6	83	18.1	91	70-130	9	20	ug/L	11.30.18 20:03	
Sec-Butylbenzene	<0.100	20.0	18.7	94	20.1	101	70-130	7	20	ug/L	11.30.18 20:03	
Styrene	<0.0800	20.0	20.7	104	22.6	113	31-165	9	37	ug/L	11.30.18 20:03	
tert-Butylbenzene	<0.200	20.0	16.7	84	18.8	94	70-138	12	20	ug/L	11.30.18 20:03	
Tetrachloroethylene	0.640	20.0	20.3	98	23.0	112	62-140	12	20	ug/L	11.30.18 20:03	
Toluene	<0.0700	20.0	18.3	92	20.4	102	70-130	11	20	ug/L	11.30.18 20:03	
trans-1,2-dichloroethene	<0.0900	20.0	17.4	87	19.4	97	64-137	11	20	ug/L	11.30.18 20:03	
Trichloroethene	20.7	20.0	37.7	85	42.8	111	69-134	13	20	ug/L	11.30.18 20:03	
Trichlorofluoromethane	<0.400	20.0	18.1	91	19.5	98	19-191	7	20	ug/L	11.30.18 20:03	
Vinyl Acetate	<0.200	20.0	16.4	82	17.8	89	34-148	8	23	ug/L	11.30.18 20:03	
Vinyl Chloride	<0.100	20.0	10.2	51	13.0	65	53-145	24	21	ug/L	11.30.18 20:03	N1R2
trans-1,3-dichloropropene	<0.0600	20.0	20.4	102	22.2	111	64-132	8	20	ug/L	11.30.18 20:03	
1,3-Butadiene	<0.276	20.0	11.5	58	13.1	66	33-153	13	20	ug/L	11.30.18 20:03	
Cyclohexane	<0.115	20.0	17.9	90	20.6	103	63-141	14	20	ug/L	11.30.18 20:03	
Dicyclopentadiene	<0.0540	20.0	19.5	98	21.8	109	15-171	11	20	ug/L	11.30.18 20:03	
Methylcyclohexane	<0.117	20.0	21.2	106	24.4	122	62-144	14	20	ug/L	11.30.18 20:03	
n-Hexane	<0.0920	20.0	18.7	94	21.4	107	63-140	13	20	ug/L	11.30.18 20:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	106		112		70-130	%	11.30.18 20:03
Dibromofluoromethane	105		112		70-130	%	11.30.18 20:03
1,2-Dichloroethane-D4	100		104		59-138	%	11.30.18 20:03
Toluene-D8	96		111		70-130	%	11.30.18 20:03

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Xenco Quote #080717RK-AMECFW

Xenco Job # 605782

Client / Reporting Information

Company Name / Branch: Wood, E & I Solutions

Company Address: 4600 E Washington St. Suite 600 Phoenix, AZ 85034

Email: SAMANTHA.SARGENT@WOODPLC.COM, EMILY .LODOLCE@WOODPLC.COM

Phone No: 602.733.6030, 602.733.6081

Project Contact: Samantha Sargent - (602) 733-6030

Samplers's Name

Project Information

Project Name/Number: Cave Creek Landfill 14-2017-2034.****.021

Project Location: Phoenix. AZ

Invoice To: Wood - ATTN: Samantha Sargent, 4600 E Washington St. Suite 600, Phoenix, AZ 85034

PO Number: C014101574

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

	No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	8260B VOCs	Field Comments
	1	~~TSSV02-733-~~ EP 11/16/18	733			W	3	x								X	
	2	~~TSSV03-760-~~	760			W	3	x								X	
	3	~~TSSV04-760-~~	760			W	3	x								X	
	4	~~TSSV05-760-~~	760			W	3	x								X	
	5	~~TSSV06-729-~~	729			W	3	x								X	
	6	~~TSSV07-743-~~	743			W	3	x								X	
1	~~7~~	EW01-713- 111618	713	11.16.18	932	W	6	x								X	Please Use as MS/MSD
2	~~8~~	MW09-718- 111618	718	↓	1245	W	3	x								X	
3	~~9~~	MW10-705- 111618	705	↓	1212	W	3	x								X	
	10	~~DUP01-~~ EP 11/16/18				W	3	x								X	
	11	~~DUP02-~~				W	3	x								X	

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ Next Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 3 Day EMERGENCY
- ☐ 5 Day TAT STANDARD
- ☐ 7 Day TAT
- ☐ Contract TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level III Std QC+ Forms
- ☐ Level 3 (CLP Forms)
- ☐ TRRP Checklist
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ TRRP Level IV
- ☐ UST / RG -411

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1 [signature]	11.16.18 15:00	1 [signature]	2		2
3		3	4		4
5		5			

Custody Seal # | Preserved where applicable ☐ | On Ice ☒ | Cooler Temp. 2.4 | Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

1.000

XENCO LABORATORIES

Sample Receipt Checklist

Client Name: Wood E&I Solutions

Date and Time Received: 11/16/18 @ 15:00

Work Order Number: 605782

Checked by: GR

Checklist completed by: GR

Logged In by: GR Date: 11/16/18

Matrix: W Courier Name: Client TWA

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody signed when relinquished and received?	Yes ☐	No ☐	Not Present ☐
Chain of custody agrees with sample labels?	Yes ☐	No ☐	
Samples in proper container/bottle?	Yes ☐	No ☐	
Sample containers intact?	Yes ☐	No ☐	
Sufficient sample volume for indicated test?	Yes ☐	No ☐	
All samples received within holding time?	Yes ☐	No ☐	
All samples received same day of collection?	Yes ☐	No ☐	
Where was the temperature reading taken at?	Sample ☒	Temp Blank ☐	Other:
VOA Water – VOA vials have zero headspace?	Yes ☒	No ☐	N/A ☐
Water – Microbiological bottles have ≤ 2.5 cm headspace?	Yes ☐	No ☐	N/A ☒
Water – All sample pH's acceptable upon receipt?	Yes ☐	No ☐	N/A ☒
Dissolved Metals – Field Filtered?	Yes ☐	No ☐	N/A ☒

Temp: 2.4 Wet Ice Present ☒

Checked by: GR

If No, list all samples and bottle types that are not acceptable in Additional Comments section. Also state any correction actions.

Additional Comments:

SRChecklist 2016.1

Analytical Report 605975

for

Wood Environment & Infrastructure Solutions, Inc.

Project Manager: Natalie Chrisman

Cave Creek Landfill - Maricopa

1420172034.**.021**

10-JAN-19

Collected By: Client

2525 West Huntington Drive, Suite 102
Tempe, AZ 85282
Ph: (480) 355-0900

Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Houston (EPA Lab code: TX00122): Arizona (AZ0765)
Xenco-Dallas (EPA Lab code: TX01468): Arizona (AZ0809)

10-JAN-19

Project Manager: **Natalie Chrisman**
Wood Environment & Infrastructure Solutions, Inc.
4600 E. Washington Suite 600
Phoenix, AZ 85034

Reference: TWA Report No(s): **605975**
Cave Creek Landfill - Maricopa
Project Address:

Natalie Chrisman :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the TWA Report Number(s) 605975. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the ADHS certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with ADHS standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and ADHS Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by TransWest Analytical. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 605975 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting TransWest Analytical to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Skip Harden
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

CASE NARRATIVE

Client Name: Wood Environment & Infrastructure Solutions, Inc.
Project Name: Cave Creek Landfill - Maricopa

Project ID: *1420172034.****.021*
Work Order Number(s): *605975*

Report Date: *10-JAN-19*
Date Received: *11/20/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3072422 VOCs by SW 8260B

N1:
The analyte recovered above accpetance criteria in the LCS/LCSD and MS/MSD. This equates to a potential high bias. Since the associated field samples were non-detect for these compounds, no further action was required.

N1:
m,p-Xylenes recovered below acceptance criteria in the LCS/LCSD and MS/MSD. This equates to a potential low bias. Since the samples were already analyzed past recommended holding times, they were no re-analyzed.

R2:
The RPD for the target analyte was outside of acceptance criteria in the LCS/LCSD, but within criteria in the MS/MSD.

Flagging Criteria

Arizona Flags

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order except as detailed below or on the Data Qualifier page of this report. Data Qualifiers used in this report are in accordance with ADHS Data Qualifiers, Revision 4.0 9/05/2012.
Data qualifiers (flags) contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

D2 Sample required dilution due to high concentration of target analyte.

E4 Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL).

E8 Analyte reported to MDL per project specification. Target analyte was not detected in sample.

H1 Sample analysis performed past holding time.

L1 The associated blank spike recovery was above laboratory acceptance limits.

L2 The associated blank spike recovery was below laboratory acceptance limits.

M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

N1 See case narrative.

R2 RPD/RSD exceeded the laboratory acceptance limit. See case narrative.

R5 MS/MSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

T4 Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Sample Cross Reference 605975

Wood Environment & Infrastructure Solutions, Inc., Phoen

Cave Creek Landfill - Maricopa

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TSSV02-733-111918	W	11-19-18 08:50		605975-001
TSSV06-729-111918	W	11-19-18 09:42		605975-002
TSSV07-743-111918	W	11-19-18 11:05		605975-003
DUP02-111918	W	11-19-18 11:25		605975-004
TSSV03-760-111918	W	11-19-18 11:52		605975-005
DUP03-111918	W	11-19-18 12:10		605975-006
TSSV05-760-111918	W	11-19-18 12:40		605975-007
TSSV04-760-112018	W	11-20-18 08:42		605975-008

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV02-733-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-001 Date Collected: 11.19.18 08.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.04.18 00.47	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.04.18 00.47	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.04.18 00.47	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.04.18 00.47	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.04.18 00.47	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.04.18 00.47	H1L2E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.04.18 00.47	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.04.18 00.47	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.04.18 00.47	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.04.18 00.47	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.04.18 00.47	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.04.18 00.47	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.04.18 00.47	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.04.18 00.47	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.04.18 00.47	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.04.18 00.47	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.04.18 00.47	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.04.18 00.47	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.04.18 00.47	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.04.18 00.47	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.04.18 00.47	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.04.18 00.47	H1E8	1
Acetone	67-64-1	**14.2**	20.0	0.600	ug/L	12.04.18 00.47	H1E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.04.18 00.47	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.04.18 00.47	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.04.18 00.47	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.04.18 00.47	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.04.18 00.47	H1N1E	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.04.18 00.47	H1N1E	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.04.18 00.47	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.04.18 00.47	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.04.18 00.47	H1E8	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV02-733-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-001 Date Collected: 11.19.18 08.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.04.18 00.47	H1L2E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.04.18 00.47	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.04.18 00.47	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.04.18 00.47	H1N1E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.04.18 00.47	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.04.18 00.47	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.04.18 00.47	H1N1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.04.18 00.47	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.04.18 00.47	H1N1E	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.04.18 00.47	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.04.18 00.47	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.04.18 00.47	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.04.18 00.47	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.04.18 00.47	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.04.18 00.47	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.04.18 00.47	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.04.18 00.47	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.04.18 00.47	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.04.18 00.47	H1M2E	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.04.18 00.47	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.04.18 00.47	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.04.18 00.47	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.04.18 00.47	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.04.18 00.47	H1E8	1
Trichloroethene	79-01-6	<0.200	0.500	0.200	ug/L	12.04.18 00.47	H1E8	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.04.18 00.47	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.04.18 00.47	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.04.18 00.47	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.04.18 00.47	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.04.18 00.47	H1N1E	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.04.18 00.47	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.04.18 00.47	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.04.18 00.47	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.04.18 00.47	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.04.18 00.47	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.04.18 00.47	T4	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV02-733-111918** Matrix: Water Date Received:11.20.18 16.00

Lab Sample Id: 605975-001 Date Collected: 11.19.18 08.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Tech: MNI % Solids:

Analyst: MNI Date Prep: 12.03.18 15.15

Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.04.18 00.47	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	103	%	70-130	12.04.18 00.47	
Dibromofluoromethane	102	%	70-130	12.04.18 00.47	
1,2-Dichloroethane-D4	82	%	59-138	12.04.18 00.47	
Toluene-D8	97	%	70-130	12.04.18 00.47	

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV06-729-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-002 Date Collected: 11.19.18 09.42

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.04.18 01.12	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.04.18 01.12	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.04.18 01.12	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.04.18 01.12	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.04.18 01.12	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.04.18 01.12	H1L2E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.04.18 01.12	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.04.18 01.12	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.04.18 01.12	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.04.18 01.12	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.04.18 01.12	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.04.18 01.12	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.04.18 01.12	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.04.18 01.12	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.04.18 01.12	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.04.18 01.12	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.04.18 01.12	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.04.18 01.12	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.04.18 01.12	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.04.18 01.12	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.04.18 01.12	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.04.18 01.12	H1E8	1
Acetone	67-64-1	**28.9**	20.0	0.600	ug/L	12.04.18 01.12	H1	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.04.18 01.12	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.04.18 01.12	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.04.18 01.12	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.04.18 01.12	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.04.18 01.12	H1N1E	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.04.18 01.12	H1N1E	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.04.18 01.12	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.04.18 01.12	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.04.18 01.12	H1E8	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV06-729-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-002 Date Collected: 11.19.18 09.42

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.04.18 01.12	H1L2E8	1
cis-1,2-Dichloroethene	156-59-2	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.04.18 01.12	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.04.18 01.12	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.04.18 01.12	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.04.18 01.12	H1N1E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.04.18 01.12	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.04.18 01.12	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.04.18 01.12	H1N1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.04.18 01.12	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.04.18 01.12	H1N1E	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.04.18 01.12	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.04.18 01.12	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.04.18 01.12	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.04.18 01.12	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.04.18 01.12	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.04.18 01.12	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.04.18 01.12	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.04.18 01.12	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.04.18 01.12	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.04.18 01.12	H1E8	1
Tetrachloroethylene	127-18-4	**1.41**	0.500	0.0800	ug/L	12.04.18 01.12	H1	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.04.18 01.12	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.04.18 01.12	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.04.18 01.12	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.04.18 01.12	H1E8	1
Trichloroethene	79-01-6	**9.45**	0.500	0.200	ug/L	12.04.18 01.12	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.04.18 01.12	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.04.18 01.12	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.04.18 01.12	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.04.18 01.12	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.04.18 01.12	H1N1E	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.04.18 01.12	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.04.18 01.12	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.04.18 01.12	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.04.18 01.12	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.04.18 01.12	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.04.18 01.12	T4	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV06-729-111918** Matrix: Water Date Received:11.20.18 16.00

Lab Sample Id: 605975-002 Date Collected: 11.19.18 09.42

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Tech: MNI % Solids:

Analyst: MNI Date Prep: 12.03.18 15.15

Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.04.18 01.12	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	103	%	70-130	12.04.18 01.12	
Dibromofluoromethane	100	%	70-130	12.04.18 01.12	
1,2-Dichloroethane-D4	87	%	59-138	12.04.18 01.12	
Toluene-D8	98	%	70-130	12.04.18 01.12	

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV07-743-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-003 Date Collected: 11.19.18 11.05

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.04.18 01.38	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.04.18 01.38	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.04.18 01.38	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.04.18 01.38	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.04.18 01.38	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.04.18 01.38	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.04.18 01.38	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.04.18 01.38	H1L2E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.04.18 01.38	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.04.18 01.38	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.04.18 01.38	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.04.18 01.38	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.04.18 01.38	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.04.18 01.38	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.04.18 01.38	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.04.18 01.38	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.04.18 01.38	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.04.18 01.38	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.04.18 01.38	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.04.18 01.38	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.04.18 01.38	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.04.18 01.38	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.04.18 01.38	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.04.18 01.38	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.04.18 01.38	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.04.18 01.38	H1E8	1
Acetone	67-64-1	**21.6**	20.0	0.600	ug/L	12.04.18 01.38	H1	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.04.18 01.38	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.04.18 01.38	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.04.18 01.38	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.04.18 01.38	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.04.18 01.38	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.04.18 01.38	H1N1E	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.04.18 01.38	H1N1E	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.04.18 01.38	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.04.18 01.38	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.04.18 01.38	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.04.18 01.38	H1E8	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV07-743-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-003 Date Collected: 11.19.18 11.05

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.04.18 01.38	H1L2E8	1
cis-1,2-Dichloroethene	156-59-2	**0.700**	0.500	0.200	ug/L	12.04.18 01.38	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.04.18 01.38	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.04.18 01.38	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.04.18 01.38	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.04.18 01.38	H1N1E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.04.18 01.38	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.04.18 01.38	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.04.18 01.38	H1N1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.04.18 01.38	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.04.18 01.38	H1N1E	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.04.18 01.38	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.04.18 01.38	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.04.18 01.38	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.04.18 01.38	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.04.18 01.38	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.04.18 01.38	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.04.18 01.38	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.04.18 01.38	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.04.18 01.38	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.04.18 01.38	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.04.18 01.38	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.04.18 01.38	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.04.18 01.38	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.04.18 01.38	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.04.18 01.38	H1E8	1
Trichloroethene	79-01-6	**1.31**	0.500	0.200	ug/L	12.04.18 01.38	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.04.18 01.38	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.04.18 01.38	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.04.18 01.38	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.04.18 01.38	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.04.18 01.38	H1N1E	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.04.18 01.38	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.04.18 01.38	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.04.18 01.38	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.04.18 01.38	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.04.18 01.38	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.04.18 01.38	T4	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV07-743-111918** Matrix: Water Date Received:11.20.18 16.00

Lab Sample Id: 605975-003 Date Collected: 11.19.18 11.05

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Tech: MNI % Solids:

Analyst: MNI Date Prep: 12.03.18 15.15

Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.04.18 01.38	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	93	%	70-130	12.04.18 01.38	
Dibromofluoromethane	94	%	70-130	12.04.18 01.38	
1,2-Dichloroethane-D4	81	%	59-138	12.04.18 01.38	
Toluene-D8	88	%	70-130	12.04.18 01.38	

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP02-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-004 Date Collected: 11.19.18 11.25

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.04.18 02.04	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.04.18 02.04	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.04.18 02.04	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.04	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.04.18 02.04	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.04.18 02.04	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.04.18 02.04	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.04.18 02.04	H1L2E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.04.18 02.04	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.04.18 02.04	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.04.18 02.04	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.04.18 02.04	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.04.18 02.04	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.04.18 02.04	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.04.18 02.04	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.04	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.04.18 02.04	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.04.18 02.04	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.04.18 02.04	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.04.18 02.04	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.04.18 02.04	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.04.18 02.04	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.04.18 02.04	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.04.18 02.04	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.04.18 02.04	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.04.18 02.04	H1E8	1
Acetone	67-64-1	**23.2**	20.0	0.600	ug/L	12.04.18 02.04	H1	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.04.18 02.04	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.04.18 02.04	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.04.18 02.04	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.04.18 02.04	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.04.18 02.04	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.04.18 02.04	H1N1E	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.04.18 02.04	H1N1E	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.04.18 02.04	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.04.18 02.04	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.04.18 02.04	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.04.18 02.04	H1E8	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP02-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-004 Date Collected: 11.19.18 11.25

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.04.18 02.04	H1L2E8	1
cis-1,2-Dichloroethene	156-59-2	**0.660**	0.500	0.200	ug/L	12.04.18 02.04	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.04.18 02.04	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.04.18 02.04	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.04.18 02.04	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.04.18 02.04	H1N1E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.04.18 02.04	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.04.18 02.04	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.04.18 02.04	H1N1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.04.18 02.04	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.04.18 02.04	H1N1E	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.04.18 02.04	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.04.18 02.04	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.04.18 02.04	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.04.18 02.04	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.04.18 02.04	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.04.18 02.04	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.04.18 02.04	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.04.18 02.04	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.04.18 02.04	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.04.18 02.04	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.04.18 02.04	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.04.18 02.04	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.04.18 02.04	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.04.18 02.04	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.04	H1E8	1
Trichloroethene	79-01-6	**1.14**	0.500	0.200	ug/L	12.04.18 02.04	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.04.18 02.04	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.04.18 02.04	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.04.18 02.04	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.04.18 02.04	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.04.18 02.04	H1N1E	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.04.18 02.04	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.04.18 02.04	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.04.18 02.04	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.04.18 02.04	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.04.18 02.04	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.04.18 02.04	T4	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP02-111918**
Lab Sample Id: 605975-004

Matrix: Water
Date Collected: 11.19.18 11.25

Date Received:11.20.18 16.00

Analytical Method: VOCs by SW 8260B
Tech: MNI
Analyst: MNI
Seq Number: 3072422

Date Prep: 12.03.18 15.15

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.04.18 02.04	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	94	%	70-130	12.04.18 02.04	
Dibromofluoromethane	97	%	70-130	12.04.18 02.04	
1,2-Dichloroethane-D4	81	%	59-138	12.04.18 02.04	
Toluene-D8	89	%	70-130	12.04.18 02.04	

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV03-760-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-005 Date Collected: 11.19.18 11.52

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 19:35 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.04.18 02.30	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.04.18 02.30	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.04.18 02.30	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.30	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.04.18 02.30	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.04.18 02.30	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.04.18 02.30	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.04.18 02.30	H1L2E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.04.18 02.30	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.04.18 02.30	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.04.18 02.30	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.04.18 02.30	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.04.18 02.30	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.04.18 02.30	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.04.18 02.30	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.30	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.04.18 02.30	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.04.18 02.30	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.04.18 02.30	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.04.18 02.30	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.04.18 02.30	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.04.18 02.30	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.04.18 02.30	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.04.18 02.30	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.04.18 02.30	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.04.18 02.30	H1E8	1
Acetone	67-64-1	**11.3**	20.0	0.600	ug/L	12.04.18 02.30	H1E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.04.18 02.30	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.04.18 02.30	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.04.18 02.30	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.04.18 02.30	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.04.18 02.30	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.04.18 02.30	H1N1E	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.04.18 02.30	H1N1E	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.04.18 02.30	H1E8	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV03-760-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-005 Date Collected: 11.19.18 11.52

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 19:35 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.04.18 02.30	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.04.18 02.30	H1E8	1
Chloroform	67-66-3	**0.510**	0.500	0.0700	ug/L	12.04.18 02.30	H1	1
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.04.18 02.30	H1L2E8	1
cis-1,2-Dichloroethene	156-59-2	**11.7**	0.500	0.200	ug/L	12.04.18 02.30	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.04.18 02.30	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.04.18 02.30	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.04.18 02.30	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.04.18 02.30	H1N1E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.04.18 02.30	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.04.18 02.30	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.04.18 02.30	H1N1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.04.18 02.30	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.04.18 02.30	H1N1E	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.04.18 02.30	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.04.18 02.30	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.04.18 02.30	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.04.18 02.30	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.04.18 02.30	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.04.18 02.30	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.04.18 02.30	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.04.18 02.30	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.04.18 02.30	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.04.18 02.30	H1E8	1
Tetrachloroethylene	127-18-4	**3.38**	0.500	0.0800	ug/L	12.04.18 02.30	H1	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.04.18 02.30	H1E8	1
Total Trihalomethane		**0.510**	0.500	0.0700	ug/L	12.04.18 02.30	H1	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.04.18 02.30	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.30	H1E8	1
Trichloroethene	79-01-6	**274**	2.50	1.00	ug/L	12.11.18 19.35	H1D2	5
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.04.18 02.30	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.04.18 02.30	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.04.18 02.30	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.04.18 02.30	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.04.18 02.30	H1N1E	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV03-760-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-005 Date Collected: 11.19.18 11.52

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 19:35 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.04.18 02.30	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.04.18 02.30	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.04.18 02.30	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.04.18 02.30	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.04.18 02.30	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.04.18 02.30	T4	1
Propene	115-07-1	ND			ug/L	12.04.18 02.30	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	100	%	70-130	12.04.18 02.30	
Dibromofluoromethane	100	%	70-130	12.04.18 02.30	
1,2-Dichloroethane-D4	84	%	59-138	12.04.18 02.30	
Toluene-D8	85	%	70-130	12.04.18 02.30	

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP03-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-006 Date Collected: 11.19.18 12.10

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:01 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.04.18 02.55	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.04.18 02.55	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.04.18 02.55	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.55	H1E8	1
1,1-Dichloroethane	75-34-3	**1.27**	0.500	0.0700	ug/L	12.04.18 02.55	H1	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.04.18 02.55	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.04.18 02.55	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.04.18 02.55	H1L2E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.04.18 02.55	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.04.18 02.55	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.04.18 02.55	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.04.18 02.55	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.04.18 02.55	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.04.18 02.55	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.04.18 02.55	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.55	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.04.18 02.55	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.04.18 02.55	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.04.18 02.55	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.04.18 02.55	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.04.18 02.55	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.04.18 02.55	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.04.18 02.55	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.04.18 02.55	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.04.18 02.55	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.04.18 02.55	H1E8	1
Acetone	67-64-1	**5.40**	20.0	0.600	ug/L	12.04.18 02.55	H1E4	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.04.18 02.55	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.04.18 02.55	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.04.18 02.55	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.04.18 02.55	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.04.18 02.55	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.04.18 02.55	H1N1E	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.04.18 02.55	H1N1E	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.04.18 02.55	H1E8	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP03-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-006 Date Collected: 11.19.18 12.10

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:01 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.04.18 02.55	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.04.18 02.55	H1E8	1
Chloroform	67-66-3	**0.400**	0.500	0.0700	ug/L	12.04.18 02.55	H1E4	1
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.04.18 02.55	H1L2E8	1
cis-1,2-Dichloroethene	156-59-2	**9.81**	0.500	0.200	ug/L	12.04.18 02.55	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.04.18 02.55	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.04.18 02.55	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.04.18 02.55	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.04.18 02.55	H1N1E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.04.18 02.55	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.04.18 02.55	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.04.18 02.55	H1N1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.04.18 02.55	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.04.18 02.55	H1N1E	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.04.18 02.55	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.04.18 02.55	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.04.18 02.55	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.04.18 02.55	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.04.18 02.55	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.04.18 02.55	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.04.18 02.55	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.04.18 02.55	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.04.18 02.55	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.04.18 02.55	H1E8	1
Tetrachloroethylene	127-18-4	**3.26**	0.500	0.0800	ug/L	12.04.18 02.55	H1	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.04.18 02.55	H1E8	1
Total Trihalomethane		**0.400**	0.500	0.0700	ug/L	12.04.18 02.55	H1E4	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.04.18 02.55	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.04.18 02.55	H1E8	1
Trichloroethene	79-01-6	**256**	2.50	1.00	ug/L	12.11.18 20.01	H1D2	5
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.04.18 02.55	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.04.18 02.55	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.04.18 02.55	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.04.18 02.55	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.04.18 02.55	H1N1E	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **DUP03-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-006 Date Collected: 11.19.18 12.10

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Dilution Analysis:
Seq#: 3072450 Date Analyzed: 12/11/18 20:01 Date Prep: 12/11/18 10:46

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.04.18 02.55	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.04.18 02.55	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.04.18 02.55	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.04.18 02.55	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.04.18 02.55	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.04.18 02.55	T4	1
Propene	115-07-1	ND			ug/L	12.04.18 02.55	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	94	%	70-130	12.04.18 02.55	
Dibromofluoromethane	88	%	70-130	12.04.18 02.55	
1,2-Dichloroethane-D4	79	%	59-138	12.04.18 02.55	
Toluene-D8	103	%	70-130	12.04.18 02.55	

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV05-760-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-007 Date Collected: 11.19.18 12.40

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.100	0.500	0.100	ug/L	12.04.18 03.21	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.200	0.500	0.200	ug/L	12.04.18 03.21	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.100	0.500	0.100	ug/L	12.04.18 03.21	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.0900	0.500	0.0900	ug/L	12.04.18 03.21	H1E8	1
1,1-Dichloroethane	75-34-3	<0.0700	0.500	0.0700	ug/L	12.04.18 03.21	H1E8	1
1,1-Dichloroethene	75-35-4	<0.200	0.500	0.200	ug/L	12.04.18 03.21	H1E8	1
1,1-Dichloropropene	563-58-6	<0.200	1.00	0.200	ug/L	12.04.18 03.21	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<0.200	5.00	0.200	ug/L	12.04.18 03.21	H1L2E8	1
1,2,3-Trichloropropane	96-18-4	<0.200	1.00	0.200	ug/L	12.04.18 03.21	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<0.0700	5.00	0.0700	ug/L	12.04.18 03.21	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.0700	2.00	0.0700	ug/L	12.04.18 03.21	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.300	2.00	0.300	ug/L	12.04.18 03.21	H1E8	1
1,2-Dibromoethane	106-93-4	<0.200	0.500	0.200	ug/L	12.04.18 03.21	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.0800	1.50	0.0800	ug/L	12.04.18 03.21	H1E8	1
1,2-Dichloroethane	107-06-2	<0.100	0.500	0.100	ug/L	12.04.18 03.21	H1E8	1
1,2-Dichloropropane	78-87-5	<0.0900	0.500	0.0900	ug/L	12.04.18 03.21	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.0700	1.50	0.0700	ug/L	12.04.18 03.21	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.0600	1.50	0.0600	ug/L	12.04.18 03.21	H1E8	1
1,3-Dichloropropane	142-28-9	<0.0700	1.00	0.0700	ug/L	12.04.18 03.21	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.200	1.50	0.200	ug/L	12.04.18 03.21	H1E8	1
2,2-Dichloropropane	594-20-7	<0.200	0.500	0.200	ug/L	12.04.18 03.21	H1E8	1
2-Butanone	78-93-3	<0.300	5.00	0.300	ug/L	12.04.18 03.21	H1E8	1
2-Chlorotoluene	95-49-8	<0.0800	1.50	0.0800	ug/L	12.04.18 03.21	H1E8	1
2-Hexanone	591-78-6	<0.200	5.00	0.200	ug/L	12.04.18 03.21	H1E8	1
4-Chlorotoluene	106-43-4	<0.0700	2.00	0.0700	ug/L	12.04.18 03.21	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.200	5.00	0.200	ug/L	12.04.18 03.21	H1E8	1
Acetone	67-64-1	**34.8**	20.0	0.600	ug/L	12.04.18 03.21	H1	1
Benzene	71-43-2	<0.100	0.500	0.100	ug/L	12.04.18 03.21	H1E8	1
Bromobenzene	108-86-1	<0.0900	1.50	0.0900	ug/L	12.04.18 03.21	H1E8	1
Bromochloromethane	74-97-5	<0.200	0.500	0.200	ug/L	12.04.18 03.21	H1E8	1
Bromodichloromethane	75-27-4	<0.0800	0.500	0.0800	ug/L	12.04.18 03.21	H1E8	1
Bromoform	75-25-2	<0.100	1.00	0.100	ug/L	12.04.18 03.21	H1E8	1
Bromomethane	74-83-9	<0.300	5.00	0.300	ug/L	12.04.18 03.21	H1N1E	1
Carbon Disulfide	75-15-0	<0.0900	0.500	0.0900	ug/L	12.04.18 03.21	H1N1E	1
Carbon Tetrachloride	56-23-5	<0.200	0.500	0.200	ug/L	12.04.18 03.21	H1E8	1
Chlorobenzene	108-90-7	<0.0700	0.500	0.0700	ug/L	12.04.18 03.21	H1E8	1
Chloroethane	75-00-3	<0.600	4.00	0.600	ug/L	12.04.18 03.21	H1E8	1
Chloroform	67-66-3	<0.0700	0.500	0.0700	ug/L	12.04.18 03.21	H1E8	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV05-760-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-007 Date Collected: 11.19.18 12.40

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<0.200	5.00	0.200	ug/L	12.04.18 03.21	H1L2E8	1
cis-1,2-Dichloroethene	156-59-2	**0.880**	0.500	0.200	ug/L	12.04.18 03.21	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.0800	1.00	0.0800	ug/L	12.04.18 03.21	H1E8	1
Dibromochloromethane	124-48-1	<0.0700	0.500	0.0700	ug/L	12.04.18 03.21	H1E8	1
Dibromomethane	74-95-3	<0.200	0.500	0.200	ug/L	12.04.18 03.21	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.200	2.00	0.200	ug/L	12.04.18 03.21	H1N1E	1
Ethylbenzene	100-41-4	<0.0900	2.00	0.0900	ug/L	12.04.18 03.21	H1E8	1
Hexachlorobutadiene	87-68-3	<0.200	5.00	0.200	ug/L	12.04.18 03.21	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.300	2.00	0.300	ug/L	12.04.18 03.21	H1N1E	1
isopropylbenzene	98-82-8	<0.0800	2.50	0.0800	ug/L	12.04.18 03.21	H1E8	1
m,p-Xylenes	179601-23-1	<0.0900	2.00	0.0900	ug/L	12.04.18 03.21	H1N1E	1
Methylene Chloride	75-09-2	<0.200	3.00	0.200	ug/L	12.04.18 03.21	H1E8	1
MTBE	1634-04-4	<0.100	2.00	0.100	ug/L	12.04.18 03.21	H1E8	1
Naphthalene	91-20-3	<0.200	5.00	0.200	ug/L	12.04.18 03.21	H1E8	1
n-Butylbenzene	104-51-8	<0.200	2.50	0.200	ug/L	12.04.18 03.21	H1E8	1
n-Propylbenzene	103-65-1	<0.0800	2.00	0.0800	ug/L	12.04.18 03.21	H1E8	1
o-Xylene	95-47-6	<0.0900	1.00	0.0900	ug/L	12.04.18 03.21	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.100	1.50	0.100	ug/L	12.04.18 03.21	H1E8	1
Sec-Butylbenzene	135-98-8	<0.100	1.50	0.100	ug/L	12.04.18 03.21	H1E8	1
Styrene	100-42-5	<0.0800	1.00	0.0800	ug/L	12.04.18 03.21	H1E8	1
tert-Butylbenzene	98-06-6	<0.200	2.50	0.200	ug/L	12.04.18 03.21	H1E8	1
Tetrachloroethylene	127-18-4	<0.0800	0.500	0.0800	ug/L	12.04.18 03.21	H1E8	1
Toluene	108-88-3	<0.0700	2.00	0.0700	ug/L	12.04.18 03.21	H1E8	1
Total Trihalomethane		<0.0700	0.500	0.0700	ug/L	12.04.18 03.21	H1E8	1
Total Xylenes	1330-20-7	<0.0900	1.00	0.0900	ug/L	12.04.18 03.21	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.0900	0.500	0.0900	ug/L	12.04.18 03.21	H1E8	1
Trichloroethene	79-01-6	**4.08**	0.500	0.200	ug/L	12.04.18 03.21	H1	1
Trichlorofluoromethane	75-69-4	<0.400	2.00	0.400	ug/L	12.04.18 03.21	H1E8	1
Vinyl Acetate	108-05-4	<0.200	5.00	0.200	ug/L	12.04.18 03.21	H1E8	1
Vinyl Chloride	75-01-4	<0.100	0.500	0.100	ug/L	12.04.18 03.21	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.0600	0.500	0.0600	ug/L	12.04.18 03.21	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.300	5.00	0.300	ug/L	12.04.18 03.21	H1N1E	1
1,3-Butadiene	106-99-0	<0.276	5.00	0.276	ug/L	12.04.18 03.21	H1E8	1
Cyclohexane	110-82-7	<0.115	5.00	0.115	ug/L	12.04.18 03.21	H1E8	1
Dicyclopentadiene	77-73-6	<0.0540	5.00	0.0540	ug/L	12.04.18 03.21	H1E8	1
Methylcyclohexane	108-87-2	<0.117	5.00	0.117	ug/L	12.04.18 03.21	H1E8	1
n-Hexane	110-54-3	<0.0920	5.00	0.0920	ug/L	12.04.18 03.21	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	12.04.18 03.21	T4	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV05-760-111918** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-007 Date Collected: 11.19.18 12.40

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MNI % Solids:
Analyst: MNI Date Prep: 12.03.18 15.15
Seq Number: 3072422 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	12.04.18 03.21	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	84	%	70-130	12.04.18 03.21	
Dibromofluoromethane	87	%	70-130	12.04.18 03.21	
1,2-Dichloroethane-D4	78	%	59-138	12.04.18 03.21	
Toluene-D8	82	%	70-130	12.04.18 03.21	

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV04-760-112018** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-008 Date Collected: 11.20.18 08.42

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 01.07.19 16.30
Seq Number: 3075027 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	01.07.19 19.24	H1E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	01.07.19 19.24	H1E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	01.07.19 19.24	H1E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	01.07.19 19.24	H1E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	01.07.19 19.24	H1E8	1
1,1-Dichloroethene	75-35-4	**3.56**	5.00	0.178	ug/L	01.07.19 19.24	H1E4	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	01.07.19 19.24	H1E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	01.07.19 19.24	H1E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	01.07.19 19.24	H1E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	01.07.19 19.24	H1E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	01.07.19 19.24	H1E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	01.07.19 19.24	H1E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	01.07.19 19.24	H1E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	01.07.19 19.24	H1E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	01.07.19 19.24	H1E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	01.07.19 19.24	H1E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	01.07.19 19.24	H1E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	01.07.19 19.24	H1E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	01.07.19 19.24	H1E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	01.07.19 19.24	H1E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	01.07.19 19.24	H1E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	01.07.19 19.24	H1E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	01.07.19 19.24	H1E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	01.07.19 19.24	H1E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	01.07.19 19.24	H1E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	01.07.19 19.24	H1E8	1
Acetone	67-64-1	**32.0**	100	20.0	ug/L	01.08.19 17.46	H1E4	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	01.07.19 19.24	H1E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	01.07.19 19.24	H1E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	01.07.19 19.24	H1E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	01.07.19 19.24	H1E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	01.07.19 19.24	H1E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	01.07.19 19.24	H1E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	01.07.19 19.24	H1E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	01.07.19 19.24	H1E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	01.07.19 19.24	H1E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	01.07.19 19.24	H1E8	1
Chloroform	67-66-3	**0.450**	5.00	0.107	ug/L	01.07.19 19.24	H1E4	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV04-760-112018** Matrix: Water Date Received:11.20.18 16.00
Lab Sample Id: 605975-008 Date Collected: 11.20.18 08.42

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 01.07.19 16.30
Seq Number: 3075027 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	01.07.19 19.24	H1E8	1
cis-1,2-Dichloroethene	156-59-2	**7.25**	5.00	0.162	ug/L	01.07.19 19.24	H1	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	01.07.19 19.24	H1E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	01.07.19 19.24	H1E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	01.07.19 19.24	H1E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	01.07.19 19.24	H1L1E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	01.07.19 19.24	H1E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	01.07.19 19.24	H1E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	01.07.19 19.24	H1E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	01.07.19 19.24	H1E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	01.07.19 19.24	H1E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	01.07.19 19.24	H1E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	01.07.19 19.24	H1E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	01.07.19 19.24	H1E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	01.07.19 19.24	H1E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	01.07.19 19.24	H1E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	01.07.19 19.24	H1E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	01.07.19 19.24	H1E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	01.07.19 19.24	H1E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	01.07.19 19.24	H1E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	01.07.19 19.24	H1E8	1
Tetrachloroethylene	127-18-4	**4.17**	5.00	0.347	ug/L	01.07.19 19.24	H1E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	01.07.19 19.24	H1E8	1
Total Trihalomethane		**0.450**	5.00	0.107	ug/L	01.07.19 19.24	H1E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	01.07.19 19.24	H1E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	01.07.19 19.24	H1E8	1
Trichloroethene	79-01-6	**84.4**	5.00	0.218	ug/L	01.07.19 19.24	H1	1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	01.07.19 19.24	H1E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	01.07.19 19.24	H1E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	01.07.19 19.24	H1E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	01.07.19 19.24	H1E8	1
1,1,2-Trichloro-1,2,2-Trifluoroetha	76-13-1	**0.890**	10.0	0.175	ug/L	01.07.19 19.24	H1E4	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	01.07.19 19.24	H1E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	01.07.19 19.24	H1E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	01.07.19 19.24	H1E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	01.07.19 19.24	H1E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	01.07.19 19.24	H1E8	1
4-Ethyltoluene	622-96-8	ND			ug/L	01.07.19 19.24	H1T4	1

Certificate of Analytical Results 605975

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill - Maricopa

Sample Id: **TSSV04-760-112018** Matrix: Water Date Received:11.20.18 16.00

Lab Sample Id: 605975-008 Date Collected: 11.20.18 08.42

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Tech: MCH % Solids:

Analyst: MCH Date Prep: 01.07.19 16.30

Seq Number: 3075027 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	ND			ug/L	01.07.19 19.24	H1T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	102	%	75-131	01.07.19 19.24	
1,2-Dichloroethane-D4	100	%	63-144	01.07.19 19.24	
Toluene-D8	97	%	80-117	01.07.19 19.24	
4-Bromofluorobenzene	102	%	74-124	01.07.19 19.24	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3072422 Matrix: Water Date Prep: 12.03.18

MB Sample Id: 7667821-1-BLK LCS Sample Id: 7667821-1-BKS LCSD Sample Id: 7667821-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.100	20.0	18.5	93	18.1	91	70-130	2	25	ug/L	12.03.18 22:22	
1,1,1-Trichloroethane	<0.200	20.0	19.1	96	17.6	88	70-130	8	25	ug/L	12.03.18 22:22	
1,1,2,2-Tetrachloroethane	<0.100	20.0	15.5	78	15.4	77	66-129	1	25	ug/L	12.03.18 22:22	
1,1,2-Trichloroethane	<0.0900	20.0	16.6	83	16.5	83	70-130	1	25	ug/L	12.03.18 22:22	
1,1-Dichloroethane	<0.0700	20.0	16.4	82	15.7	79	70-130	4	25	ug/L	12.03.18 22:22	
1,1-Dichloroethene	<0.200	20.0	17.2	86	16.9	85	70-130	2	25	ug/L	12.03.18 22:22	
1,1-Dichloropropene	<0.200	20.0	17.5	88	17.6	88	70-130	1	25	ug/L	12.03.18 22:22	
1,2,3-Trichlorobenzene	<0.200	20.0	18.7	94	13.2	66	70-130	34	25	ug/L	12.03.18 22:22	L2R2
1,2,3-Trichloropropane	<0.200	20.0	16.2	81	16.3	82	70-130	1	25	ug/L	12.03.18 22:22	
1,2,4-Trichlorobenzene	<0.0700	20.0	17.7	89	17.2	86	70-130	3	25	ug/L	12.03.18 22:22	
1,2,4-Trimethylbenzene	<0.0700	20.0	16.7	84	17.0	85	70-130	2	25	ug/L	12.03.18 22:22	
1,2-Dibromo-3-Chloropropane	<0.300	20.0	15.5	78	16.0	80	57-120	3	25	ug/L	12.03.18 22:22	
1,2-Dibromoethane	<0.200	20.0	17.8	89	17.7	89	69-131	1	25	ug/L	12.03.18 22:22	
1,2-Dichlorobenzene	<0.0800	20.0	16.8	84	16.6	83	70-130	1	25	ug/L	12.03.18 22:22	
1,2-Dichloroethane	<0.100	20.0	17.8	89	17.3	87	70-130	3	25	ug/L	12.03.18 22:22	
1,2-Dichloropropane	<0.0900	20.0	16.5	83	16.4	82	70-130	1	25	ug/L	12.03.18 22:22	
1,3,5-Trimethylbenzene	<0.0700	20.0	17.4	87	17.8	89	70-130	2	25	ug/L	12.03.18 22:22	
1,3-Dichlorobenzene	<0.0600	20.0	17.3	87	17.2	86	70-130	1	25	ug/L	12.03.18 22:22	
1,3-Dichloropropane	<0.0700	20.0	15.9	80	17.9	90	70-130	12	25	ug/L	12.03.18 22:22	
1,4-Dichlorobenzene	<0.200	20.0	16.5	83	16.7	84	70-130	1	25	ug/L	12.03.18 22:22	
2,2-Dichloropropane	<0.200	20.0	17.6	88	16.0	80	70-130	10	25	ug/L	12.03.18 22:22	
2-Butanone	<0.300	40.0	37.3	93	36.1	90	48-135	3	25	ug/L	12.03.18 22:22	
2-Chlorotoluene	<0.0800	20.0	17.4	87	17.5	88	70-130	1	25	ug/L	12.03.18 22:22	
2-Hexanone	<0.200	40.0	35.1	88	38.2	96	50-133	8	25	ug/L	12.03.18 22:22	
4-Chlorotoluene	<0.0700	20.0	17.1	86	17.1	86	70-130	0	25	ug/L	12.03.18 22:22	
4-Methyl-2-Pentanone	<0.200	40.0	28.3	71	31.0	78	45-141	9	25	ug/L	12.03.18 22:22	
Acetone	<0.600	40.0	30.2	76	30.3	76	47-133	0	25	ug/L	12.03.18 22:22	
Benzene	<0.100	20.0	17.4	87	17.0	85	70-130	2	25	ug/L	12.03.18 22:22	
Bromobenzene	<0.0900	20.0	17.9	90	17.6	88	70-130	2	25	ug/L	12.03.18 22:22	
Bromochloromethane	<0.200	20.0	17.0	85	16.3	82	70-130	4	25	ug/L	12.03.18 22:22	
Bromodichloromethane	<0.0800	20.0	17.6	88	17.1	86	70-130	3	25	ug/L	12.03.18 22:22	
Bromoform	<0.100	20.0	17.9	90	17.8	89	53-124	1	25	ug/L	12.03.18 22:22	
Bromomethane	<0.300	20.0	45.2	226	49.0	245	59-131	8	25	ug/L	12.03.18 22:22	N1
Carbon Disulfide	<0.0900	20.0	34.8	174	33.7	169	62-128	3	25	ug/L	12.03.18 22:22	N1
Carbon Tetrachloride	<0.200	20.0	20.9	105	19.7	99	58-138	6	25	ug/L	12.03.18 22:22	
Chlorobenzene	<0.0700	20.0	17.9	90	17.8	89	70-130	1	25	ug/L	12.03.18 22:22	
Chloroethane	<0.600	20.0	28.1	141	26.2	131	57-142	7	25	ug/L	12.03.18 22:22	
Chloroform	<0.0700	20.0	17.7	89	17.0	85	70-130	4	25	ug/L	12.03.18 22:22	
Chloromethane	<0.200	20.0	10.5	53	7.83	39	52-142	29	25	ug/L	12.03.18 22:22	L2R2
cis-1,2-Dichloroethene	<0.200	20.0	18.8	94	18.2	91	70-130	3	25	ug/L	12.03.18 22:22	
cis-1,3-Dichloropropene	<0.0800	20.0	18.0	90	17.6	88	69-138	2	25	ug/L	12.03.18 22:22	
Dibromochloromethane	<0.0700	20.0	18.3	92	17.3	87	63-124	6	25	ug/L	12.03.18 22:22	
Dibromomethane	<0.200	20.0	16.8	84	16.7	84	70-130	1	25	ug/L	12.03.18 22:22	
Dichlorodifluoromethane	<0.200	20.0	43.7	219	40.6	203	40-148	7	25	ug/L	12.03.18 22:22	N1
Ethylbenzene	<0.0900	20.0	18.0	90	17.7	89	70-130	2	25	ug/L	12.03.18 22:22	
Hexachlorobutadiene	<0.200	20.0	19.5	98	18.0	90	70-130	8	25	ug/L	12.03.18 22:22	
Iodomethane (Methyl Iodide)	<0.300	20.0	31.2	156	36.0	180	51-138	14	25	ug/L	12.03.18 22:22	N1
isopropylbenzene	<0.0800	20.0	18.0	90	17.4	87	70-130	3	25	ug/L	12.03.18 22:22	
m,p-Xylenes	<0.0900	40.0	18.2	46	18.4	46	70-130	1	25	ug/L	12.03.18 22:22	N1

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3072422 Matrix: Water Date Prep: 12.03.18

MB Sample Id: 7667821-1-BLK LCS Sample Id: 7667821-1-BKS LCSD Sample Id: 7667821-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<0.200	20.0	16.6	83	15.7	79	59-137	6	25	ug/L	12.03.18 22:22	
MTBE	<0.100	20.0	19.6	98	19.7	99	69-130	1	25	ug/L	12.03.18 22:22	
Naphthalene	<0.200	20.0	16.8	84	17.1	86	65-126	2	25	ug/L	12.03.18 22:22	
n-Butylbenzene	<0.200	20.0	17.4	87	17.3	87	70-130	1	25	ug/L	12.03.18 22:22	
n-Propylbenzene	<0.0800	20.0	16.5	83	17.1	86	70-130	4	25	ug/L	12.03.18 22:22	
o-Xylene	<0.0900	20.0	18.8	94	19.1	96	70-130	2	25	ug/L	12.03.18 22:22	
p-Cymene (p-Isopropyltoluene)	<0.100	20.0	17.3	87	17.4	87	70-130	1	25	ug/L	12.03.18 22:22	
Sec-Butylbenzene	<0.100	20.0	16.9	85	17.4	87	70-130	3	25	ug/L	12.03.18 22:22	
Styrene	<0.0800	20.0	19.1	96	18.7	94	70-130	2	25	ug/L	12.03.18 22:22	
tert-Butylbenzene	<0.200	20.0	15.9	80	16.1	81	70-130	1	25	ug/L	12.03.18 22:22	
Tetrachloroethylene	<0.0800	20.0	19.9	100	19.0	95	70-130	5	25	ug/L	12.03.18 22:22	
Toluene	<0.0700	20.0	17.1	86	17.1	86	70-130	0	25	ug/L	12.03.18 22:22	
trans-1,2-dichloroethene	<0.0900	20.0	17.6	88	17.2	86	70-130	2	25	ug/L	12.03.18 22:22	
Trichloroethene	<0.200	20.0	18.8	94	18.0	90	70-130	4	25	ug/L	12.03.18 22:22	
Trichlorofluoromethane	<0.400	20.0	26.4	132	23.8	119	63-142	10	25	ug/L	12.03.18 22:22	
Vinyl Acetate	<0.200	20.0	15.3	77	15.1	76	55-136	1	25	ug/L	12.03.18 22:22	
Vinyl Chloride	<0.100	20.0	21.5	108	18.7	94	62-136	14	25	ug/L	12.03.18 22:22	
trans-1,3-dichloropropene	<0.0600	20.0	17.8	89	18.0	90	68-130	1	25	ug/L	12.03.18 22:22	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.300	20.0	1030	5150	1010	5050	60-140	2	25	ug/L	12.03.18 22:22	N1
1,3-Butadiene	<0.276	20.0	14.2	71	12.7	64	52-140	11	20	ug/L	12.03.18 22:22	
Cyclohexane	<0.115	20.0	17.1	86	16.1	81	70-130	6	20	ug/L	12.03.18 22:22	
Dicyclopentadiene	<0.0540	20.0	18.1	91	18.6	93	70-130	3	20	ug/L	12.03.18 22:22	
Methylcyclohexane	<0.117	20.0	20.0	100	19.5	98	70-130	3	20	ug/L	12.03.18 22:22	
n-Hexane	<0.0920	20.0	17.6	88	17.6	88	70-132	0	20	ug/L	12.03.18 22:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		97		87		70-130	%	12.03.18 22:22
Dibromofluoromethane	86		96		81		70-130	%	12.03.18 22:22
1,2-Dichloroethane-D4	84		84		74		59-138	%	12.03.18 22:22
Toluene-D8	88		87		77		70-130	%	12.03.18 22:22

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030C

Seq Number: 3072450 Matrix: Water Date Prep: 12.11.18

MB Sample Id: 7667834-1-BLK LCS Sample Id: 7667834-1-BKS LCSD Sample Id: 7667834-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
m,p-Xylenes	<0.0900	40.0	42.4	106	38.0	95	70-130	11	25	ug/L	12.11.18 15:03	
o-Xylene	<0.0900	20.0	23.6	118	20.0	100	70-130	17	25	ug/L	12.11.18 15:03	
Trichloroethene	<0.200	20.0	20.5	103	18.8	94	70-130	9	25	ug/L	12.11.18 15:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		106		100		70-130	%	12.11.18 15:03
Dibromofluoromethane	87		91		87		70-130	%	12.11.18 15:03
1,2-Dichloroethane-D4	90		98		96		59-138	%	12.11.18 15:03
Toluene-D8	91		94		92		70-130	%	12.11.18 15:03

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030B

Seq Number: 3075027 Matrix: Water Date Prep: 01.07.19

MB Sample Id: 7669322-1-BLK LCS Sample Id: 7669322-1-BKS LCSD Sample Id: 7669322-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	48.4	97	48.4	97	78-131	0	25	ug/L	01.07.19 10:40	
1,1,1-Trichloroethane	<0.130	50.0	52.3	105	49.1	98	72-124	6	25	ug/L	01.07.19 10:40	
1,1,2,2-Tetrachloroethane	<0.365	50.0	48.7	97	49.0	98	80-133	1	25	ug/L	01.07.19 10:40	
1,1,2-Trichloroethane	<0.272	50.0	49.9	100	49.9	100	71-135	0	25	ug/L	01.07.19 10:40	
1,1-Dichloroethane	<0.182	50.0	53.2	106	52.1	104	75-125	2	25	ug/L	01.07.19 10:40	
1,1-Dichloroethene	<0.178	50.0	53.6	107	52.6	105	68-116	2	25	ug/L	01.07.19 10:40	
1,1-Dichloropropene	<0.257	50.0	53.0	106	51.1	102	69-124	4	25	ug/L	01.07.19 10:40	
1,2,3-Trichlorobenzene	<2.00	50.0	53.8	108	53.3	107	76-126	1	25	ug/L	01.07.19 10:40	
1,2,3-Trichloropropane	<0.214	50.0	51.7	103	52.1	104	75-134	1	25	ug/L	01.07.19 10:40	
1,2,4-Trichlorobenzene	<2.00	50.0	54.4	109	53.8	108	77-127	1	25	ug/L	01.07.19 10:40	
1,2,4-Trimethylbenzene	<0.113	50.0	51.1	102	49.9	100	79-132	2	25	ug/L	01.07.19 10:40	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	50.6	101	51.6	103	62-134	2	25	ug/L	01.07.19 10:40	
1,2-Dibromoethane	<0.380	50.0	50.5	101	49.8	100	77-129	1	25	ug/L	01.07.19 10:40	
1,2-Dichlorobenzene	<0.175	50.0	51.2	102	51.1	102	81-123	0	25	ug/L	01.07.19 10:40	
1,2-Dichloroethane	<0.283	50.0	49.9	100	49.5	99	64-130	1	25	ug/L	01.07.19 10:40	
1,2-Dichloropropane	<0.170	50.0	50.6	101	48.3	97	72-127	5	25	ug/L	01.07.19 10:40	
1,3,5-Trimethylbenzene	<0.178	50.0	49.5	99	50.5	101	72-139	2	25	ug/L	01.07.19 10:40	
1,3-Dichlorobenzene	<0.169	50.0	50.6	101	49.8	100	82-126	2	25	ug/L	01.07.19 10:40	
1,3-Dichloropropane	<0.199	50.0	49.0	98	49.1	98	79-133	0	25	ug/L	01.07.19 10:40	
1,4-Dichlorobenzene	<0.222	50.0	49.5	99	49.0	98	80-119	1	25	ug/L	01.07.19 10:40	
2,2-Dichloropropane	<0.154	50.0	52.9	106	51.1	102	71-134	3	25	ug/L	01.07.19 10:40	
2-Butanone	<1.32	250	238	95	243	97	49-135	2	25	ug/L	01.07.19 10:40	
2-Chlorotoluene	<0.293	50.0	50.5	101	50.0	100	83-128	1	25	ug/L	01.07.19 10:40	
2-Hexanone	<1.05	250	259	104	264	106	56-134	2	25	ug/L	01.07.19 10:40	
4-Chlorotoluene	<0.114	50.0	49.9	100	49.4	99	81-125	1	25	ug/L	01.07.19 10:40	
4-Methyl-2-Pentanone	<0.874	250	265	106	263	105	63-127	1	25	ug/L	01.07.19 10:40	
Acetone	<20.0	250	200	80	197	79	40-142	2	25	ug/L	01.07.19 10:40	
Benzene	<0.185	50.0	51.8	104	50.1	100	68-123	3	25	ug/L	01.07.19 10:40	
Bromobenzene	<0.258	50.0	51.5	103	51.4	103	83-124	0	25	ug/L	01.07.19 10:40	
Bromochloromethane	<0.328	50.0	50.9	102	50.7	101	68-119	0	25	ug/L	01.07.19 10:40	
Bromodichloromethane	<0.164	50.0	52.0	104	50.7	101	72-132	3	25	ug/L	01.07.19 10:40	
Bromoform	<0.348	50.0	46.3	93	46.3	93	65-136	0	25	ug/L	01.07.19 10:40	
Bromomethane	<0.127	50.0	46.6	93	46.3	93	48-120	1	25	ug/L	01.07.19 10:40	
Carbon Disulfide	<0.173	50.0	61.8	124	58.5	117	53-138	5	25	ug/L	01.07.19 10:40	
Carbon Tetrachloride	<0.243	50.0	52.1	104	50.6	101	68-135	3	25	ug/L	01.07.19 10:40	
Chlorobenzene	<0.110	50.0	49.5	99	48.9	98	78-124	1	25	ug/L	01.07.19 10:40	
Chloroethane	<0.190	50.0	43.4	87	43.2	86	55-120	0	25	ug/L	01.07.19 10:40	
Chloroform	<0.107	50.0	50.5	101	48.8	98	71-119	3	25	ug/L	01.07.19 10:40	
Chloromethane	<5.00	50.0	50.7	101	50.4	101	54-114	1	25	ug/L	01.07.19 10:40	
cis-1,2-Dichloroethene	<0.162	50.0	51.8	104	50.9	102	74-130	2	25	ug/L	01.07.19 10:40	
cis-1,3-Dichloropropene	<0.126	50.0	54.2	108	53.1	106	74-138	2	25	ug/L	01.07.19 10:40	
Dibromochloromethane	<0.212	50.0	50.5	101	49.9	100	74-135	1	25	ug/L	01.07.19 10:40	
Dibromomethane	<0.186	50.0	49.6	99	49.0	98	71-124	1	25	ug/L	01.07.19 10:40	
Dichlorodifluoromethane	<0.148	50.0	62.2	124	60.8	122	59-121	2	25	ug/L	01.07.19 10:40	L1
Ethylbenzene	<0.190	50.0	51.1	102	50.3	101	69-131	2	25	ug/L	01.07.19 10:40	
Hexachlorobutadiene	<2.00	50.0	55.3	111	52.3	105	74-130	6	25	ug/L	01.07.19 10:40	
Iodomethane (Methyl Iodide)	<0.170	50.0	47.6	95	45.9	92	66-115	4	25	ug/L	01.07.19 10:40	
isopropylbenzene	<0.218	50.0	50.6	101	49.9	100	66-133	1	25	ug/L	01.07.19 10:40	
m,p-Xylenes	<1.00	100	103	103	101	101	69-132	2	25	ug/L	01.07.19 10:40	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030B
Seq Number: 3075027 Matrix: Water Date Prep: 01.07.19
MB Sample Id: 7669322-1-BLK LCS Sample Id: 7669322-1-BKS LCSD Sample Id: 7669322-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	50.8	102	49.0	98	60-121	4	25	ug/L	01.07.19 10:40	
MTBE	<0.500	50.0	55.0	110	52.1	104	60-152	5	25	ug/L	01.07.19 10:40	
Naphthalene	<2.00	50.0	58.5	117	59.0	118	69-140	1	25	ug/L	01.07.19 10:40	
n-Butylbenzene	<2.00	50.0	55.8	112	54.0	108	82-128	3	25	ug/L	01.07.19 10:40	
n-Propylbenzene	<0.173	50.0	52.4	105	52.0	104	86-129	1	25	ug/L	01.07.19 10:40	
o-Xylene	<0.500	50.0	52.1	104	51.1	102	67-132	2	25	ug/L	01.07.19 10:40	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	48.2	96	47.2	94	85-129	2	25	ug/L	01.07.19 10:40	
Sec-Butylbenzene	<0.124	50.0	53.0	106	51.9	104	83-130	2	25	ug/L	01.07.19 10:40	
Styrene	<0.197	50.0	53.0	106	52.7	105	79-128	1	25	ug/L	01.07.19 10:40	
tert-Butylbenzene	<0.177	50.0	54.8	110	53.1	106	83-131	3	25	ug/L	01.07.19 10:40	
Tetrachloroethylene	<0.347	50.0	51.6	103	49.9	100	79-122	3	25	ug/L	01.07.19 10:40	
Toluene	<0.500	50.0	50.6	101	49.7	99	62-132	2	25	ug/L	01.07.19 10:40	
trans-1,2-dichloroethene	<0.167	50.0	50.8	102	50.0	100	64-109	2	25	ug/L	01.07.19 10:40	
Trichloroethene	<0.218	50.0	52.5	105	51.0	102	74-123	3	25	ug/L	01.07.19 10:40	
Trichlorofluoromethane	<0.191	50.0	50.7	101	49.7	99	70-143	2	25	ug/L	01.07.19 10:40	
Vinyl Acetate	<0.583	250	214	86	212	85	63-145	1	25	ug/L	01.07.19 10:40	
Vinyl Chloride	<0.232	50.0	43.0	86	42.0	84	59-124	2	25	ug/L	01.07.19 10:40	
trans-1,3-dichloropropene	<0.198	50.0	54.6	109	53.7	107	70-132	2	25	ug/L	01.07.19 10:40	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	54.2	108	50.2	100	73-118	8	25	ug/L	01.07.19 10:40	
1,3-Butadiene	<2.52	50.0	74.1	148	66.6	133	70-150	11	25	ug/L	01.07.19 10:40	
Cyclohexane	<0.309	50.0	56.0	112	52.3	105	65-121	7	25	ug/L	01.07.19 10:40	
Dicyclopentadiene	<5.00	50.0	45.4	91	44.2	88	70-120	3	25	ug/L	01.07.19 10:40	
Methylcyclohexane	<0.228	50.0	57.2	114	53.5	107	67-118	7	25	ug/L	01.07.19 10:40	
n-Hexane	<5.00	50.0	54.1	108	51.2	102	72-125	6	25	ug/L	01.07.19 10:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	106		100		101		75-131	%	01.07.19 10:40
1,2-Dichloroethane-D4	100		99		97		63-144	%	01.07.19 10:40
Toluene-D8	100		97		98		80-117	%	01.07.19 10:40
4-Bromofluorobenzene	101		102		101		74-124	%	01.07.19 10:40

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030B
Seq Number: 3075227 Matrix: Water Date Prep: 01.08.19
MB Sample Id: 7669433-1-BLK LCS Sample Id: 7669433-1-BKS LCSD Sample Id: 7669433-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
m,p-Xylenes	<1.00	100	96.3	96	93.6	94	69-132	3	25	ug/L	01.08.19 14:12	
o-Xylene	<0.500	50.0	49.5	99	49.0	98	67-132	1	25	ug/L	01.08.19 14:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		97		97		75-131	%	01.08.19 14:12
1,2-Dichloroethane-D4	101		96		98		63-144	%	01.08.19 14:12
Toluene-D8	100		98		99		80-117	%	01.08.19 14:12
4-Bromofluorobenzene	97		100		100		74-124	%	01.08.19 14:12

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3072422 Matrix: Water Date Prep: 12.03.18

Parent Sample Id: 605975-001 MS Sample Id: 605975-001 S MSD Sample Id: 605975-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.100	20.0	17.7	89	17.7	89	58-137	0	20	ug/L	12.04.18 03:47	
1,1,1-Trichloroethane	<0.200	20.0	17.4	87	18.5	93	59-137	6	20	ug/L	12.04.18 03:47	
1,1,2,2-Tetrachloroethane	<0.100	20.0	14.5	73	15.7	79	61-132	8	20	ug/L	12.04.18 03:47	
1,1,2-Trichloroethane	<0.0900	20.0	16.2	81	17.1	86	70-130	5	20	ug/L	12.04.18 03:47	
1,1-Dichloroethane	<0.0700	20.0	17.7	89	17.0	85	65-138	4	20	ug/L	12.04.18 03:47	
1,1-Dichloroethene	<0.200	20.0	17.9	90	18.7	94	60-139	4	20	ug/L	12.04.18 03:47	
1,1-Dichloropropene	<0.200	20.0	17.3	87	17.4	87	70-130	1	20	ug/L	12.04.18 03:47	
1,2,3-Trichlorobenzene	<0.200	20.0	16.5	83	15.2	76	67-127	8	24	ug/L	12.04.18 03:47	
1,2,3-Trichloropropane	<0.200	20.0	15.3	77	15.9	80	56-130	4	20	ug/L	12.04.18 03:47	
1,2,4-Trichlorobenzene	<0.0700	20.0	15.8	79	15.6	78	66-133	1	20	ug/L	12.04.18 03:47	
1,2,4-Trimethylbenzene	<0.0700	20.0	15.5	78	16.4	82	44-157	6	22	ug/L	12.04.18 03:47	
1,2-Dibromo-3-Chloropropane	<0.300	20.0	14.4	72	15.3	77	49-122	6	22	ug/L	12.04.18 03:47	
1,2-Dibromoethane	<0.200	20.0	16.7	84	17.8	89	63-131	6	20	ug/L	12.04.18 03:47	
1,2-Dichlorobenzene	<0.0800	20.0	15.7	79	16.6	83	70-130	6	20	ug/L	12.04.18 03:47	
1,2-Dichloroethane	<0.100	20.0	17.3	87	18.4	92	51-148	6	20	ug/L	12.04.18 03:47	
1,2-Dichloropropane	<0.0900	20.0	17.6	88	17.6	88	70-130	0	20	ug/L	12.04.18 03:47	
1,3,5-Trimethylbenzene	<0.0700	20.0	16.0	80	16.4	82	59-143	2	20	ug/L	12.04.18 03:47	
1,3-Dichlorobenzene	<0.0600	20.0	16.1	81	16.3	82	70-130	1	20	ug/L	12.04.18 03:47	
1,3-Dichloropropane	<0.0700	20.0	17.7	89	18.5	93	70-130	4	20	ug/L	12.04.18 03:47	
1,4-Dichlorobenzene	<0.200	20.0	15.6	78	16.1	81	70-130	3	20	ug/L	12.04.18 03:47	
2,2-Dichloropropane	<0.200	20.0	15.0	75	16.0	80	67-136	6	20	ug/L	12.04.18 03:47	
2-Butanone	<0.300	40.0	43.8	110	42.3	106	47-142	3	22	ug/L	12.04.18 03:47	
2-Chlorotoluene	<0.0800	20.0	16.2	81	16.5	83	70-130	2	20	ug/L	12.04.18 03:47	
2-Hexanone	<0.200	40.0	32.1	80	36.7	92	47-133	13	33	ug/L	12.04.18 03:47	
4-Chlorotoluene	<0.0700	20.0	16.0	80	16.6	83	70-130	4	20	ug/L	12.04.18 03:47	
4-Methyl-2-Pentanone	<0.200	40.0	28.3	71	30.8	77	46-139	8	20	ug/L	12.04.18 03:47	
Acetone	14.2	40.0	46.4	81	48.5	86	22-162	4	20	ug/L	12.04.18 03:47	
Benzene	<0.100	20.0	17.4	87	17.8	89	70-130	2	20	ug/L	12.04.18 03:47	
Bromobenzene	<0.0900	20.0	16.6	83	17.8	89	65-138	7	20	ug/L	12.04.18 03:47	
Bromochloromethane	<0.200	20.0	16.9	85	17.2	86	64-135	2	22	ug/L	12.04.18 03:47	
Bromodichloromethane	<0.0800	20.0	15.9	80	18.3	92	65-130	14	20	ug/L	12.04.18 03:47	
Bromoform	<0.100	20.0	16.0	80	16.7	84	40-130	4	20	ug/L	12.04.18 03:47	
Bromomethane	<0.300	20.0	40.6	203	43.2	216	57-132	6	22	ug/L	12.04.18 03:47	N1
Carbon Disulfide	<0.0900	20.0	36.0	180	34.2	171	53-141	5	28	ug/L	12.04.18 03:47	N1
Carbon Tetrachloride	<0.200	20.0	18.0	90	19.8	99	49-139	10	20	ug/L	12.04.18 03:47	
Chlorobenzene	<0.0700	20.0	17.5	88	18.3	92	70-130	4	20	ug/L	12.04.18 03:47	
Chloroethane	<0.600	20.0	27.2	136	23.8	119	41-152	13	20	ug/L	12.04.18 03:47	
Chloroform	<0.0700	20.0	17.3	87	18.2	91	60-141	5	22	ug/L	12.04.18 03:47	
Chloromethane	<0.200	20.0	18.9	95	9.66	48	36-168	65	22	ug/L	12.04.18 03:47	R5
cis-1,2-Dichloroethene	<0.200	20.0	18.9	95	18.5	93	68-137	2	20	ug/L	12.04.18 03:47	
cis-1,3-Dichloropropene	<0.0800	20.0	16.1	81	18.1	91	66-135	12	20	ug/L	12.04.18 03:47	
Dibromochloromethane	<0.0700	20.0	16.6	83	17.5	88	49-132	5	20	ug/L	12.04.18 03:47	
Dibromomethane	<0.200	20.0	16.4	82	17.0	85	67-134	4	20	ug/L	12.04.18 03:47	
Dichlorodifluoromethane	<0.200	20.0	44.6	223	43.8	219	36-143	2	33	ug/L	12.04.18 03:47	N1
Ethylbenzene	<0.0900	20.0	17.2	86	17.7	89	70-130	3	20	ug/L	12.04.18 03:47	
Hexachlorobutadiene	<0.200	20.0	17.1	86	15.6	78	64-135	9	20	ug/L	12.04.18 03:47	
Iodomethane (Methyl Iodide)	<0.300	20.0	32.7	164	34.3	172	38-150	5	20	ug/L	12.04.18 03:47	N1
isopropylbenzene	<0.0800	20.0	16.7	84	17.5	88	70-130	5	20	ug/L	12.04.18 03:47	
m,p-Xylenes	<0.0900	40.0	17.2	43	17.8	45	61-145	3	20	ug/L	12.04.18 03:47	N1

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B | Prep Method: SW5030C

Seq Number: 3072422 | Matrix: Water | Date Prep: 12.03.18

Parent Sample Id: 605975-001 | MS Sample Id: 605975-001 S | MSD Sample Id: 605975-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<0.200	20.0	17.4	87	17.3	87	45-153	1	20	ug/L	12.04.18 03:47	
MTBE	<0.100	20.0	20.6	103	21.4	107	58-139	4	20	ug/L	12.04.18 03:47	
Naphthalene	<0.200	20.0	14.9	75	15.2	76	59-127	2	26	ug/L	12.04.18 03:47	
n-Butylbenzene	<0.200	20.0	16.7	84	16.8	84	70-130	1	20	ug/L	12.04.18 03:47	
n-Propylbenzene	<0.0800	20.0	15.8	79	16.1	81	70-130	2	20	ug/L	12.04.18 03:47	
o-Xylene	<0.0900	20.0	18.2	91	18.6	93	66-140	2	20	ug/L	12.04.18 03:47	
p-Cymene (p-Isopropyltoluene)	<0.100	20.0	16.0	80	16.4	82	70-130	2	20	ug/L	12.04.18 03:47	
Sec-Butylbenzene	<0.100	20.0	15.6	78	16.1	81	70-130	3	20	ug/L	12.04.18 03:47	
Styrene	<0.0800	20.0	18.1	91	18.5	93	31-165	2	37	ug/L	12.04.18 03:47	
tert-Butylbenzene	<0.200	20.0	13.1	66	13.4	67	70-138	2	20	ug/L	12.04.18 03:47	M2
Tetrachloroethylene	<0.0800	20.0	18.5	93	19.2	96	62-140	4	20	ug/L	12.04.18 03:47	
Toluene	<0.0700	20.0	16.7	84	17.1	86	70-130	2	20	ug/L	12.04.18 03:47	
trans-1,2-dichloroethene	<0.0900	20.0	18.2	91	18.8	94	64-137	3	20	ug/L	12.04.18 03:47	
Trichloroethene	<0.200	20.0	17.7	89	18.2	91	69-134	3	20	ug/L	12.04.18 03:47	
Trichlorofluoromethane	<0.400	20.0	23.6	118	24.3	122	19-191	3	20	ug/L	12.04.18 03:47	
Vinyl Acetate	<0.200	20.0	17.0	85	15.4	77	34-148	10	23	ug/L	12.04.18 03:47	
Vinyl Chloride	<0.100	20.0	27.9	140	19.4	97	53-145	36	21	ug/L	12.04.18 03:47	R5
trans-1,3-dichloropropene	<0.0600	20.0	17.5	88	18.6	93	64-132	6	20	ug/L	12.04.18 03:47	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.300	20.0	1020	5100	1010	5050	38-131	1	20	ug/L	12.04.18 03:47	N1
1,3-Butadiene	<0.276	20.0	19.3	97	14.5	73	33-153	28	20	ug/L	12.04.18 03:47	R5
Cyclohexane	<0.115	20.0	17.2	86	17.1	86	63-141	1	20	ug/L	12.04.18 03:47	
Dicyclopentadiene	<0.0540	20.0	18.1	91	18.3	92	15-171	1	20	ug/L	12.04.18 03:47	
Methylcyclohexane	<0.117	20.0	19.0	95	19.5	98	62-144	3	20	ug/L	12.04.18 03:47	
n-Hexane	<0.0920	20.0	20.1	101	18.1	91	63-140	10	20	ug/L	12.04.18 03:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	97		97		70-130	%	12.04.18 03:47
Dibromofluoromethane	96		96		70-130	%	12.04.18 03:47
1,2-Dichloroethane-D4	82		88		59-138	%	12.04.18 03:47
Toluene-D8	82		87		70-130	%	12.04.18 03:47

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030C
Seq Number: 3072450 Matrix: Ground Water Date Prep: 12.11.18
Parent Sample Id: 606602-001 MS Sample Id: 606602-001 S MSD Sample Id: 606602-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
m,p-Xylenes	<0.0900	40.0	40.3	101	39.2	98	61-145	3	20	ug/L	12.12.18 00:53	
o-Xylene	<0.0900	20.0	21.5	108	20.5	103	66-140	5	20	ug/L	12.12.18 00:53	
Trichloroethene	<0.200	20.0	20.6	103	18.8	94	69-134	9	20	ug/L	12.12.18 00:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		107		70-130	%	12.12.18 00:53
Dibromofluoromethane	81		81		70-130	%	12.12.18 00:53
1,2-Dichloroethane-D4	116		115		59-138	%	12.12.18 00:53
Toluene-D8	84		87		70-130	%	12.12.18 00:53

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030B
Seq Number: 3075227 Matrix: Solid Date Prep: 01.08.19
Parent Sample Id: 610300-010 MS Sample Id: 610300-010 S MSD Sample Id: 610300-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
m,p-Xylenes	<50.0	5000	4720	94	5210	104	79-118	10	25	ug/L	01.08.19 18:55	
o-Xylene	246	2500	2590	94	2820	103	78-122	9	25	ug/L	01.08.19 18:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	94		84		75-131	%	01.08.19 18:55
1,2-Dichloroethane-D4	87		76		63-144	%	01.08.19 18:55
Toluene-D8	101		106		80-117	%	01.08.19 18:55
4-Bromofluorobenzene	94		97		74-124	%	01.08.19 18:55

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030B

Seq Number: 3075027 Matrix: Ground Water Date Prep: 01.07.19

Parent Sample Id: 610323-003 MS Sample Id: 610323-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	47.3	95	75-114	ug/L	01.07.19 11:36	
1,1,1-Trichloroethane	<0.130	50.0	50.0	100	75-118	ug/L	01.07.19 11:36	
1,1,2,2-Tetrachloroethane	<0.365	50.0	47.0	94	75-113	ug/L	01.07.19 11:36	
1,1,2-Trichloroethane	<0.272	50.0	48.8	98	75-114	ug/L	01.07.19 11:36	
1,1-Dichloroethane	<0.182	50.0	51.0	102	71-121	ug/L	01.07.19 11:36	
1,1-Dichloroethene	<0.178	50.0	51.8	104	74-124	ug/L	01.07.19 11:36	
1,1-Dichloropropene	<0.257	50.0	50.9	102	77-116	ug/L	01.07.19 11:36	
1,2,3-Trichlorobenzene	<2.00	50.0	53.2	106	70-140	ug/L	01.07.19 11:36	
1,2,3-Trichloropropane	<0.214	50.0	49.3	99	73-115	ug/L	01.07.19 11:36	
1,2,4-Trichlorobenzene	<2.00	50.0	53.1	106	71-135	ug/L	01.07.19 11:36	
1,2,4-Trimethylbenzene	<0.113	50.0	49.0	98	74-118	ug/L	01.07.19 11:36	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	48.2	96	70-124	ug/L	01.07.19 11:36	
1,2-Dibromoethane	<0.380	50.0	49.4	99	75-117	ug/L	01.07.19 11:36	
1,2-Dichlorobenzene	<0.175	50.0	50.0	100	77-115	ug/L	01.07.19 11:36	
1,2-Dichloroethane	<0.283	50.0	48.3	97	72-111	ug/L	01.07.19 11:36	
1,2-Dichloropropane	<0.170	50.0	47.6	95	75-113	ug/L	01.07.19 11:36	
1,3,5-Trimethylbenzene	<0.178	50.0	49.3	99	77-119	ug/L	01.07.19 11:36	
1,3-Dichlorobenzene	<0.169	50.0	49.0	98	79-112	ug/L	01.07.19 11:36	
1,3-Dichloropropane	<0.199	50.0	47.8	96	74-113	ug/L	01.07.19 11:36	
1,4-Dichlorobenzene	<0.222	50.0	48.1	96	76-112	ug/L	01.07.19 11:36	
2,2-Dichloropropane	<0.154	50.0	50.5	101	58-131	ug/L	01.07.19 11:36	
2-Butanone	<1.32	250	223	89	59-114	ug/L	01.07.19 11:36	
2-Chlorotoluene	<0.293	50.0	49.1	98	79-113	ug/L	01.07.19 11:36	
2-Hexanone	<1.05	250	251	100	66-129	ug/L	01.07.19 11:36	
4-Chlorotoluene	<0.114	50.0	48.4	97	76-114	ug/L	01.07.19 11:36	
4-Methyl-2-Pentanone	<0.874	250	251	100	73-126	ug/L	01.07.19 11:36	
Acetone	<20.0	250	182	73	33-121	ug/L	01.07.19 11:36	
Benzene	<0.185	50.0	48.8	98	76-110	ug/L	01.07.19 11:36	
Bromobenzene	<0.258	50.0	50.5	101	77-114	ug/L	01.07.19 11:36	
Bromochloromethane	<0.328	50.0	49.6	99	72-112	ug/L	01.07.19 11:36	
Bromodichloromethane	<0.164	50.0	48.8	98	75-116	ug/L	01.07.19 11:36	
Bromoform	<0.348	50.0	45.0	90	66-119	ug/L	01.07.19 11:36	
Bromomethane	<0.127	50.0	43.0	86	60-110	ug/L	01.07.19 11:36	
Carbon Disulfide	<0.173	50.0	58.2	116	71-128	ug/L	01.07.19 11:36	
Carbon Tetrachloride	<0.243	50.0	50.4	101	77-119	ug/L	01.07.19 11:36	
Chlorobenzene	<0.110	50.0	48.4	97	78-110	ug/L	01.07.19 11:36	
Chloroethane	<0.190	50.0	40.9	82	62-113	ug/L	01.07.19 11:36	
Chloroform	<0.107	50.0	48.5	97	79-111	ug/L	01.07.19 11:36	
Chloromethane	<5.00	50.0	43.1	86	64-115	ug/L	01.07.19 11:36	
cis-1,2-Dichloroethene	<0.162	50.0	50.0	100	72-121	ug/L	01.07.19 11:36	
cis-1,3-Dichloropropene	<0.126	50.0	52.1	104	75-119	ug/L	01.07.19 11:36	
Dibromochloromethane	<0.212	50.0	48.8	98	74-117	ug/L	01.07.19 11:36	
Dibromomethane	<0.186	50.0	47.8	96	72-114	ug/L	01.07.19 11:36	
Dichlorodifluoromethane	<0.148	50.0	50.5	101	64-138	ug/L	01.07.19 11:36	
Ethylbenzene	<0.190	50.0	49.5	99	80-116	ug/L	01.07.19 11:36	
Hexachlorobutadiene	<2.00	50.0	54.4	109	79-123	ug/L	01.07.19 11:36	
Iodomethane (Methyl Iodide)	<0.170	50.0	46.4	93	74-108	ug/L	01.07.19 11:36	
isopropylbenzene	<0.218	50.0	49.4	99	79-117	ug/L	01.07.19 11:36	
m,p-Xylenes	<1.00	100	101	101	79-118	ug/L	01.07.19 11:36	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 605975

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill - Maricopa

Analytical Method: VOCs by SW 8260B Prep Method: SW5030B

Seq Number: 3075027 Matrix: Ground Water Date Prep: 01.07.19

Parent Sample Id: 610323-003 MS Sample Id: 610323-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	48.2	96	67-116	ug/L	01.07.19 11:36	
MTBE	<0.500	50.0	52.5	105	70-125	ug/L	01.07.19 11:36	
Naphthalene	<2.00	50.0	57.2	114	72-157	ug/L	01.07.19 11:36	
n-Butylbenzene	<2.00	50.0	54.0	108	74-128	ug/L	01.07.19 11:36	
n-Propylbenzene	<0.173	50.0	50.5	101	75-121	ug/L	01.07.19 11:36	
o-Xylene	<0.500	50.0	50.5	101	78-122	ug/L	01.07.19 11:36	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	46.5	93	71-123	ug/L	01.07.19 11:36	
Sec-Butylbenzene	<0.124	50.0	51.6	103	76-126	ug/L	01.07.19 11:36	
Styrene	<0.197	50.0	51.4	103	74-124	ug/L	01.07.19 11:36	
tert-Butylbenzene	<0.177	50.0	52.4	105	77-124	ug/L	01.07.19 11:36	
Tetrachloroethylene	<0.347	50.0	50.3	101	78-117	ug/L	01.07.19 11:36	
Toluene	<0.500	50.0	49.3	99	77-112	ug/L	01.07.19 11:36	
trans-1,2-dichloroethene	<0.167	50.0	49.4	99	72-117	ug/L	01.07.19 11:36	
Trichloroethene	<0.218	50.0	50.5	101	70-123	ug/L	01.07.19 11:36	
Trichlorofluoromethane	<0.191	50.0	47.7	95	69-118	ug/L	01.07.19 11:36	
Vinyl Acetate	<0.583	250	203	81	68-114	ug/L	01.07.19 11:36	
Vinyl Chloride	<0.232	50.0	38.5	77	65-114	ug/L	01.07.19 11:36	
trans-1,3-dichloropropene	<0.198	50.0	52.7	105	75-123	ug/L	01.07.19 11:36	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	51.2	102	75-125	ug/L	01.07.19 11:36	
1,3-Butadiene	<2.52	50.0	44.0	88	77-104	ug/L	01.07.19 11:36	
Cyclohexane	<0.309	50.0	52.0	104	74-123	ug/L	01.07.19 11:36	
Dicyclopentadiene	<5.00	50.0	41.5	83	73-108	ug/L	01.07.19 11:36	
Methylcyclohexane	<0.228	50.0	53.3	107	76-125	ug/L	01.07.19 11:36	
n-Hexane	<5.00	50.0	52.0	104	66-132	ug/L	01.07.19 11:36	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		75-131	%	01.07.19 11:36
1,2-Dichloroethane-D4	99		63-144	%	01.07.19 11:36
Toluene-D8	98		80-117	%	01.07.19 11:36
4-Bromofluorobenzene	101		74-124	%	01.07.19 11:36

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

Xenco Quote #080717RK-AMECFW

Xenco Job # 605975

Client / Reporting Information

Company Name / Branch: Amec Foster Wheeler

Company Address: 4600 E Washington St. Suite 600 Phoenix, AZ 85034

Email: SAMANTHA.SARGENT@WOODPLC.COM, emily.lodolce@amecfw.com

Phone No: 602.733.6030, 602.733.6081

Project Contact: Emily LoDolce or Samantha Sargent (602-733-6030)

Samplers's Name

Project Information

Project Name/Number: Cave Creek Landfill 1420172034.****.021

Project Location: Phoenix. AZ

Invoice To: Amec Foster Wheeler - ATTN: Emily LoDolce, 4600 E Washington St. Suite 600, Phoenix, AZ 85034

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	8260B VOCs	Field Comments
1	TSSV02-733-111918	733	11.19.18	850	AQ	3	X								X	
2	TSSV06-729-111918	729	↓	942	↓	↓	X								X	
3	TSSV07-743-111918	743	↓	1105	↓	↓	X								X	
4	DUP02-111918	–	↓	1125	↓	↓	X								X	
5	TSSV03-760-111918	760	↓	1152	↓	↓	X								X	
6	DUP03-111918	–	↓	1210	↓	↓	X								X	
7	TSSV05-760-111918	760	↓	1240	↓	↓	X								X	
8	TSSV04-760-112018	760	11.20.18	842	↓	↓	X								X	
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT STANDARD
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	11/20/18 1600		2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice ✓ Cooler Temp. 3.03 Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

1.000

XENCO LABORATORIES

Sample Receipt Checklist

Client Name: Wood

Work Order Number: 605975

Checklist completed by: EP

Matrix: W Courier Name: Client TWA

Date and Time Received: 11/20/18 @ 16:00

Checked by: EP

Logged In by: EP Date: 11/20/18

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	Not Present ☐
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
All samples received same day of collection?	Yes ☐	No ☒	Temp: 3.3 Wet Ice Present ☒
Where was the temperature reading taken at?	Sample ☒	Temp Blank ☐	Other:
VOA Water – VOA vials have zero headspace?	Yes ☒	No ☐	~~N/A ☒~~ EP 11/20/18
Water – Microbiological bottles have ≤ 2.5 cm headspace?	Yes ☐	No ☐	N/A ☒
Water – All sample pH's acceptable upon receipt?	Yes ☐	No ☐	N/A ☒ Checked by: EP

If No, list all samples and bottle types that are not acceptable in Additional Comments section. Also state any correction actions.

Dissolved Metals – Field Filtered?	Yes ☐	No ☐	N/A ☒

Additional Comments:

SRChecklist 2016.1

Inter-Office Shipment

IOS Number **120099**

Date/Time: 01/04/19 16:12
Lab# From: **Phoenix**
Lab# To: **Houston**

Created by: Skip Harden
Delivery Priority:
Air Bill No.: 774120151845

Please send report to: Skip Harden
Address: 2525 West Huntington Drive, Suite 102
E-Mail: skip.harden@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
605975-008	W	TSSV04-760-112018	11/20/18 08:42	SW8260B_AZ	VOCs by SW 8260B	**11/30/18**	**12/04/18 08:42**	WWH	ACE BDCME BRBZ BRCI	

Inter Office Shipment or Sample Comments:

Relinquished By: Skip Harden

Date Relinquished: 01/04/2019

Received By: Taha Hedib

Date Received: 01/05/2019 10:00

Cooler Temperature: 4.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 120099

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sent By: Skip Harden **Date Sent:** 01/04/2019 04:12 PM

Received By: Taha Hedib **Date Received:** 01/05/2019 10:00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: _____ Date: 01/05/2019
Taha Hedib

Analytical Report 609594

for

Wood Environment & Infrastructure Solutions, Inc.

Project Manager: Natalie Chrisman

Cave Creek Landfill

1420172034.**.021**

07-JAN-19

Collected By: Client

2525 West Huntington Drive, Suite 102
Tempe, AZ 85282
Ph: (480) 355-0900

Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Houston (EPA Lab code: TX00122): Arizona (AZ0765)
Xenco-Dallas (EPA Lab code: TX01468): Arizona (AZ0809)

07-JAN-19

Project Manager: **Natalie Chrisman**
Wood Environment & Infrastructure Solutions, Inc.
4600 E. Washington Suite 600
Phoenix, AZ 85034

Reference: TWA Report No(s): **609594**
Cave Creek Landfill
Project Address:

Natalie Chrisman :

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the TWA Report Number(s) 609594. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the ADHS certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with ADHS standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and ADHS Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by TransWest Analytical. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 609594 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting TransWest Analytical to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Skip Harden
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Flagging Criteria

Arizona Flags

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order except as detailed below or on the Data Qualifier page of this report. Data Qualifiers used in this report are in accordance with ADHS Data Qualifiers, Revision 4.0 9/05/2012.
Data qualifiers (flags) contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

B1 Target analyte detected in method blank at or above the method reporting limit.

E4 Concentration estimated. Analyte was detected below laboratory minimum reporting limit (MRL).

E8 Analyte reported to MDL per project specification. Target analyte was not detected in sample.

M1 Matrix spike recovery was high; the associated blank spike recovery was acceptable.

M2 Matrix spike recovery was low; the associated blank spike recovery was acceptable.

T4 Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Sample Cross Reference 609594

Wood Environment & Infrastructure Solutions, Inc., Phoen

Cave Creek Landfill

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW11-720-122118	W	12-21-18 10:15		609594-001
DUP03-122118	W	12-21-18 10:25		609594-002
MW11-745-122118	W	12-21-18 10:35		609594-003
MW11-766-122118	W	12-21-18 10:43		609594-004
MW13-752-122118	W	12-21-18 11:23		609594-005
MW13-772-122118	W	12-21-18 11:38		609594-006
MW13-787-122118	W	12-21-18 11:50		609594-007
MW12-730-122118	W	12-21-18 12:22		609594-008
MW12-755-122118	W	12-21-18 12:32		609594-009
MW12-770-122118	W	12-21-18 12:45		609594-010

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-720-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-001 Date Collected: 12.21.18 10.15

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.28.18 17.00
Seq Number: 3074627 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	12.28.18 22.13	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	12.28.18 22.13	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	12.28.18 22.13	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	12.28.18 22.13	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	12.28.18 22.13	E8	1
1,1-Dichloroethene	75-35-4	**0.620**	5.00	0.178	ug/L	12.28.18 22.13	E4	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	12.28.18 22.13	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	12.28.18 22.13	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	12.28.18 22.13	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	12.28.18 22.13	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	12.28.18 22.13	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	12.28.18 22.13	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	12.28.18 22.13	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	12.28.18 22.13	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	12.28.18 22.13	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	12.28.18 22.13	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	12.28.18 22.13	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	12.28.18 22.13	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	12.28.18 22.13	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	12.28.18 22.13	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	12.28.18 22.13	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	12.28.18 22.13	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	12.28.18 22.13	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	12.28.18 22.13	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	12.28.18 22.13	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	12.28.18 22.13	E8	1
Acetone	67-64-1	<20.0	100	20.0	ug/L	12.28.18 22.13	E8	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	12.28.18 22.13	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	12.28.18 22.13	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	12.28.18 22.13	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	12.28.18 22.13	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	12.28.18 22.13	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	12.28.18 22.13	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	12.28.18 22.13	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	12.28.18 22.13	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	12.28.18 22.13	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	12.28.18 22.13	E8	1
Chloroform	67-66-3	**0.310**	5.00	0.107	ug/L	12.28.18 22.13	E4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-720-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-001 Date Collected: 12.21.18 10.15

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.28.18 17.00
Seq Number: 3074627 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	12.28.18 22.13	E8	1
cis-1,2-Dichloroethene	156-59-2	<0.162	5.00	0.162	ug/L	12.28.18 22.13	E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	12.28.18 22.13	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	12.28.18 22.13	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	12.28.18 22.13	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	12.28.18 22.13	E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	12.28.18 22.13	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	12.28.18 22.13	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	12.28.18 22.13	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	12.28.18 22.13	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	12.28.18 22.13	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	12.28.18 22.13	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	12.28.18 22.13	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	12.28.18 22.13	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	12.28.18 22.13	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	12.28.18 22.13	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	12.28.18 22.13	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	12.28.18 22.13	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	12.28.18 22.13	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	12.28.18 22.13	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	12.28.18 22.13	E8	1
Tetrachloroethylene	127-18-4	**0.470**	5.00	0.347	ug/L	12.28.18 22.13	E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	12.28.18 22.13	E8	1
Total Trihalomethane		**0.310**	5.00	0.107	ug/L	12.28.18 22.13	E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	12.28.18 22.13	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	12.28.18 22.13	E8	1
Trichloroethene	79-01-6	**16.3**	5.00	0.218	ug/L	12.28.18 22.13		1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	12.28.18 22.13	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	12.28.18 22.13	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	12.28.18 22.13	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	12.28.18 22.13	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroetha	76-13-1	**0.210**	10.0	0.175	ug/L	12.28.18 22.13	E4	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	12.28.18 22.13	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	12.28.18 22.13	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	12.28.18 22.13	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	12.28.18 22.13	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	12.28.18 22.13	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	12.28.18 22.13	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-720-122118**
Lab Sample Id: 609594-001

Matrix: Water
Date Collected: 12.21.18 10.15

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: MCH
Analyst: MCH
Seq Number: 3074627

Date Prep: 12.28.18 17.00

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	12.28.18 22.13	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	100	%	75-131	12.28.18 22.13	
1,2-Dichloroethane-D4	103	%	63-144	12.28.18 22.13	
Toluene-D8	99	%	80-117	12.28.18 22.13	
4-Bromofluorobenzene	97	%	74-124	12.28.18 22.13	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **DUP03-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-002 Date Collected: 12.21.18 10.25

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.28.18 17.00
Seq Number: 3074627 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	12.28.18 22.36	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	12.28.18 22.36	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	12.28.18 22.36	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	12.28.18 22.36	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	12.28.18 22.36	E8	1
1,1-Dichloroethene	75-35-4	**0.640**	5.00	0.178	ug/L	12.28.18 22.36	E4	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	12.28.18 22.36	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	12.28.18 22.36	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	12.28.18 22.36	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	12.28.18 22.36	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	12.28.18 22.36	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	12.28.18 22.36	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	12.28.18 22.36	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	12.28.18 22.36	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	12.28.18 22.36	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	12.28.18 22.36	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	12.28.18 22.36	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	12.28.18 22.36	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	12.28.18 22.36	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	12.28.18 22.36	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	12.28.18 22.36	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	12.28.18 22.36	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	12.28.18 22.36	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	12.28.18 22.36	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	12.28.18 22.36	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	12.28.18 22.36	E8	1
Acetone	67-64-1	<20.0	100	20.0	ug/L	12.28.18 22.36	E8	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	12.28.18 22.36	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	12.28.18 22.36	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	12.28.18 22.36	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	12.28.18 22.36	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	12.28.18 22.36	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	12.28.18 22.36	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	12.28.18 22.36	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	12.28.18 22.36	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	12.28.18 22.36	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	12.28.18 22.36	E8	1
Chloroform	67-66-3	**0.320**	5.00	0.107	ug/L	12.28.18 22.36	E4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **DUP03-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-002 Date Collected: 12.21.18 10.25

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.28.18 17.00
Seq Number: 3074627 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	12.28.18 22.36	E8	1
cis-1,2-Dichloroethene	156-59-2	<0.162	5.00	0.162	ug/L	12.28.18 22.36	E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	12.28.18 22.36	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	12.28.18 22.36	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	12.28.18 22.36	E8	1
Dichlorodifluoromethane	75-71-8	**0.200**	5.00	0.148	ug/L	12.28.18 22.36	E4	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	12.28.18 22.36	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	12.28.18 22.36	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	12.28.18 22.36	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	12.28.18 22.36	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	12.28.18 22.36	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	12.28.18 22.36	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	12.28.18 22.36	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	12.28.18 22.36	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	12.28.18 22.36	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	12.28.18 22.36	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	12.28.18 22.36	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	12.28.18 22.36	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	12.28.18 22.36	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	12.28.18 22.36	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	12.28.18 22.36	E8	1
Tetrachloroethylene	127-18-4	**0.460**	5.00	0.347	ug/L	12.28.18 22.36	E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	12.28.18 22.36	E8	1
Total Trihalomethane		**0.320**	5.00	0.107	ug/L	12.28.18 22.36	E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	12.28.18 22.36	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	12.28.18 22.36	E8	1
Trichloroethene	79-01-6	**16.1**	5.00	0.218	ug/L	12.28.18 22.36		1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	12.28.18 22.36	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	12.28.18 22.36	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	12.28.18 22.36	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	12.28.18 22.36	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	12.28.18 22.36	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	12.28.18 22.36	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	12.28.18 22.36	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	12.28.18 22.36	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	12.28.18 22.36	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	12.28.18 22.36	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	12.28.18 22.36	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **DUP03-122118**
Lab Sample Id: 609594-002

Matrix: Water
Date Collected: 12.21.18 10.25

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: MCH
Analyst: MCH
Seq Number: 3074627

Date Prep: 12.28.18 17.00

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	12.28.18 22.36	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	101	%	75-131	12.28.18 22.36	
1,2-Dichloroethane-D4	101	%	63-144	12.28.18 22.36	
Toluene-D8	102	%	80-117	12.28.18 22.36	
4-Bromofluorobenzene	97	%	74-124	12.28.18 22.36	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-745-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-003 Date Collected: 12.21.18 10.35

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.28.18 18.20
Seq Number: 3074524 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	12.29.18 04.46	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	12.29.18 04.46	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	12.29.18 04.46	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	12.29.18 04.46	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	12.29.18 04.46	E8	1
1,1-Dichloroethene	75-35-4	**0.630**	5.00	0.178	ug/L	12.29.18 04.46	E4	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	12.29.18 04.46	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	12.29.18 04.46	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	12.29.18 04.46	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	12.29.18 04.46	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	12.29.18 04.46	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	12.29.18 04.46	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	12.29.18 04.46	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	12.29.18 04.46	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	12.29.18 04.46	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	12.29.18 04.46	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	12.29.18 04.46	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	12.29.18 04.46	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	12.29.18 04.46	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	12.29.18 04.46	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	12.29.18 04.46	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	12.29.18 04.46	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	12.29.18 04.46	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	12.29.18 04.46	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	12.29.18 04.46	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	12.29.18 04.46	E8	1
Acetone	67-64-1	**20.0**	100	20.0	ug/L	12.29.18 04.46	E4	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	12.29.18 04.46	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	12.29.18 04.46	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	12.29.18 04.46	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	12.29.18 04.46	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	12.29.18 04.46	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	12.29.18 04.46	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	12.29.18 04.46	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	12.29.18 04.46	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	12.29.18 04.46	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	12.29.18 04.46	E8	1
Chloroform	67-66-3	**0.220**	5.00	0.107	ug/L	12.29.18 04.46	E4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-745-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-003 Date Collected: 12.21.18 10.35

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.28.18 18.20
Seq Number: 3074524 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	12.29.18 04.46	E8	1
cis-1,2-Dichloroethene	156-59-2	<0.162	5.00	0.162	ug/L	12.29.18 04.46	E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	12.29.18 04.46	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	12.29.18 04.46	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	12.29.18 04.46	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	12.29.18 04.46	E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	12.29.18 04.46	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	12.29.18 04.46	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	12.29.18 04.46	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	12.29.18 04.46	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	12.29.18 04.46	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	12.29.18 04.46	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	12.29.18 04.46	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	12.29.18 04.46	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	12.29.18 04.46	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	12.29.18 04.46	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	12.29.18 04.46	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	12.29.18 04.46	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	12.29.18 04.46	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	12.29.18 04.46	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	12.29.18 04.46	E8	1
Tetrachloroethylene	127-18-4	**0.530**	5.00	0.347	ug/L	12.29.18 04.46	E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	12.29.18 04.46	E8	1
Total Trihalomethane		**0.220**	5.00	0.107	ug/L	12.29.18 04.46	E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	12.29.18 04.46	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	12.29.18 04.46	E8	1
Trichloroethene	79-01-6	**16.4**	5.00	0.218	ug/L	12.29.18 04.46		1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	12.29.18 04.46	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	12.29.18 04.46	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	12.29.18 04.46	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	12.29.18 04.46	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	12.29.18 04.46	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	12.29.18 04.46	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	12.29.18 04.46	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	12.29.18 04.46	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	12.29.18 04.46	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	12.29.18 04.46	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	12.29.18 04.46	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-745-122118**
Lab Sample Id: 609594-003

Matrix: Water
Date Collected: 12.21.18 10.35

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: MCH
Analyst: MCH
Seq Number: 3074524

Date Prep: 12.28.18 18.20

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	12.29.18 04.46	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	104	%	75-131	12.29.18 04.46	
1,2-Dichloroethane-D4	100	%	63-144	12.29.18 04.46	
Toluene-D8	101	%	80-117	12.29.18 04.46	
4-Bromofluorobenzene	97	%	74-124	12.29.18 04.46	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-766-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-004 Date Collected: 12.21.18 10.43

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.30.18 16.20
Seq Number: 3074644 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	12.30.18 19.08	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	12.30.18 19.08	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	12.30.18 19.08	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	12.30.18 19.08	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	12.30.18 19.08	E8	1
1,1-Dichloroethene	75-35-4	**0.640**	5.00	0.178	ug/L	12.30.18 19.08	E4	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	12.30.18 19.08	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	12.30.18 19.08	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	12.30.18 19.08	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	12.30.18 19.08	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	12.30.18 19.08	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	12.30.18 19.08	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	12.30.18 19.08	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	12.30.18 19.08	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	12.30.18 19.08	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	12.30.18 19.08	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	12.30.18 19.08	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	12.30.18 19.08	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	12.30.18 19.08	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	12.30.18 19.08	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	12.30.18 19.08	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	12.30.18 19.08	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	12.30.18 19.08	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	12.30.18 19.08	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	12.30.18 19.08	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	12.30.18 19.08	E8	1
Acetone	67-64-1	<20.0	100	20.0	ug/L	12.30.18 19.08	E8	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	12.30.18 19.08	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	12.30.18 19.08	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	12.30.18 19.08	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	12.30.18 19.08	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	12.30.18 19.08	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	12.30.18 19.08	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	12.30.18 19.08	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	12.30.18 19.08	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	12.30.18 19.08	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	12.30.18 19.08	E8	1
Chloroform	67-66-3	**0.200**	5.00	0.107	ug/L	12.30.18 19.08	E4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-766-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-004 Date Collected: 12.21.18 10.43

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: MCH % Solids:
Analyst: MCH Date Prep: 12.30.18 16.20
Seq Number: 3074644 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	12.30.18 19.08	E8	1
cis-1,2-Dichloroethene	156-59-2	<0.162	5.00	0.162	ug/L	12.30.18 19.08	E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	12.30.18 19.08	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	12.30.18 19.08	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	12.30.18 19.08	E8	1
Dichlorodifluoromethane	75-71-8	**0.190**	5.00	0.148	ug/L	12.30.18 19.08	E4	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	12.30.18 19.08	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	12.30.18 19.08	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	12.30.18 19.08	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	12.30.18 19.08	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	12.30.18 19.08	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	12.30.18 19.08	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	12.30.18 19.08	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	12.30.18 19.08	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	12.30.18 19.08	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	12.30.18 19.08	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	12.30.18 19.08	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	12.30.18 19.08	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	12.30.18 19.08	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	12.30.18 19.08	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	12.30.18 19.08	E8	1
Tetrachloroethylene	127-18-4	**0.520**	5.00	0.347	ug/L	12.30.18 19.08	E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	12.30.18 19.08	E8	1
Total Trihalomethane		**0.200**	5.00	0.107	ug/L	12.30.18 19.08	E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	12.30.18 19.08	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	12.30.18 19.08	E8	1
Trichloroethene	79-01-6	**15.9**	5.00	0.218	ug/L	12.30.18 19.08		1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	12.30.18 19.08	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	12.30.18 19.08	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	12.30.18 19.08	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	12.30.18 19.08	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	12.30.18 19.08	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	12.30.18 19.08	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	12.30.18 19.08	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	12.30.18 19.08	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	12.30.18 19.08	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	12.30.18 19.08	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	12.30.18 19.08	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW11-766-122118**
Lab Sample Id: 609594-004

Matrix: Water
Date Collected: 12.21.18 10.43

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: MCH
Analyst: MCH
Seq Number: 3074644

Date Prep: 12.30.18 16.20

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	12.30.18 19.08	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	102	%	75-131	12.30.18 19.08	
1,2-Dichloroethane-D4	104	%	63-144	12.30.18 19.08	
Toluene-D8	101	%	80-117	12.30.18 19.08	
4-Bromofluorobenzene	98	%	74-124	12.30.18 19.08	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-752-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-005 Date Collected: 12.21.18 11.23

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	01.02.19 11.50	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	01.02.19 11.50	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	01.02.19 11.50	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	01.02.19 11.50	E8	1
1,1-Dichloroethane	75-34-3	**0.290**	5.00	0.182	ug/L	01.02.19 11.50	E4	1
1,1-Dichloroethene	75-35-4	**5.81**	5.00	0.178	ug/L	01.02.19 11.50		1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	01.02.19 11.50	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	01.02.19 11.50	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	01.02.19 11.50	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	01.02.19 11.50	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	01.02.19 11.50	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	01.02.19 11.50	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	01.02.19 11.50	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	01.02.19 11.50	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	01.02.19 11.50	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	01.02.19 11.50	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	01.02.19 11.50	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	01.02.19 11.50	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	01.02.19 11.50	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	01.02.19 11.50	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	01.02.19 11.50	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	01.02.19 11.50	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	01.02.19 11.50	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	01.02.19 11.50	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	01.02.19 11.50	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	01.02.19 11.50	E8	1
Acetone	67-64-1	**34.9**	100	20.0	ug/L	01.02.19 11.50	E4	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	01.02.19 11.50	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	01.02.19 11.50	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	01.02.19 11.50	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	01.02.19 11.50	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	01.02.19 11.50	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	01.02.19 11.50	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	01.02.19 11.50	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	01.02.19 11.50	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	01.02.19 11.50	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	01.02.19 11.50	E8	1
Chloroform	67-66-3	**0.400**	5.00	0.107	ug/L	01.02.19 11.50	E4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-752-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-005 Date Collected: 12.21.18 11.23

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	01.02.19 11.50	E8	1
cis-1,2-Dichloroethene	156-59-2	**1.03**	5.00	0.162	ug/L	01.02.19 11.50	E4	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	01.02.19 11.50	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	01.02.19 11.50	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	01.02.19 11.50	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	01.02.19 11.50	E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	01.02.19 11.50	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	01.02.19 11.50	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	01.02.19 11.50	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	01.02.19 11.50	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	01.02.19 11.50	E8	1
Methylene Chloride	75-09-2	**4.19**	5.00	2.00	ug/L	01.02.19 11.50	E4	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	01.02.19 11.50	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	01.02.19 11.50	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	01.02.19 11.50	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	01.02.19 11.50	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	01.02.19 11.50	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	01.02.19 11.50	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	01.02.19 11.50	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	01.02.19 11.50	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	01.02.19 11.50	E8	1
Tetrachloroethylene	127-18-4	**3.21**	5.00	0.347	ug/L	01.02.19 11.50	E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	01.02.19 11.50	E8	1
Total Trihalomethane		**0.400**	5.00	0.107	ug/L	01.02.19 11.50	E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	01.02.19 11.50	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	01.02.19 11.50	E8	1
Trichloroethene	79-01-6	**10.5**	5.00	0.218	ug/L	01.02.19 11.50		1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	01.02.19 11.50	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	01.02.19 11.50	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	01.02.19 11.50	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	01.02.19 11.50	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	01.02.19 11.50	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	01.02.19 11.50	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	01.02.19 11.50	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	01.02.19 11.50	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	01.02.19 11.50	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	01.02.19 11.50	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	01.02.19 11.50	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-752-122118**
Lab Sample Id: 609594-005

Matrix: Water
Date Collected: 12.21.18 11.23

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: EZA
Analyst: EZA
Seq Number: 3074650

Date Prep: 01.02.19 11.33

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	01.02.19 11.50	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	107	%	75-131	01.02.19 11.50	
1,2-Dichloroethane-D4	99	%	63-144	01.02.19 11.50	
Toluene-D8	100	%	80-117	01.02.19 11.50	
4-Bromofluorobenzene	99	%	74-124	01.02.19 11.50	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-772-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-006 Date Collected: 12.21.18 11.38

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	01.02.19 12.13	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	01.02.19 12.13	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	01.02.19 12.13	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	01.02.19 12.13	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	01.02.19 12.13	E8	1
1,1-Dichloroethene	75-35-4	**2.27**	5.00	0.178	ug/L	01.02.19 12.13	E4	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	01.02.19 12.13	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	01.02.19 12.13	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	01.02.19 12.13	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	01.02.19 12.13	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	01.02.19 12.13	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	01.02.19 12.13	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	01.02.19 12.13	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	01.02.19 12.13	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	01.02.19 12.13	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	01.02.19 12.13	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	01.02.19 12.13	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	01.02.19 12.13	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	01.02.19 12.13	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	01.02.19 12.13	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	01.02.19 12.13	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	01.02.19 12.13	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	01.02.19 12.13	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	01.02.19 12.13	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	01.02.19 12.13	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	01.02.19 12.13	E8	1
Acetone	67-64-1	**30.1**	100	20.0	ug/L	01.02.19 12.13	E4	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	01.02.19 12.13	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	01.02.19 12.13	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	01.02.19 12.13	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	01.02.19 12.13	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	01.02.19 12.13	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	01.02.19 12.13	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	01.02.19 12.13	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	01.02.19 12.13	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	01.02.19 12.13	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	01.02.19 12.13	E8	1
Chloroform	67-66-3	**0.300**	5.00	0.107	ug/L	01.02.19 12.13	E4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-772-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-006 Date Collected: 12.21.18 11.38

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	01.02.19 12.13	E8	1
cis-1,2-Dichloroethene	156-59-2	**0.330**	5.00	0.162	ug/L	01.02.19 12.13	E4	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	01.02.19 12.13	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	01.02.19 12.13	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	01.02.19 12.13	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	01.02.19 12.13	E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	01.02.19 12.13	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	01.02.19 12.13	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	01.02.19 12.13	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	01.02.19 12.13	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	01.02.19 12.13	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	01.02.19 12.13	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	01.02.19 12.13	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	01.02.19 12.13	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	01.02.19 12.13	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	01.02.19 12.13	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	01.02.19 12.13	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	01.02.19 12.13	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	01.02.19 12.13	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	01.02.19 12.13	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	01.02.19 12.13	E8	1
Tetrachloroethylene	127-18-4	**0.990**	5.00	0.347	ug/L	01.02.19 12.13	E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	01.02.19 12.13	E8	1
Total Trihalomethane		**0.300**	5.00	0.107	ug/L	01.02.19 12.13	E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	01.02.19 12.13	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	01.02.19 12.13	E8	1
Trichloroethene	79-01-6	**4.49**	5.00	0.218	ug/L	01.02.19 12.13	E4	1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	01.02.19 12.13	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	01.02.19 12.13	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	01.02.19 12.13	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	01.02.19 12.13	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	01.02.19 12.13	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	01.02.19 12.13	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	01.02.19 12.13	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	01.02.19 12.13	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	01.02.19 12.13	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	01.02.19 12.13	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	01.02.19 12.13	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-772-122118**
Lab Sample Id: 609594-006

Matrix: Water
Date Collected: 12.21.18 11.38

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: EZA
Analyst: EZA
Seq Number: 3074650

Date Prep: 01.02.19 11.33

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	01.02.19 12.13	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	107	%	75-131	01.02.19 12.13	
1,2-Dichloroethane-D4	106	%	63-144	01.02.19 12.13	
Toluene-D8	100	%	80-117	01.02.19 12.13	
4-Bromofluorobenzene	98	%	74-124	01.02.19 12.13	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-787-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-007 Date Collected: 12.21.18 11.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	01.02.19 12.36	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	01.02.19 12.36	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	01.02.19 12.36	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	01.02.19 12.36	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	01.02.19 12.36	E8	1
1,1-Dichloroethene	75-35-4	**1.97**	5.00	0.178	ug/L	01.02.19 12.36	E4	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	01.02.19 12.36	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	01.02.19 12.36	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	01.02.19 12.36	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	01.02.19 12.36	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	01.02.19 12.36	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	01.02.19 12.36	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	01.02.19 12.36	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	01.02.19 12.36	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	01.02.19 12.36	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	01.02.19 12.36	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	01.02.19 12.36	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	01.02.19 12.36	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	01.02.19 12.36	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	01.02.19 12.36	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	01.02.19 12.36	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	01.02.19 12.36	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	01.02.19 12.36	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	01.02.19 12.36	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	01.02.19 12.36	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	01.02.19 12.36	E8	1
Acetone	67-64-1	**21.7**	100	20.0	ug/L	01.02.19 12.36	E4	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	01.02.19 12.36	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	01.02.19 12.36	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	01.02.19 12.36	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	01.02.19 12.36	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	01.02.19 12.36	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	01.02.19 12.36	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	01.02.19 12.36	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	01.02.19 12.36	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	01.02.19 12.36	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	01.02.19 12.36	E8	1
Chloroform	67-66-3	**0.340**	5.00	0.107	ug/L	01.02.19 12.36	E4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-787-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-007 Date Collected: 12.21.18 11.50

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	01.02.19 12.36	E8	1
cis-1,2-Dichloroethene	156-59-2	**0.250**	5.00	0.162	ug/L	01.02.19 12.36	E4	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	01.02.19 12.36	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	01.02.19 12.36	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	01.02.19 12.36	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	01.02.19 12.36	E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	01.02.19 12.36	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	01.02.19 12.36	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	01.02.19 12.36	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	01.02.19 12.36	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	01.02.19 12.36	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	01.02.19 12.36	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	01.02.19 12.36	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	01.02.19 12.36	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	01.02.19 12.36	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	01.02.19 12.36	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	01.02.19 12.36	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	01.02.19 12.36	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	01.02.19 12.36	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	01.02.19 12.36	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	01.02.19 12.36	E8	1
Tetrachloroethylene	127-18-4	**1.05**	5.00	0.347	ug/L	01.02.19 12.36	E4	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	01.02.19 12.36	E8	1
Total Trihalomethane		**0.340**	5.00	0.107	ug/L	01.02.19 12.36	E4	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	01.02.19 12.36	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	01.02.19 12.36	E8	1
Trichloroethene	79-01-6	**4.10**	5.00	0.218	ug/L	01.02.19 12.36	E4	1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	01.02.19 12.36	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	01.02.19 12.36	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	01.02.19 12.36	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	01.02.19 12.36	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	01.02.19 12.36	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	01.02.19 12.36	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	01.02.19 12.36	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	01.02.19 12.36	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	01.02.19 12.36	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	01.02.19 12.36	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	01.02.19 12.36	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW13-787-122118**
Lab Sample Id: 609594-007

Matrix: Water
Date Collected: 12.21.18 11.50

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: EZA
Analyst: EZA
Seq Number: 3074650

Date Prep: 01.02.19 11.33

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	01.02.19 12.36	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	106	%	75-131	01.02.19 12.36	
1,2-Dichloroethane-D4	102	%	63-144	01.02.19 12.36	
Toluene-D8	101	%	80-117	01.02.19 12.36	
4-Bromofluorobenzene	100	%	74-124	01.02.19 12.36	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-730-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-008 Date Collected: 12.21.18 12.22

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	01.02.19 13.00	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	01.02.19 13.00	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	01.02.19 13.00	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	01.02.19 13.00	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	01.02.19 13.00	E8	1
1,1-Dichloroethene	75-35-4	<0.178	5.00	0.178	ug/L	01.02.19 13.00	E8	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	01.02.19 13.00	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	01.02.19 13.00	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	01.02.19 13.00	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	01.02.19 13.00	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	01.02.19 13.00	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	01.02.19 13.00	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	01.02.19 13.00	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	01.02.19 13.00	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	01.02.19 13.00	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	01.02.19 13.00	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	01.02.19 13.00	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	01.02.19 13.00	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	01.02.19 13.00	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	01.02.19 13.00	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	01.02.19 13.00	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	01.02.19 13.00	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	01.02.19 13.00	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	01.02.19 13.00	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	01.02.19 13.00	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	01.02.19 13.00	E8	1
Acetone	67-64-1	<20.0	100	20.0	ug/L	01.02.19 13.00	E8	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	01.02.19 13.00	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	01.02.19 13.00	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	01.02.19 13.00	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	01.02.19 13.00	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	01.02.19 13.00	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	01.02.19 13.00	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	01.02.19 13.00	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	01.02.19 13.00	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	01.02.19 13.00	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	01.02.19 13.00	E8	1
Chloroform	67-66-3	<0.107	5.00	0.107	ug/L	01.02.19 13.00	E8	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-730-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-008 Date Collected: 12.21.18 12.22

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	01.02.19 13.00	E8	1
cis-1,2-Dichloroethene	156-59-2	<0.162	5.00	0.162	ug/L	01.02.19 13.00	E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	01.02.19 13.00	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	01.02.19 13.00	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	01.02.19 13.00	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	01.02.19 13.00	E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	01.02.19 13.00	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	01.02.19 13.00	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	01.02.19 13.00	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	01.02.19 13.00	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	01.02.19 13.00	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	01.02.19 13.00	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	01.02.19 13.00	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	01.02.19 13.00	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	01.02.19 13.00	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	01.02.19 13.00	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	01.02.19 13.00	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	01.02.19 13.00	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	01.02.19 13.00	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	01.02.19 13.00	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	01.02.19 13.00	E8	1
Tetrachloroethylene	127-18-4	<0.347	5.00	0.347	ug/L	01.02.19 13.00	E8	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	01.02.19 13.00	E8	1
Total Trihalomethane		<0.107	5.00	0.107	ug/L	01.02.19 13.00	E8	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	01.02.19 13.00	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	01.02.19 13.00	E8	1
Trichloroethene	79-01-6	**2.35**	5.00	0.218	ug/L	01.02.19 13.00	E4	1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	01.02.19 13.00	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	01.02.19 13.00	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	01.02.19 13.00	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	01.02.19 13.00	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	01.02.19 13.00	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	01.02.19 13.00	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	01.02.19 13.00	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	01.02.19 13.00	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	01.02.19 13.00	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	01.02.19 13.00	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	01.02.19 13.00	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-730-122118**
Lab Sample Id: 609594-008

Matrix: Water
Date Collected: 12.21.18 12.22

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: EZA
Analyst: EZA
Seq Number: 3074650

Date Prep: 01.02.19 11.33

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	01.02.19 13.00	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	109	%	75-131	01.02.19 13.00	
1,2-Dichloroethane-D4	101	%	63-144	01.02.19 13.00	
Toluene-D8	98	%	80-117	01.02.19 13.00	
4-Bromofluorobenzene	100	%	74-124	01.02.19 13.00	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-755-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-009 Date Collected: 12.21.18 12.32

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	01.02.19 13.23	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	01.02.19 13.23	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	01.02.19 13.23	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	01.02.19 13.23	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	01.02.19 13.23	E8	1
1,1-Dichloroethene	75-35-4	<0.178	5.00	0.178	ug/L	01.02.19 13.23	E8	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	01.02.19 13.23	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	01.02.19 13.23	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	01.02.19 13.23	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	01.02.19 13.23	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	01.02.19 13.23	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	01.02.19 13.23	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	01.02.19 13.23	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	01.02.19 13.23	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	01.02.19 13.23	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	01.02.19 13.23	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	01.02.19 13.23	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	01.02.19 13.23	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	01.02.19 13.23	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	01.02.19 13.23	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	01.02.19 13.23	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	01.02.19 13.23	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	01.02.19 13.23	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	01.02.19 13.23	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	01.02.19 13.23	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	01.02.19 13.23	E8	1
Acetone	67-64-1	<20.0	100	20.0	ug/L	01.02.19 13.23	E8	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	01.02.19 13.23	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	01.02.19 13.23	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	01.02.19 13.23	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	01.02.19 13.23	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	01.02.19 13.23	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	01.02.19 13.23	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	01.02.19 13.23	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	01.02.19 13.23	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	01.02.19 13.23	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	01.02.19 13.23	E8	1
Chloroform	67-66-3	<0.107	5.00	0.107	ug/L	01.02.19 13.23	E8	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-755-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-009 Date Collected: 12.21.18 12.32

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	01.02.19 13.23	E8	1
cis-1,2-Dichloroethene	156-59-2	<0.162	5.00	0.162	ug/L	01.02.19 13.23	E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	01.02.19 13.23	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	01.02.19 13.23	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	01.02.19 13.23	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	01.02.19 13.23	E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	01.02.19 13.23	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	01.02.19 13.23	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	01.02.19 13.23	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	01.02.19 13.23	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	01.02.19 13.23	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	01.02.19 13.23	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	01.02.19 13.23	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	01.02.19 13.23	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	01.02.19 13.23	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	01.02.19 13.23	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	01.02.19 13.23	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	01.02.19 13.23	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	01.02.19 13.23	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	01.02.19 13.23	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	01.02.19 13.23	E8	1
Tetrachloroethylene	127-18-4	<0.347	5.00	0.347	ug/L	01.02.19 13.23	E8	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	01.02.19 13.23	E8	1
Total Trihalomethane		<0.107	5.00	0.107	ug/L	01.02.19 13.23	E8	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	01.02.19 13.23	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	01.02.19 13.23	E8	1
Trichloroethene	79-01-6	**1.71**	5.00	0.218	ug/L	01.02.19 13.23	E4	1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	01.02.19 13.23	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	01.02.19 13.23	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	01.02.19 13.23	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	01.02.19 13.23	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	01.02.19 13.23	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	01.02.19 13.23	E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	01.02.19 13.23	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	01.02.19 13.23	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	01.02.19 13.23	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	01.02.19 13.23	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	01.02.19 13.23	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-755-122118**
Lab Sample Id: 609594-009

Matrix: Water
Date Collected: 12.21.18 12.32

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: EZA
Analyst: EZA
Seq Number: 3074650

Date Prep: 01.02.19 11.33

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	01.02.19 13.23	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	108	%	75-131	01.02.19 13.23	
1,2-Dichloroethane-D4	106	%	63-144	01.02.19 13.23	
Toluene-D8	99	%	80-117	01.02.19 13.23	
4-Bromofluorobenzene	99	%	74-124	01.02.19 13.23	

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-770-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-010 Date Collected: 12.21.18 12.45

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
1,1,1,2-Tetrachloroethane	630-20-6	<0.195	5.00	0.195	ug/L	01.02.19 13.45	E8	1
1,1,1-Trichloroethane	71-55-6	<0.130	5.00	0.130	ug/L	01.02.19 13.45	E8	1
1,1,2,2-Tetrachloroethane	79-34-5	<0.365	5.00	0.365	ug/L	01.02.19 13.45	E8	1
1,1,2-Trichloroethane	79-00-5	<0.272	5.00	0.272	ug/L	01.02.19 13.45	E8	1
1,1-Dichloroethane	75-34-3	<0.182	5.00	0.182	ug/L	01.02.19 13.45	E8	1
1,1-Dichloroethene	75-35-4	<0.178	5.00	0.178	ug/L	01.02.19 13.45	E8	1
1,1-Dichloropropene	563-58-6	<0.257	5.00	0.257	ug/L	01.02.19 13.45	E8	1
1,2,3-Trichlorobenzene	87-61-6	<2.00	5.00	2.00	ug/L	01.02.19 13.45	E8	1
1,2,3-Trichloropropane	96-18-4	<0.214	5.00	0.214	ug/L	01.02.19 13.45	E8	1
1,2,4-Trichlorobenzene	120-82-1	<2.00	5.00	2.00	ug/L	01.02.19 13.45	E8	1
1,2,4-Trimethylbenzene	95-63-6	<0.113	5.00	0.113	ug/L	01.02.19 13.45	E8	1
1,2-Dibromo-3-Chloropropane	96-12-8	<0.707	5.00	0.707	ug/L	01.02.19 13.45	E8	1
1,2-Dibromoethane	106-93-4	<0.380	5.00	0.380	ug/L	01.02.19 13.45	E8	1
1,2-Dichlorobenzene	95-50-1	<0.175	5.00	0.175	ug/L	01.02.19 13.45	E8	1
1,2-Dichloroethane	107-06-2	<0.283	5.00	0.283	ug/L	01.02.19 13.45	E8	1
1,2-Dichloropropane	78-87-5	<0.170	5.00	0.170	ug/L	01.02.19 13.45	E8	1
1,3,5-Trimethylbenzene	108-67-8	<0.178	5.00	0.178	ug/L	01.02.19 13.45	E8	1
1,3-Dichlorobenzene	541-73-1	<0.169	5.00	0.169	ug/L	01.02.19 13.45	E8	1
1,3-Dichloropropane	142-28-9	<0.199	5.00	0.199	ug/L	01.02.19 13.45	E8	1
1,4-Dichlorobenzene	106-46-7	<0.222	5.00	0.222	ug/L	01.02.19 13.45	E8	1
2,2-Dichloropropane	594-20-7	<0.154	5.00	0.154	ug/L	01.02.19 13.45	E8	1
2-Butanone	78-93-3	<1.32	50.0	1.32	ug/L	01.02.19 13.45	E8	1
2-Chlorotoluene	95-49-8	<0.293	5.00	0.293	ug/L	01.02.19 13.45	E8	1
2-Hexanone	591-78-6	<1.05	50.0	1.05	ug/L	01.02.19 13.45	E8	1
4-Chlorotoluene	106-43-4	<0.114	5.00	0.114	ug/L	01.02.19 13.45	E8	1
4-Methyl-2-Pentanone	108-10-1	<0.874	50.0	0.874	ug/L	01.02.19 13.45	E8	1
Acetone	67-64-1	<20.0	100	20.0	ug/L	01.02.19 13.45	E8	1
Benzene	71-43-2	<0.185	5.00	0.185	ug/L	01.02.19 13.45	E8	1
Bromobenzene	108-86-1	<0.258	5.00	0.258	ug/L	01.02.19 13.45	E8	1
Bromochloromethane	74-97-5	<0.328	5.00	0.328	ug/L	01.02.19 13.45	E8	1
Bromodichloromethane	75-27-4	<0.164	5.00	0.164	ug/L	01.02.19 13.45	E8	1
Bromoform	75-25-2	<0.348	5.00	0.348	ug/L	01.02.19 13.45	E8	1
Bromomethane	74-83-9	<0.127	5.00	0.127	ug/L	01.02.19 13.45	E8	1
Carbon Disulfide	75-15-0	<0.173	5.00	0.173	ug/L	01.02.19 13.45	E8	1
Carbon Tetrachloride	56-23-5	<0.243	5.00	0.243	ug/L	01.02.19 13.45	E8	1
Chlorobenzene	108-90-7	<0.110	5.00	0.110	ug/L	01.02.19 13.45	E8	1
Chloroethane	75-00-3	<0.190	10.0	0.190	ug/L	01.02.19 13.45	E8	1
Chloroform	67-66-3	<0.107	5.00	0.107	ug/L	01.02.19 13.45	E8	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-770-122118** Matrix: Water Date Received:12.21.18 14.00
Lab Sample Id: 609594-010 Date Collected: 12.21.18 12.45

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C
Tech: EZA % Solids:
Analyst: EZA Date Prep: 01.02.19 11.33
Seq Number: 3074650 SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloromethane	74-87-3	<5.00	10.0	5.00	ug/L	01.02.19 13.45	M1E8	1
cis-1,2-Dichloroethene	156-59-2	<0.162	5.00	0.162	ug/L	01.02.19 13.45	E8	1
cis-1,3-Dichloropropene	10061-01-5	<0.126	5.00	0.126	ug/L	01.02.19 13.45	E8	1
Dibromochloromethane	124-48-1	<0.212	5.00	0.212	ug/L	01.02.19 13.45	E8	1
Dibromomethane	74-95-3	<0.186	5.00	0.186	ug/L	01.02.19 13.45	E8	1
Dichlorodifluoromethane	75-71-8	<0.148	5.00	0.148	ug/L	01.02.19 13.45	M1E8	1
Ethylbenzene	100-41-4	<0.190	5.00	0.190	ug/L	01.02.19 13.45	E8	1
Hexachlorobutadiene	87-68-3	<2.00	5.00	2.00	ug/L	01.02.19 13.45	E8	1
Iodomethane (Methyl Iodide)	74-88-4	<0.170	20.0	0.170	ug/L	01.02.19 13.45	E8	1
isopropylbenzene	98-82-8	<0.218	5.00	0.218	ug/L	01.02.19 13.45	E8	1
m,p-Xylenes	179601-23-1	<1.00	10.0	1.00	ug/L	01.02.19 13.45	E8	1
Methylene Chloride	75-09-2	<2.00	5.00	2.00	ug/L	01.02.19 13.45	E8	1
MTBE	1634-04-4	<0.500	5.00	0.500	ug/L	01.02.19 13.45	E8	1
Naphthalene	91-20-3	<2.00	10.0	2.00	ug/L	01.02.19 13.45	E8	1
n-Butylbenzene	104-51-8	<2.00	5.00	2.00	ug/L	01.02.19 13.45	E8	1
n-Propylbenzene	103-65-1	<0.173	5.00	0.173	ug/L	01.02.19 13.45	E8	1
o-Xylene	95-47-6	<0.500	5.00	0.500	ug/L	01.02.19 13.45	E8	1
p-Cymene (p-Isopropyltoluene)	99-87-6	<0.150	5.00	0.150	ug/L	01.02.19 13.45	E8	1
Sec-Butylbenzene	135-98-8	<0.124	5.00	0.124	ug/L	01.02.19 13.45	E8	1
Styrene	100-42-5	<0.197	5.00	0.197	ug/L	01.02.19 13.45	E8	1
tert-Butylbenzene	98-06-6	<0.177	5.00	0.177	ug/L	01.02.19 13.45	E8	1
Tetrachloroethylene	127-18-4	<0.347	5.00	0.347	ug/L	01.02.19 13.45	E8	1
Toluene	108-88-3	<0.500	5.00	0.500	ug/L	01.02.19 13.45	E8	1
Total Trihalomethane		<0.107	5.00	0.107	ug/L	01.02.19 13.45	E8	1
Total Xylenes	1330-20-7	<0.500	5.00	0.500	ug/L	01.02.19 13.45	E8	1
trans-1,2-dichloroethene	156-60-5	<0.167	5.00	0.167	ug/L	01.02.19 13.45	E8	1
Trichloroethene	79-01-6	**1.35**	5.00	0.218	ug/L	01.02.19 13.45	E4	1
Trichlorofluoromethane	75-69-4	<0.191	5.00	0.191	ug/L	01.02.19 13.45	E8	1
Vinyl Acetate	108-05-4	<0.583	50.0	0.583	ug/L	01.02.19 13.45	E8	1
Vinyl Chloride	75-01-4	<0.232	2.00	0.232	ug/L	01.02.19 13.45	E8	1
trans-1,3-dichloropropene	10061-02-6	<0.198	5.00	0.198	ug/L	01.02.19 13.45	E8	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	<0.175	10.0	0.175	ug/L	01.02.19 13.45	E8	1
1,3-Butadiene	106-99-0	<2.52	5.00	2.52	ug/L	01.02.19 13.45	M1E8	1
Cyclohexane *	110-82-7	<0.309	5.00	0.309	ug/L	01.02.19 13.45	E8	1
Dicyclopentadiene	77-73-6	<5.00	10.0	5.00	ug/L	01.02.19 13.45	E8	1
Methylcyclohexane	108-87-2	<0.228	10.0	0.228	ug/L	01.02.19 13.45	E8	1
n-Hexane	110-54-3	<5.00	10.0	5.00	ug/L	01.02.19 13.45	E8	1
4-Ethyltoluene	622-96-8	Not Present			ug/L	01.02.19 13.45	T4	1

Certificate of Analytical Results 609594

Wood Environment & Infrastructure Solutions, Inc., Phoenix,

Cave Creek Landfill

Sample Id: **MW12-770-122118**
Lab Sample Id: 609594-010

Matrix: Water
Date Collected: 12.21.18 12.45

Date Received:12.21.18 14.00

Analytical Method: VOCs by SW 8260B
Tech: EZA
Analyst: EZA
Seq Number: 3074650

Date Prep: 01.02.19 11.33

Prep Method: SW5030C
% Solids:

SUB: AZ0765

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Propene	115-07-1	Not Present			ug/L	01.02.19 13.45	T4	1

Surrogate	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	109	%	75-131	01.02.19 13.45	
1,2-Dichloroethane-D4	102	%	63-144	01.02.19 13.45	
Toluene-D8	100	%	80-117	01.02.19 13.45	
4-Bromofluorobenzene	100	%	74-124	01.02.19 13.45	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074627 Matrix: Water Date Prep: 12.28.18

MB Sample Id: 7669110-1-BLK LCS Sample Id: 7669110-1-BKS LCSD Sample Id: 7669110-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	49.7	99	49.7	99	78-131	0	25	ug/L	12.28.18 14:41	
1,1,1-Trichloroethane	<0.130	50.0	45.2	90	45.3	91	72-124	0	25	ug/L	12.28.18 14:41	
1,1,2,2-Tetrachloroethane	<0.365	50.0	48.7	97	47.4	95	80-133	3	25	ug/L	12.28.18 14:41	
1,1,2-Trichloroethane	<0.272	50.0	49.0	98	47.2	94	71-135	4	25	ug/L	12.28.18 14:41	
1,1-Dichloroethane	<0.182	50.0	44.2	88	44.4	89	75-125	0	25	ug/L	12.28.18 14:41	
1,1-Dichloroethene	<0.178	50.0	47.2	94	47.6	95	68-116	1	25	ug/L	12.28.18 14:41	
1,1-Dichloropropene	<0.257	50.0	46.3	93	45.8	92	69-124	1	25	ug/L	12.28.18 14:41	
1,2,3-Trichlorobenzene	<2.00	50.0	48.7	97	50.7	101	76-126	4	25	ug/L	12.28.18 14:41	
1,2,3-Trichloropropane	<0.214	50.0	46.9	94	46.2	92	75-134	2	25	ug/L	12.28.18 14:41	
1,2,4-Trichlorobenzene	<2.00	50.0	51.2	102	54.2	108	77-127	6	25	ug/L	12.28.18 14:41	
1,2,4-Trimethylbenzene	<0.113	50.0	50.0	100	51.0	102	79-132	2	25	ug/L	12.28.18 14:41	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	47.9	96	47.6	95	62-134	1	25	ug/L	12.28.18 14:41	
1,2-Dibromoethane	<0.380	50.0	49.4	99	47.8	96	77-129	3	25	ug/L	12.28.18 14:41	
1,2-Dichlorobenzene	<0.175	50.0	49.5	99	50.2	100	81-123	1	25	ug/L	12.28.18 14:41	
1,2-Dichloroethane	<0.283	50.0	45.5	91	45.3	91	64-130	0	25	ug/L	12.28.18 14:41	
1,2-Dichloropropane	<0.170	50.0	45.8	92	46.1	92	72-127	1	25	ug/L	12.28.18 14:41	
1,3,5-Trimethylbenzene	<0.178	50.0	47.9	96	48.4	97	72-139	1	25	ug/L	12.28.18 14:41	
1,3-Dichlorobenzene	<0.169	50.0	48.8	98	49.5	99	82-126	1	25	ug/L	12.28.18 14:41	
1,3-Dichloropropane	<0.199	50.0	47.8	96	46.3	93	79-133	3	25	ug/L	12.28.18 14:41	
1,4-Dichlorobenzene	<0.222	50.0	48.4	97	49.7	99	80-119	3	25	ug/L	12.28.18 14:41	
2,2-Dichloropropane	<0.154	50.0	48.1	96	50.2	100	71-134	4	25	ug/L	12.28.18 14:41	
2-Butanone	<1.32	250	241	96	229	92	49-135	5	25	ug/L	12.28.18 14:41	
2-Chlorotoluene	<0.293	50.0	48.0	96	48.8	98	83-128	2	25	ug/L	12.28.18 14:41	
2-Hexanone	<1.05	250	248	99	232	93	56-134	7	25	ug/L	12.28.18 14:41	
4-Chlorotoluene	<0.114	50.0	48.9	98	49.4	99	81-125	1	25	ug/L	12.28.18 14:41	
4-Methyl-2-Pentanone	<0.874	250	231	92	219	88	63-127	5	25	ug/L	12.28.18 14:41	
Acetone	<20.0	250	234	94	231	92	40-142	1	25	ug/L	12.28.18 14:41	
Benzene	<0.185	50.0	46.1	92	46.2	92	68-123	0	25	ug/L	12.28.18 14:41	
Bromobenzene	<0.258	50.0	50.6	101	50.6	101	83-124	0	25	ug/L	12.28.18 14:41	
Bromochloromethane	<0.328	50.0	45.9	92	45.7	91	68-119	0	25	ug/L	12.28.18 14:41	
Bromodichloromethane	<0.164	50.0	47.6	95	47.7	95	72-132	0	25	ug/L	12.28.18 14:41	
Bromoform	<0.348	50.0	54.9	110	54.1	108	65-136	1	25	ug/L	12.28.18 14:41	
Bromomethane	<0.127	50.0	46.2	92	43.9	88	48-120	5	25	ug/L	12.28.18 14:41	
Carbon Disulfide	<0.173	50.0	45.4	91	46.4	93	53-138	2	25	ug/L	12.28.18 14:41	
Carbon Tetrachloride	<0.243	50.0	48.1	96	47.9	96	68-135	0	25	ug/L	12.28.18 14:41	
Chlorobenzene	<0.110	50.0	48.4	97	47.6	95	78-124	2	25	ug/L	12.28.18 14:41	
Chloroethane	<0.190	50.0	45.4	91	46.7	93	55-120	3	25	ug/L	12.28.18 14:41	
Chloroform	<0.107	50.0	45.4	91	45.4	91	71-119	0	25	ug/L	12.28.18 14:41	
Chloromethane	<5.00	50.0	43.7	87	44.9	90	54-114	3	25	ug/L	12.28.18 14:41	
cis-1,2-Dichloroethene	<0.162	50.0	46.1	92	46.0	92	74-130	0	25	ug/L	12.28.18 14:41	
cis-1,3-Dichloropropene	<0.126	50.0	50.2	100	50.0	100	74-138	0	25	ug/L	12.28.18 14:41	
Dibromochloromethane	<0.212	50.0	51.7	103	51.3	103	74-135	1	25	ug/L	12.28.18 14:41	
Dibromomethane	<0.186	50.0	45.8	92	45.9	92	71-124	0	25	ug/L	12.28.18 14:41	
Dichlorodifluoromethane	<0.148	50.0	48.2	96	49.6	99	59-121	3	25	ug/L	12.28.18 14:41	
Ethylbenzene	<0.190	50.0	48.9	98	48.2	96	69-131	1	25	ug/L	12.28.18 14:41	
Hexachlorobutadiene	<2.00	50.0	52.9	106	60.4	121	74-130	13	25	ug/L	12.28.18 14:41	
Iodomethane (Methyl Iodide)	<0.170	50.0	46.9	94	48.3	97	66-115	3	25	ug/L	12.28.18 14:41	
isopropylbenzene	<0.218	50.0	50.9	102	50.7	101	66-133	0	25	ug/L	12.28.18 14:41	
m,p-Xylenes	<1.00	100	97.4	97	96.4	96	69-132	1	25	ug/L	12.28.18 14:41	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074627 Matrix: Water Date Prep: 12.28.18

MB Sample Id: 7669110-1-BLK LCS Sample Id: 7669110-1-BKS LCSD Sample Id: 7669110-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	43.6	87	46.1	92	60-121	6	25	ug/L	12.28.18 14:41	
MTBE	<0.500	50.0	45.7	91	46.2	92	60-152	1	25	ug/L	12.28.18 14:41	
Naphthalene	<2.00	50.0	50.3	101	52.0	104	69-140	3	25	ug/L	12.28.18 14:41	
n-Butylbenzene	<2.00	50.0	50.8	102	53.4	107	82-128	5	25	ug/L	12.28.18 14:41	
n-Propylbenzene	<0.173	50.0	50.3	101	51.0	102	86-129	1	25	ug/L	12.28.18 14:41	
o-Xylene	<0.500	50.0	50.3	101	49.6	99	67-132	1	25	ug/L	12.28.18 14:41	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	51.0	102	52.4	105	85-129	3	25	ug/L	12.28.18 14:41	
Sec-Butylbenzene	<0.124	50.0	50.3	101	51.8	104	83-130	3	25	ug/L	12.28.18 14:41	
Styrene	<0.197	50.0	50.1	100	49.9	100	79-128	0	25	ug/L	12.28.18 14:41	
tert-Butylbenzene	<0.177	50.0	51.5	103	53.4	107	83-131	4	25	ug/L	12.28.18 14:41	
Tetrachloroethylene	<0.347	50.0	50.0	100	49.4	99	79-122	1	25	ug/L	12.28.18 14:41	
Toluene	<0.500	50.0	48.3	97	47.3	95	62-132	2	25	ug/L	12.28.18 14:41	
trans-1,2-dichloroethene	<0.167	50.0	45.5	91	46.0	92	64-109	1	25	ug/L	12.28.18 14:41	
Trichloroethene	<0.218	50.0	47.8	96	47.6	95	74-123	0	25	ug/L	12.28.18 14:41	
Trichlorofluoromethane	<0.191	50.0	48.4	97	49.9	100	70-143	3	25	ug/L	12.28.18 14:41	
Vinyl Acetate	<0.583	250	241	96	237	95	63-145	2	25	ug/L	12.28.18 14:41	
Vinyl Chloride	<0.232	50.0	45.8	92	44.7	89	59-124	2	25	ug/L	12.28.18 14:41	
trans-1,3-dichloropropene	<0.198	50.0	52.0	104	51.1	102	70-132	2	25	ug/L	12.28.18 14:41	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	47.2	94	49.4	99	73-118	5	25	ug/L	12.28.18 14:41	
1,3-Butadiene	<2.52	50.0	44.6	89	43.4	87	70-150	3	25	ug/L	12.28.18 14:41	
Cyclohexane	<0.309	50.0	44.4	89	44.7	89	65-121	1	25	ug/L	12.28.18 14:41	
Dicyclopentadiene	<5.00	50.0	45.1	90	45.9	92	70-120	2	25	ug/L	12.28.18 14:41	
Methylcyclohexane	<0.228	50.0	48.8	98	49.0	98	67-118	0	25	ug/L	12.28.18 14:41	
n-Hexane	<5.00	50.0	45.8	92	46.2	92	72-125	1	25	ug/L	12.28.18 14:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	98		96		96		75-131	%	12.28.18 14:41
1,2-Dichloroethane-D4	101		94		96		63-144	%	12.28.18 14:41
Toluene-D8	102		99		98		80-117	%	12.28.18 14:41
4-Bromofluorobenzene	98		101		103		74-124	%	12.28.18 14:41

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074524 Matrix: Water Date Prep: 12.28.18

MB Sample Id: 7669048-1-BLK LCS Sample Id: 7669048-1-BKS LCSD Sample Id: 7669048-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	50.8	102	51.0	102	78-131	0	25	ug/L	12.29.18 11:40	
1,1,1-Trichloroethane	<0.130	50.0	42.3	85	41.0	82	72-124	3	25	ug/L	12.29.18 11:40	
1,1,2,2-Tetrachloroethane	<0.365	50.0	45.5	91	45.1	90	80-133	1	25	ug/L	12.29.18 11:40	
1,1,2-Trichloroethane	<0.272	50.0	52.0	104	51.6	103	71-135	1	25	ug/L	12.29.18 11:40	
1,1-Dichloroethane	<0.182	50.0	40.6	81	40.7	81	75-125	0	25	ug/L	12.29.18 11:40	
1,1-Dichloroethene	<0.178	50.0	42.1	84	42.8	86	68-116	2	25	ug/L	12.29.18 11:40	
1,1-Dichloropropene	<0.257	50.0	41.1	82	41.1	82	69-124	0	25	ug/L	12.29.18 11:40	
1,2,3-Trichlorobenzene	<2.00	50.0	57.8	116	58.4	117	76-126	1	25	ug/L	12.29.18 11:40	
1,2,3-Trichloropropane	<0.214	50.0	41.6	83	41.4	83	75-134	0	25	ug/L	12.29.18 11:40	
1,2,4-Trichlorobenzene	<2.00	50.0	59.6	119	58.7	117	77-127	2	25	ug/L	12.29.18 11:40	
1,2,4-Trimethylbenzene	<0.113	50.0	46.9	94	47.0	94	79-132	0	25	ug/L	12.29.18 11:40	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	49.2	98	49.1	98	62-134	0	25	ug/L	12.29.18 11:40	
1,2-Dibromoethane	<0.380	50.0	53.4	107	53.1	106	77-129	1	25	ug/L	12.29.18 11:40	
1,2-Dichlorobenzene	<0.175	50.0	51.2	102	51.3	103	81-123	0	25	ug/L	12.29.18 11:40	
1,2-Dichloroethane	<0.283	50.0	43.1	86	43.1	86	64-130	0	25	ug/L	12.29.18 11:40	
1,2-Dichloropropane	<0.170	50.0	43.7	87	43.3	87	72-127	1	25	ug/L	12.29.18 11:40	
1,3,5-Trimethylbenzene	<0.178	50.0	47.0	94	48.1	96	72-139	2	25	ug/L	12.29.18 11:40	
1,3-Dichlorobenzene	<0.169	50.0	49.2	98	49.4	99	82-126	0	25	ug/L	12.29.18 11:40	
1,3-Dichloropropane	<0.199	50.0	47.9	96	47.7	95	79-133	0	25	ug/L	12.29.18 11:40	
1,4-Dichlorobenzene	<0.222	50.0	49.4	99	49.3	99	80-119	0	25	ug/L	12.29.18 11:40	
2,2-Dichloropropane	<0.154	50.0	43.2	86	42.3	85	71-134	2	25	ug/L	12.29.18 11:40	
2-Butanone	<1.32	250	232	93	224	90	49-135	4	25	ug/L	12.29.18 11:40	
2-Chlorotoluene	<0.293	50.0	47.5	95	48.8	98	83-128	3	25	ug/L	12.29.18 11:40	
2-Hexanone	<1.05	250	254	102	249	100	56-134	2	25	ug/L	12.29.18 11:40	
4-Chlorotoluene	<0.114	50.0	45.7	91	45.8	92	81-125	0	25	ug/L	12.29.18 11:40	
4-Methyl-2-Pentanone	<0.874	250	227	91	220	88	63-127	3	25	ug/L	12.29.18 11:40	
Acetone	<20.0	250	199	80	195	78	40-142	2	25	ug/L	12.29.18 11:40	
Benzene	<0.185	50.0	45.1	90	44.6	89	68-123	1	25	ug/L	12.29.18 11:40	
Bromobenzene	<0.258	50.0	51.5	103	51.7	103	83-124	0	25	ug/L	12.29.18 11:40	
Bromochloromethane	<0.328	50.0	45.1	90	45.1	90	68-119	0	25	ug/L	12.29.18 11:40	
Bromodichloromethane	<0.164	50.0	45.8	92	45.2	90	72-132	1	25	ug/L	12.29.18 11:40	
Bromoform	<0.348	50.0	58.8	118	58.1	116	65-136	1	25	ug/L	12.29.18 11:40	
Bromomethane	<0.127	50.0	42.7	85	43.5	87	48-120	2	25	ug/L	12.29.18 11:40	
Carbon Disulfide	<0.173	50.0	45.7	91	45.4	91	53-138	1	25	ug/L	12.29.18 11:40	
Carbon Tetrachloride	<0.243	50.0	43.3	87	42.8	86	68-135	1	25	ug/L	12.29.18 11:40	
Chlorobenzene	<0.110	50.0	50.0	100	50.3	101	78-124	1	25	ug/L	12.29.18 11:40	
Chloroethane	<0.190	50.0	39.4	79	39.7	79	55-120	1	25	ug/L	12.29.18 11:40	
Chloroform	<0.107	50.0	41.5	83	41.2	82	71-119	1	25	ug/L	12.29.18 11:40	
Chloromethane	<5.00	50.0	38.2	76	38.3	77	54-114	0	25	ug/L	12.29.18 11:40	
cis-1,2-Dichloroethene	<0.162	50.0	43.9	88	43.7	87	74-130	0	25	ug/L	12.29.18 11:40	
cis-1,3-Dichloropropene	<0.126	50.0	48.6	97	47.7	95	74-138	2	25	ug/L	12.29.18 11:40	
Dibromochloromethane	<0.212	50.0	52.7	105	52.9	106	74-135	0	25	ug/L	12.29.18 11:40	
Dibromomethane	<0.186	50.0	47.3	95	46.2	92	71-124	2	25	ug/L	12.29.18 11:40	
Dichlorodifluoromethane	<0.148	50.0	45.3	91	47.6	95	59-121	5	25	ug/L	12.29.18 11:40	
Ethylbenzene	<0.190	50.0	49.8	100	50.3	101	69-131	1	25	ug/L	12.29.18 11:40	
Hexachlorobutadiene	<2.00	50.0	59.6	119	60.6	121	74-130	2	25	ug/L	12.29.18 11:40	
Iodomethane (Methyl Iodide)	<0.170	50.0	42.6	85	42.0	84	66-115	1	25	ug/L	12.29.18 11:40	
isopropylbenzene	<0.218	50.0	51.2	102	51.5	103	66-133	1	25	ug/L	12.29.18 11:40	
m,p-Xylenes	<1.00	100	102	102	103	103	69-132	1	25	ug/L	12.29.18 11:40	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074524 Matrix: Water Date Prep: 12.28.18

MB Sample Id: 7669048-1-BLK LCS Sample Id: 7669048-1-BKS LCSD Sample Id: 7669048-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	41.1	82	40.6	81	60-121	1	25	ug/L	12.29.18 11:40	
MTBE	<0.500	50.0	43.9	88	42.7	85	60-152	3	25	ug/L	12.29.18 11:40	
Naphthalene	<2.00	50.0	61.3	123	61.0	122	69-140	0	25	ug/L	12.29.18 11:40	
n-Butylbenzene	<2.00	50.0	49.5	99	49.5	99	82-128	0	25	ug/L	12.29.18 11:40	
n-Propylbenzene	<0.173	50.0	48.7	97	49.3	99	86-129	1	25	ug/L	12.29.18 11:40	
o-Xylene	<0.500	50.0	52.5	105	53.0	106	67-132	1	25	ug/L	12.29.18 11:40	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	45.7	91	45.7	91	85-129	0	25	ug/L	12.29.18 11:40	
Sec-Butylbenzene	<0.124	50.0	48.9	98	48.9	98	83-130	0	25	ug/L	12.29.18 11:40	
Styrene	<0.197	50.0	53.3	107	53.8	108	79-128	1	25	ug/L	12.29.18 11:40	
tert-Butylbenzene	<0.177	50.0	51.5	103	51.9	104	83-131	1	25	ug/L	12.29.18 11:40	
Tetrachloroethylene	<0.347	50.0	54.4	109	55.2	110	79-122	1	25	ug/L	12.29.18 11:40	
Toluene	<0.500	50.0	49.1	98	50.0	100	62-132	2	25	ug/L	12.29.18 11:40	
trans-1,2-dichloroethene	<0.167	50.0	42.7	85	42.3	85	64-109	1	25	ug/L	12.29.18 11:40	
Trichloroethene	<0.218	50.0	47.4	95	47.1	94	74-123	1	25	ug/L	12.29.18 11:40	
Trichlorofluoromethane	<0.191	50.0	46.5	93	48.5	97	70-143	4	25	ug/L	12.29.18 11:40	
Vinyl Acetate	<0.583	250	173	69	167	67	63-145	4	25	ug/L	12.29.18 11:40	
Vinyl Chloride	<0.232	50.0	30.9	62	31.3	63	59-124	1	25	ug/L	12.29.18 11:40	
trans-1,3-dichloropropene	<0.198	50.0	52.6	105	52.4	105	70-132	0	25	ug/L	12.29.18 11:40	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	41.0	82	41.8	84	73-118	2	25	ug/L	12.29.18 11:40	
1,3-Butadiene	<2.52	50.0	42.8	86	42.4	85	70-150	1	25	ug/L	12.29.18 11:40	
Cyclohexane	<0.309	50.0	37.5	75	38.0	76	65-121	1	25	ug/L	12.29.18 11:40	
Dicyclopentadiene	<5.00	50.0	37.0	74	36.8	74	70-120	1	25	ug/L	12.29.18 11:40	
Methylcyclohexane	<0.228	50.0	45.6	91	45.9	92	67-118	1	25	ug/L	12.29.18 11:40	
n-Hexane	<5.00	50.0	36.8	74	38.4	77	72-125	4	25	ug/L	12.29.18 11:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	103		89		87		75-131	%	12.29.18 11:40
1,2-Dichloroethane-D4	100		98		97		63-144	%	12.29.18 11:40
Toluene-D8	102		100		101		80-117	%	12.29.18 11:40
4-Bromofluorobenzene	97		95		98		74-124	%	12.29.18 11:40

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074644 Matrix: Water Date Prep: 12.30.18

MB Sample Id: 7669118-1-BLK LCS Sample Id: 7669118-1-BKS LCSD Sample Id: 7669118-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	50.5	101	49.4	99	78-131	2	25	ug/L	12.30.18 15:05	
1,1,1-Trichloroethane	<0.130	50.0	50.1	100	48.1	96	72-124	4	25	ug/L	12.30.18 15:05	
1,1,2,2-Tetrachloroethane	<0.365	50.0	51.8	104	48.6	97	80-133	6	25	ug/L	12.30.18 15:05	
1,1,2-Trichloroethane	<0.272	50.0	49.9	100	48.4	97	71-135	3	25	ug/L	12.30.18 15:05	
1,1-Dichloroethane	<0.182	50.0	49.9	100	47.5	95	75-125	5	25	ug/L	12.30.18 15:05	
1,1-Dichloroethene	<0.178	50.0	51.2	102	49.7	99	68-116	3	25	ug/L	12.30.18 15:05	
1,1-Dichloropropene	<0.257	50.0	50.4	101	48.5	97	69-124	4	25	ug/L	12.30.18 15:05	
1,2,3-Trichlorobenzene	<2.00	50.0	51.2	102	50.5	101	76-126	1	25	ug/L	12.30.18 15:05	
1,2,3-Trichloropropane	<0.214	50.0	50.3	101	48.5	97	75-134	4	25	ug/L	12.30.18 15:05	
1,2,4-Trichlorobenzene	<2.00	50.0	52.6	105	52.9	106	77-127	1	25	ug/L	12.30.18 15:05	
1,2,4-Trimethylbenzene	<0.113	50.0	50.9	102	49.9	100	79-132	2	25	ug/L	12.30.18 15:05	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	53.0	106	50.0	100	62-134	6	25	ug/L	12.30.18 15:05	
1,2-Dibromoethane	<0.380	50.0	50.7	101	48.6	97	77-129	4	25	ug/L	12.30.18 15:05	
1,2-Dichlorobenzene	<0.175	50.0	50.9	102	49.9	100	81-123	2	25	ug/L	12.30.18 15:05	
1,2-Dichloroethane	<0.283	50.0	49.0	98	47.4	95	64-130	3	25	ug/L	12.30.18 15:05	
1,2-Dichloropropane	<0.170	50.0	48.8	98	47.4	95	72-127	3	25	ug/L	12.30.18 15:05	
1,3,5-Trimethylbenzene	<0.178	50.0	49.7	99	49.4	99	72-139	1	25	ug/L	12.30.18 15:05	
1,3-Dichlorobenzene	<0.169	50.0	50.2	100	49.1	98	82-126	2	25	ug/L	12.30.18 15:05	
1,3-Dichloropropane	<0.199	50.0	49.7	99	47.8	96	79-133	4	25	ug/L	12.30.18 15:05	
1,4-Dichlorobenzene	<0.222	50.0	49.7	99	48.9	98	80-119	2	25	ug/L	12.30.18 15:05	
2,2-Dichloropropane	<0.154	50.0	51.6	103	48.7	97	71-134	6	25	ug/L	12.30.18 15:05	
2-Butanone	<1.32	250	266	106	238	95	49-135	11	25	ug/L	12.30.18 15:05	
2-Chlorotoluene	<0.293	50.0	49.6	99	48.9	98	83-128	1	25	ug/L	12.30.18 15:05	
2-Hexanone	<1.05	250	257	103	239	96	56-134	7	25	ug/L	12.30.18 15:05	
4-Chlorotoluene	<0.114	50.0	50.4	101	49.4	99	81-125	2	25	ug/L	12.30.18 15:05	
4-Methyl-2-Pentanone	<0.874	250	251	100	228	91	63-127	10	25	ug/L	12.30.18 15:05	
Acetone	<20.0	250	259	104	244	98	40-142	6	25	ug/L	12.30.18 15:05	
Benzene	<0.185	50.0	49.2	98	47.7	95	68-123	3	25	ug/L	12.30.18 15:05	
Bromobenzene	<0.258	50.0	50.9	102	50.3	101	83-124	1	25	ug/L	12.30.18 15:05	
Bromochloromethane	<0.328	50.0	50.7	101	47.5	95	68-119	7	25	ug/L	12.30.18 15:05	
Bromodichloromethane	<0.164	50.0	51.1	102	49.3	99	72-132	4	25	ug/L	12.30.18 15:05	
Bromoform	<0.348	50.0	45.3	91	44.8	90	65-136	1	25	ug/L	12.30.18 15:05	
Bromomethane	<0.127	50.0	49.0	98	48.1	96	48-120	2	25	ug/L	12.30.18 15:05	
Carbon Disulfide	<0.173	50.0	49.6	99	47.8	96	53-138	4	25	ug/L	12.30.18 15:05	
Carbon Tetrachloride	<0.243	50.0	52.0	104	50.3	101	68-135	3	25	ug/L	12.30.18 15:05	
Chlorobenzene	<0.110	50.0	50.3	101	49.1	98	78-124	2	25	ug/L	12.30.18 15:05	
Chloroethane	<0.190	50.0	50.7	101	50.2	100	55-120	1	25	ug/L	12.30.18 15:05	
Chloroform	<0.107	50.0	50.2	100	48.5	97	71-119	3	25	ug/L	12.30.18 15:05	
Chloromethane	<5.00	50.0	50.9	102	49.4	99	54-114	3	25	ug/L	12.30.18 15:05	
cis-1,2-Dichloroethene	<0.162	50.0	50.7	101	49.2	98	74-130	3	25	ug/L	12.30.18 15:05	
cis-1,3-Dichloropropene	<0.126	50.0	52.9	106	51.7	103	74-138	2	25	ug/L	12.30.18 15:05	
Dibromochloromethane	<0.212	50.0	51.2	102	50.2	100	74-135	2	25	ug/L	12.30.18 15:05	
Dibromomethane	<0.186	50.0	49.3	99	47.2	94	71-124	4	25	ug/L	12.30.18 15:05	
Dichlorodifluoromethane	<0.148	50.0	54.3	109	54.0	108	59-121	1	25	ug/L	12.30.18 15:05	
Ethylbenzene	<0.190	50.0	50.3	101	48.6	97	69-131	3	25	ug/L	12.30.18 15:05	
Hexachlorobutadiene	<2.00	50.0	49.6	99	51.9	104	74-130	5	25	ug/L	12.30.18 15:05	
Iodomethane (Methyl Iodide)	<0.170	50.0	49.1	98	47.9	96	66-115	2	25	ug/L	12.30.18 15:05	
isopropylbenzene	<0.218	50.0	51.4	103	50.1	100	66-133	3	25	ug/L	12.30.18 15:05	
m,p-Xylenes	<1.00	100	99.3	99	96.7	97	69-132	3	25	ug/L	12.30.18 15:05	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074644 Matrix: Water Date Prep: 12.30.18

MB Sample Id: 7669118-1-BLK LCS Sample Id: 7669118-1-BKS LCSD Sample Id: 7669118-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	46.9	94	45.3	91	60-121	3	25	ug/L	12.30.18 15:05	
MTBE	<0.500	50.0	49.5	99	47.9	96	60-152	3	25	ug/L	12.30.18 15:05	
Naphthalene	<2.00	50.0	51.6	103	50.7	101	69-140	2	25	ug/L	12.30.18 15:05	
n-Butylbenzene	<2.00	50.0	53.2	106	53.2	106	82-128	0	25	ug/L	12.30.18 15:05	
n-Propylbenzene	<0.173	50.0	51.3	103	50.0	100	86-129	3	25	ug/L	12.30.18 15:05	
o-Xylene	<0.500	50.0	51.0	102	49.9	100	67-132	2	25	ug/L	12.30.18 15:05	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	51.6	103	50.9	102	85-129	1	25	ug/L	12.30.18 15:05	
Sec-Butylbenzene	<0.124	50.0	51.7	103	50.8	102	83-130	2	25	ug/L	12.30.18 15:05	
Styrene	<0.197	50.0	51.1	102	49.8	100	79-128	3	25	ug/L	12.30.18 15:05	
tert-Butylbenzene	<0.177	50.0	52.6	105	51.1	102	83-131	3	25	ug/L	12.30.18 15:05	
Tetrachloroethylene	<0.347	50.0	49.9	100	48.4	97	79-122	3	25	ug/L	12.30.18 15:05	
Toluene	<0.500	50.0	49.4	99	48.0	96	62-132	3	25	ug/L	12.30.18 15:05	
trans-1,2-dichloroethene	<0.167	50.0	50.4	101	47.9	96	64-109	5	25	ug/L	12.30.18 15:05	
Trichloroethene	<0.218	50.0	50.4	101	47.8	96	74-123	5	25	ug/L	12.30.18 15:05	
Trichlorofluoromethane	<0.191	50.0	53.1	106	51.9	104	70-143	2	25	ug/L	12.30.18 15:05	
Vinyl Acetate	<0.583	250	267	107	251	100	63-145	6	25	ug/L	12.30.18 15:05	
Vinyl Chloride	<0.232	50.0	51.7	103	49.1	98	59-124	5	25	ug/L	12.30.18 15:05	
trans-1,3-dichloropropene	<0.198	50.0	54.0	108	53.0	106	70-132	2	25	ug/L	12.30.18 15:05	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	52.8	106	51.2	102	73-118	3	25	ug/L	12.30.18 15:05	
1,3-Butadiene	<2.52	50.0	52.2	104	49.1	98	70-150	6	25	ug/L	12.30.18 15:05	
Cyclohexane	<0.309	50.0	50.7	101	48.6	97	65-121	4	25	ug/L	12.30.18 15:05	
Dicyclopentadiene	<5.00	50.0	48.2	96	46.5	93	70-120	4	25	ug/L	12.30.18 15:05	
Methylcyclohexane	<0.228	50.0	51.8	104	50.3	101	67-118	3	25	ug/L	12.30.18 15:05	
n-Hexane	<5.00	50.0	51.5	103	49.2	98	72-125	5	25	ug/L	12.30.18 15:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		100		100		75-131	%	12.30.18 15:05
1,2-Dichloroethane-D4	103		99		97		63-144	%	12.30.18 15:05
Toluene-D8	103		98		99		80-117	%	12.30.18 15:05
4-Bromofluorobenzene	98		101		101		74-124	%	12.30.18 15:05

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: **VOCs by SW 8260B** Prep Method: SW5030C

Seq Number: 3074650 Matrix: Water Date Prep: 01.02.19

MB Sample Id: 7669116-1-BLK LCS Sample Id: 7669116-1-BKS LCSD Sample Id: 7669116-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	49.7	99	50.1	100	78-131	1	25	ug/L	01.02.19 09:20	
1,1,1-Trichloroethane	<0.130	50.0	51.6	103	53.3	107	72-124	3	25	ug/L	01.02.19 09:20	
1,1,2,2-Tetrachloroethane	<0.365	50.0	49.5	99	50.6	101	80-133	2	25	ug/L	01.02.19 09:20	
1,1,2-Trichloroethane	<0.272	50.0	47.8	96	49.0	98	71-135	2	25	ug/L	01.02.19 09:20	
1,1-Dichloroethane	<0.182	50.0	52.1	104	52.4	105	75-125	1	25	ug/L	01.02.19 09:20	
1,1-Dichloroethene	<0.178	50.0	51.6	103	50.9	102	68-116	1	25	ug/L	01.02.19 09:20	
1,1-Dichloropropene	<0.257	50.0	50.9	102	51.9	104	69-124	2	25	ug/L	01.02.19 09:20	
1,2,3-Trichlorobenzene	<2.00	50.0	52.6	105	52.6	105	76-126	0	25	ug/L	01.02.19 09:20	
1,2,3-Trichloropropane	<0.214	50.0	54.5	109	55.5	111	75-134	2	25	ug/L	01.02.19 09:20	
1,2,4-Trichlorobenzene	<2.00	50.0	54.0	108	53.6	107	77-127	1	25	ug/L	01.02.19 09:20	
1,2,4-Trimethylbenzene	<0.113	50.0	50.4	101	50.5	101	79-132	0	25	ug/L	01.02.19 09:20	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	50.1	100	52.3	105	62-134	4	25	ug/L	01.02.19 09:20	
1,2-Dibromoethane	<0.380	50.0	47.6	95	48.1	96	77-129	1	25	ug/L	01.02.19 09:20	
1,2-Dichlorobenzene	<0.175	50.0	50.6	101	51.3	103	81-123	1	25	ug/L	01.02.19 09:20	
1,2-Dichloroethane	<0.283	50.0	50.5	101	52.3	105	64-130	4	25	ug/L	01.02.19 09:20	
1,2-Dichloropropane	<0.170	50.0	49.9	100	51.4	103	72-127	3	25	ug/L	01.02.19 09:20	
1,3,5-Trimethylbenzene	<0.178	50.0	48.7	97	49.6	99	72-139	2	25	ug/L	01.02.19 09:20	
1,3-Dichlorobenzene	<0.169	50.0	48.9	98	49.4	99	82-126	1	25	ug/L	01.02.19 09:20	
1,3-Dichloropropane	<0.199	50.0	48.4	97	48.8	98	79-133	1	25	ug/L	01.02.19 09:20	
1,4-Dichlorobenzene	<0.222	50.0	48.9	98	49.5	99	80-119	1	25	ug/L	01.02.19 09:20	
2,2-Dichloropropane	<0.154	50.0	52.6	105	52.9	106	71-134	1	25	ug/L	01.02.19 09:20	
2-Butanone	<1.32	250	252	101	273	109	49-135	8	25	ug/L	01.02.19 09:20	
2-Chlorotoluene	<0.293	50.0	48.3	97	49.2	98	83-128	2	25	ug/L	01.02.19 09:20	
2-Hexanone	<1.05	250	246	98	263	105	56-134	7	25	ug/L	01.02.19 09:20	
4-Chlorotoluene	<0.114	50.0	49.4	99	49.8	100	81-125	1	25	ug/L	01.02.19 09:20	
4-Methyl-2-Pentanone	<0.874	250	245	98	259	104	63-127	6	25	ug/L	01.02.19 09:20	
Acetone	<20.0	250	282	113	307	123	40-142	8	25	ug/L	01.02.19 09:20	
Benzene	<0.185	50.0	49.3	99	50.4	101	68-123	2	25	ug/L	01.02.19 09:20	
Bromobenzene	<0.258	50.0	49.0	98	49.5	99	83-124	1	25	ug/L	01.02.19 09:20	
Bromochloromethane	<0.328	50.0	49.9	100	50.5	101	68-119	1	25	ug/L	01.02.19 09:20	
Bromodichloromethane	<0.164	50.0	52.3	105	54.5	109	72-132	4	25	ug/L	01.02.19 09:20	
Bromoform	<0.348	50.0	45.9	92	47.6	95	65-136	4	25	ug/L	01.02.19 09:20	
Bromomethane	<0.127	50.0	50.4	101	48.7	97	48-120	3	25	ug/L	01.02.19 09:20	
Carbon Disulfide	<0.173	50.0	47.8	96	47.3	95	53-138	1	25	ug/L	01.02.19 09:20	
Carbon Tetrachloride	<0.243	50.0	52.8	106	53.2	106	68-135	1	25	ug/L	01.02.19 09:20	
Chlorobenzene	<0.110	50.0	48.4	97	48.9	98	78-124	1	25	ug/L	01.02.19 09:20	
Chloroethane	<0.190	50.0	51.2	102	50.8	102	55-120	1	25	ug/L	01.02.19 09:20	
Chloroform	<0.107	50.0	51.4	103	52.4	105	71-119	2	25	ug/L	01.02.19 09:20	
Chloromethane	<5.00	50.0	50.8	102	49.8	100	54-114	2	25	ug/L	01.02.19 09:20	
cis-1,2-Dichloroethene	<0.162	50.0	51.0	102	52.1	104	74-130	2	25	ug/L	01.02.19 09:20	
cis-1,3-Dichloropropene	<0.126	50.0	55.1	110	56.4	113	74-138	2	25	ug/L	01.02.19 09:20	
Dibromochloromethane	<0.212	50.0	51.3	103	52.1	104	74-135	2	25	ug/L	01.02.19 09:20	
Dibromomethane	<0.186	50.0	48.4	97	50.4	101	71-124	4	25	ug/L	01.02.19 09:20	
Dichlorodifluoromethane	<0.148	50.0	53.6	107	51.7	103	59-121	4	25	ug/L	01.02.19 09:20	
Ethylbenzene	<0.190	50.0	48.8	98	48.9	98	69-131	0	25	ug/L	01.02.19 09:20	
Hexachlorobutadiene	<2.00	50.0	55.0	110	52.5	105	74-130	5	25	ug/L	01.02.19 09:20	
Iodomethane (Methyl Iodide)	<0.170	50.0	48.5	97	48.0	96	66-115	1	25	ug/L	01.02.19 09:20	
isopropylbenzene	<0.218	50.0	49.9	100	50.2	100	66-133	1	25	ug/L	01.02.19 09:20	
m,p-Xylenes	<1.00	100	96.4	96	96.4	96	69-132	0	25	ug/L	01.02.19 09:20	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074650 Matrix: Water Date Prep: 01.02.19

MB Sample Id: 7669116-1-BLK LCS Sample Id: 7669116-1-BKS LCSD Sample Id: 7669116-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	47.9	96	47.8	96	60-121	0	25	ug/L	01.02.19 09:20	
MTBE	<0.500	50.0	51.1	102	54.6	109	60-152	7	25	ug/L	01.02.19 09:20	
Naphthalene	<2.00	50.0	52.3	105	53.6	107	69-140	2	25	ug/L	01.02.19 09:20	
n-Butylbenzene	<2.00	50.0	54.8	110	54.2	108	82-128	1	25	ug/L	01.02.19 09:20	
n-Propylbenzene	<0.173	50.0	49.5	99	49.9	100	86-129	1	25	ug/L	01.02.19 09:20	
o-Xylene	<0.500	50.0	48.9	98	49.8	100	67-132	2	25	ug/L	01.02.19 09:20	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	52.0	104	51.8	104	85-129	0	25	ug/L	01.02.19 09:20	
Sec-Butylbenzene	0.130	50.0	52.1	104	52.0	104	83-130	0	25	ug/L	01.02.19 09:20	
Styrene	<0.197	50.0	49.9	100	50.0	100	79-128	0	25	ug/L	01.02.19 09:20	
tert-Butylbenzene	<0.177	50.0	51.4	103	52.0	104	83-131	1	25	ug/L	01.02.19 09:20	
Tetrachloroethylene	<0.347	50.0	46.9	94	46.1	92	79-122	2	25	ug/L	01.02.19 09:20	
Toluene	<0.500	50.0	47.3	95	47.8	96	62-132	1	25	ug/L	01.02.19 09:20	
trans-1,2-dichloroethene	<0.167	50.0	49.0	98	49.6	99	64-109	1	25	ug/L	01.02.19 09:20	
Trichloroethene	<0.218	50.0	49.9	100	50.6	101	74-123	1	25	ug/L	01.02.19 09:20	
Trichlorofluoromethane	<0.191	50.0	54.3	109	52.0	104	70-143	4	25	ug/L	01.02.19 09:20	
Vinyl Acetate	<0.583	250	277	111	287	115	63-145	4	25	ug/L	01.02.19 09:20	
Vinyl Chloride	<0.232	50.0	51.3	103	51.1	102	59-124	0	25	ug/L	01.02.19 09:20	
trans-1,3-dichloropropene	<0.198	50.0	54.2	108	54.6	109	70-132	1	25	ug/L	01.02.19 09:20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	53.8	108	53.2	106	73-118	1	25	ug/L	01.02.19 09:20	
1,3-Butadiene	<2.52	50.0	47.8	96	49.6	99	70-150	4	25	ug/L	01.02.19 09:20	
Cyclohexane	<0.309	50.0	50.8	102	52.1	104	65-121	3	25	ug/L	01.02.19 09:20	
Dicyclopentadiene	<5.00	50.0	48.7	97	48.9	98	70-120	0	25	ug/L	01.02.19 09:20	
Methylcyclohexane	<0.228	50.0	51.6	103	51.8	104	67-118	0	25	ug/L	01.02.19 09:20	
n-Hexane	<5.00	50.0	50.1	100	49.9	100	72-125	0	25	ug/L	01.02.19 09:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	103		105		104		75-131	%	01.02.19 09:20
1,2-Dichloroethane-D4	105		99		101		63-144	%	01.02.19 09:20
Toluene-D8	100		97		95		80-117	%	01.02.19 09:20
4-Bromofluorobenzene	99		101		100		74-124	%	01.02.19 09:20

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074627 Matrix: Ground Water Date Prep: 12.28.18

Parent Sample Id: 609440-027 MS Sample Id: 609440-027 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	50.0	100	75-114	ug/L	12.28.18 15:50	
1,1,1-Trichloroethane	<0.130	50.0	44.6	89	75-118	ug/L	12.28.18 15:50	
1,1,2,2-Tetrachloroethane	<0.365	50.0	50.7	101	75-113	ug/L	12.28.18 15:50	
1,1,2-Trichloroethane	<0.272	50.0	48.8	98	75-114	ug/L	12.28.18 15:50	
1,1-Dichloroethane	<0.182	50.0	43.9	88	71-121	ug/L	12.28.18 15:50	
1,1-Dichloroethene	<0.178	50.0	43.2	86	74-124	ug/L	12.28.18 15:50	
1,1-Dichloropropene	<0.257	50.0	40.9	82	77-116	ug/L	12.28.18 15:50	
1,2,3-Trichlorobenzene	<2.00	50.0	50.3	101	70-140	ug/L	12.28.18 15:50	
1,2,3-Trichloropropane	<0.214	50.0	51.1	102	73-115	ug/L	12.28.18 15:50	
1,2,4-Trichlorobenzene	<2.00	50.0	51.0	102	71-135	ug/L	12.28.18 15:50	
1,2,4-Trimethylbenzene	<0.113	50.0	37.6	75	74-118	ug/L	12.28.18 15:50	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	52.8	106	70-124	ug/L	12.28.18 15:50	
1,2-Dibromoethane	<0.380	50.0	49.1	98	75-117	ug/L	12.28.18 15:50	
1,2-Dichlorobenzene	<0.175	50.0	49.9	100	77-115	ug/L	12.28.18 15:50	
1,2-Dichloroethane	5.36	50.0	49.5	88	72-111	ug/L	12.28.18 15:50	
1,2-Dichloropropane	<0.170	50.0	47.6	95	75-113	ug/L	12.28.18 15:50	
1,3,5-Trimethylbenzene	<0.178	50.0	10.5	21	77-119	ug/L	12.28.18 15:50	M2
1,3-Dichlorobenzene	<0.169	50.0	49.0	98	79-112	ug/L	12.28.18 15:50	
1,3-Dichloropropane	<0.199	50.0	47.2	94	74-113	ug/L	12.28.18 15:50	
1,4-Dichlorobenzene	<0.222	50.0	49.3	99	76-112	ug/L	12.28.18 15:50	
2,2-Dichloropropane	<0.154	50.0	48.1	96	58-131	ug/L	12.28.18 15:50	
2-Butanone	20.3	250	259	95	59-114	ug/L	12.28.18 15:50	
2-Chlorotoluene	<0.293	50.0	47.8	96	79-113	ug/L	12.28.18 15:50	
2-Hexanone	<1.05	250	290	116	66-129	ug/L	12.28.18 15:50	
4-Chlorotoluene	<0.114	50.0	48.4	97	76-114	ug/L	12.28.18 15:50	
4-Methyl-2-Pentanone	<0.874	250	259	104	73-126	ug/L	12.28.18 15:50	
Acetone	490	250	583	37	33-121	ug/L	12.28.18 15:50	
Benzene	<0.185	50.0	45.5	91	76-110	ug/L	12.28.18 15:50	
Bromobenzene	<0.258	50.0	51.2	102	77-114	ug/L	12.28.18 15:50	
Bromochloromethane	<0.328	50.0	46.4	93	72-112	ug/L	12.28.18 15:50	
Bromodichloromethane	<0.164	50.0	47.8	96	75-116	ug/L	12.28.18 15:50	
Bromoform	27.2	50.0	87.3	120	66-119	ug/L	12.28.18 15:50	M1
Bromomethane	1.82	50.0	46.5	89	60-110	ug/L	12.28.18 15:50	
Carbon Disulfide	<0.173	50.0	45.0	90	71-128	ug/L	12.28.18 15:50	
Carbon Tetrachloride	<0.243	50.0	47.4	95	77-119	ug/L	12.28.18 15:50	
Chlorobenzene	<0.110	50.0	47.9	96	78-110	ug/L	12.28.18 15:50	
Chloroethane	0.570	50.0	45.3	89	62-113	ug/L	12.28.18 15:50	
Chloroform	<0.107	50.0	44.7	89	79-111	ug/L	12.28.18 15:50	
Chloromethane	37.4	50.0	90.4	106	64-115	ug/L	12.28.18 15:50	
cis-1,2-Dichloroethene	<0.162	50.0	45.4	91	72-121	ug/L	12.28.18 15:50	
cis-1,3-Dichloropropene	<0.126	50.0	50.5	101	75-119	ug/L	12.28.18 15:50	
Dibromochloromethane	0.430	50.0	53.7	107	74-117	ug/L	12.28.18 15:50	
Dibromomethane	<0.186	50.0	45.7	91	72-114	ug/L	12.28.18 15:50	
Dichlorodifluoromethane	<0.148	50.0	45.6	91	64-138	ug/L	12.28.18 15:50	
Ethylbenzene	<0.190	50.0	44.9	90	80-116	ug/L	12.28.18 15:50	
Hexachlorobutadiene	<2.00	50.0	58.6	117	79-123	ug/L	12.28.18 15:50	
Iodomethane (Methyl Iodide)	<0.170	50.0	1.92	4	74-108	ug/L	12.28.18 15:50	M2
isopropylbenzene	<0.218	50.0	46.0	92	79-117	ug/L	12.28.18 15:50	
m,p-Xylenes	<1.00	100	82.6	83	79-118	ug/L	12.28.18 15:50	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074627 Matrix: Ground Water Date Prep: 12.28.18

Parent Sample Id: 609440-027 MS Sample Id: 609440-027 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	42.9	86	67-116	ug/L	12.28.18 15:50	
MTBE	<0.500	50.0	47.2	94	70-125	ug/L	12.28.18 15:50	
Naphthalene	<2.00	50.0	46.8	94	72-157	ug/L	12.28.18 15:50	
n-Butylbenzene	<2.00	50.0	44.6	89	74-128	ug/L	12.28.18 15:50	
n-Propylbenzene	<0.173	50.0	45.8	92	75-121	ug/L	12.28.18 15:50	
o-Xylene	<0.500	50.0	42.9	86	78-122	ug/L	12.28.18 15:50	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	45.0	90	71-123	ug/L	12.28.18 15:50	
Sec-Butylbenzene	<0.124	50.0	46.3	93	76-126	ug/L	12.28.18 15:50	
Styrene	<0.197	50.0	1.34	3	74-124	ug/L	12.28.18 15:50	M2
tert-Butylbenzene	<0.177	50.0	49.1	98	77-124	ug/L	12.28.18 15:50	
Tetrachloroethylene	<0.347	50.0	47.9	96	78-117	ug/L	12.28.18 15:50	
Toluene	<0.500	50.0	44.6	89	77-112	ug/L	12.28.18 15:50	
trans-1,2-dichloroethene	<0.167	50.0	42.9	86	72-117	ug/L	12.28.18 15:50	
Trichloroethene	<0.218	50.0	45.2	90	70-123	ug/L	12.28.18 15:50	
Trichlorofluoromethane	<0.191	50.0	47.3	95	69-118	ug/L	12.28.18 15:50	
Vinyl Acetate	<0.583	250	40.8	16	68-114	ug/L	12.28.18 15:50	M2
Vinyl Chloride	<0.232	50.0	40.1	80	65-114	ug/L	12.28.18 15:50	
trans-1,3-dichloropropene	<0.198	50.0	50.0	100	75-123	ug/L	12.28.18 15:50	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	47.2	94	75-125	ug/L	12.28.18 15:50	
1,3-Butadiene	<2.52	50.0	<2.52	0	77-104	ug/L	12.28.18 15:50	M2
Cyclohexane	<0.309	50.0	35.3	71	74-123	ug/L	12.28.18 15:50	M2
Dicyclopentadiene	<5.00	50.0	<5.00	0	73-108	ug/L	12.28.18 15:50	M2
Methylcyclohexane	<0.228	50.0	38.7	77	76-125	ug/L	12.28.18 15:50	
n-Hexane	<5.00	50.0	36.0	72	66-132	ug/L	12.28.18 15:50	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	96		75-131	%	12.28.18 15:50
1,2-Dichloroethane-D4	98		63-144	%	12.28.18 15:50
Toluene-D8	95		80-117	%	12.28.18 15:50
4-Bromofluorobenzene	103		74-124	%	12.28.18 15:50

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074524 Matrix: Water Date Prep: 12.28.18

Parent Sample Id: 609594-003 MS Sample Id: 609594-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	49.7	99	75-114	ug/L	12.29.18 02:50	
1,1,1-Trichloroethane	<0.130	50.0	47.9	96	75-118	ug/L	12.29.18 02:50	
1,1,2,2-Tetrachloroethane	<0.365	50.0	51.1	102	75-113	ug/L	12.29.18 02:50	
1,1,2-Trichloroethane	<0.272	50.0	50.4	101	75-114	ug/L	12.29.18 02:50	
1,1-Dichloroethane	<0.182	50.0	47.5	95	71-121	ug/L	12.29.18 02:50	
1,1-Dichloroethene	0.630	50.0	50.3	99	74-124	ug/L	12.29.18 02:50	
1,1-Dichloropropene	<0.257	50.0	48.3	97	77-116	ug/L	12.29.18 02:50	
1,2,3-Trichlorobenzene	<2.00	50.0	54.7	109	70-140	ug/L	12.29.18 02:50	
1,2,3-Trichloropropane	<0.214	50.0	47.7	95	73-115	ug/L	12.29.18 02:50	
1,2,4-Trichlorobenzene	<2.00	50.0	54.7	109	71-135	ug/L	12.29.18 02:50	
1,2,4-Trimethylbenzene	<0.113	50.0	50.3	101	74-118	ug/L	12.29.18 02:50	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	51.4	103	70-124	ug/L	12.29.18 02:50	
1,2-Dibromoethane	<0.380	50.0	52.3	105	75-117	ug/L	12.29.18 02:50	
1,2-Dichlorobenzene	<0.175	50.0	51.7	103	77-115	ug/L	12.29.18 02:50	
1,2-Dichloroethane	<0.283	50.0	48.5	97	72-111	ug/L	12.29.18 02:50	
1,2-Dichloropropane	<0.170	50.0	49.2	98	75-113	ug/L	12.29.18 02:50	
1,3,5-Trimethylbenzene	<0.178	50.0	48.1	96	77-119	ug/L	12.29.18 02:50	
1,3-Dichlorobenzene	<0.169	50.0	49.6	99	79-112	ug/L	12.29.18 02:50	
1,3-Dichloropropane	<0.199	50.0	49.6	99	74-113	ug/L	12.29.18 02:50	
1,4-Dichlorobenzene	<0.222	50.0	49.6	99	76-112	ug/L	12.29.18 02:50	
2,2-Dichloropropane	<0.154	50.0	41.8	84	58-131	ug/L	12.29.18 02:50	
2-Butanone	<1.32	250	257	103	59-114	ug/L	12.29.18 02:50	
2-Chlorotoluene	<0.293	50.0	48.7	97	79-113	ug/L	12.29.18 02:50	
2-Hexanone	<1.05	250	267	107	66-129	ug/L	12.29.18 02:50	
4-Chlorotoluene	<0.114	50.0	48.5	97	76-114	ug/L	12.29.18 02:50	
4-Methyl-2-Pentanone	<0.874	250	261	104	73-126	ug/L	12.29.18 02:50	
Acetone	20.0	250	238	87	33-121	ug/L	12.29.18 02:50	
Benzene	<0.185	50.0	49.1	98	76-110	ug/L	12.29.18 02:50	
Bromobenzene	<0.258	50.0	50.8	102	77-114	ug/L	12.29.18 02:50	
Bromochloromethane	<0.328	50.0	49.9	100	72-112	ug/L	12.29.18 02:50	
Bromodichloromethane	<0.164	50.0	48.5	97	75-116	ug/L	12.29.18 02:50	
Bromoform	<0.348	50.0	53.1	106	66-119	ug/L	12.29.18 02:50	
Bromomethane	<0.127	50.0	45.9	92	60-110	ug/L	12.29.18 02:50	
Carbon Disulfide	<0.173	50.0	49.9	100	71-128	ug/L	12.29.18 02:50	
Carbon Tetrachloride	<0.243	50.0	48.9	98	77-119	ug/L	12.29.18 02:50	
Chlorobenzene	<0.110	50.0	50.2	100	78-110	ug/L	12.29.18 02:50	
Chloroethane	<0.190	50.0	49.5	99	62-113	ug/L	12.29.18 02:50	
Chloroform	0.220	50.0	48.5	97	79-111	ug/L	12.29.18 02:50	
Chloromethane	<5.00	50.0	50.2	100	64-115	ug/L	12.29.18 02:50	
cis-1,2-Dichloroethene	<0.162	50.0	50.0	100	72-121	ug/L	12.29.18 02:50	
cis-1,3-Dichloropropene	<0.126	50.0	50.4	101	75-119	ug/L	12.29.18 02:50	
Dibromochloromethane	<0.212	50.0	51.0	102	74-117	ug/L	12.29.18 02:50	
Dibromomethane	<0.186	50.0	49.8	100	72-114	ug/L	12.29.18 02:50	
Dichlorodifluoromethane	<0.148	50.0	45.3	91	64-138	ug/L	12.29.18 02:50	
Ethylbenzene	<0.190	50.0	50.2	100	80-116	ug/L	12.29.18 02:50	
Hexachlorobutadiene	<2.00	50.0	50.8	102	79-123	ug/L	12.29.18 02:50	
Iodomethane (Methyl Iodide)	<0.170	50.0	50.6	101	74-108	ug/L	12.29.18 02:50	
isopropylbenzene	<0.218	50.0	50.4	101	79-117	ug/L	12.29.18 02:50	
m,p-Xylenes	<1.00	100	99.7	100	79-118	ug/L	12.29.18 02:50	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074524 Matrix: Water Date Prep: 12.28.18

Parent Sample Id: 609594-003 MS Sample Id: 609594-003 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	47.2	94	67-116	ug/L	12.29.18 02:50	
MTBE	<0.500	50.0	49.2	98	70-125	ug/L	12.29.18 02:50	
Naphthalene	<2.00	50.0	62.1	124	72-157	ug/L	12.29.18 02:50	
n-Butylbenzene	<2.00	50.0	47.6	95	74-128	ug/L	12.29.18 02:50	
n-Propylbenzene	<0.173	50.0	48.5	97	75-121	ug/L	12.29.18 02:50	
o-Xylene	<0.500	50.0	51.2	102	78-122	ug/L	12.29.18 02:50	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	48.1	96	71-123	ug/L	12.29.18 02:50	
Sec-Butylbenzene	<0.124	50.0	46.6	93	76-126	ug/L	12.29.18 02:50	
Styrene	<0.197	50.0	51.0	102	74-124	ug/L	12.29.18 02:50	
tert-Butylbenzene	<0.177	50.0	48.6	97	77-124	ug/L	12.29.18 02:50	
Tetrachloroethylene	0.530	50.0	49.9	99	78-117	ug/L	12.29.18 02:50	
Toluene	<0.500	50.0	49.7	99	77-112	ug/L	12.29.18 02:50	
trans-1,2-dichloroethene	<0.167	50.0	49.0	98	72-117	ug/L	12.29.18 02:50	
Trichloroethene	16.4	50.0	66.2	100	70-123	ug/L	12.29.18 02:50	
Trichlorofluoromethane	<0.191	50.0	47.4	95	69-118	ug/L	12.29.18 02:50	
Vinyl Acetate	<0.583	250	198	79	68-114	ug/L	12.29.18 02:50	
Vinyl Chloride	<0.232	50.0	49.3	99	65-114	ug/L	12.29.18 02:50	
trans-1,3-dichloropropene	<0.198	50.0	51.3	103	75-123	ug/L	12.29.18 02:50	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	44.1	88	75-125	ug/L	12.29.18 02:50	
1,3-Butadiene	<2.52	50.0	47.3	95	77-104	ug/L	12.29.18 02:50	
Cyclohexane	<0.309	50.0	42.4	85	74-123	ug/L	12.29.18 02:50	
Dicyclopentadiene	<5.00	50.0	42.2	84	73-108	ug/L	12.29.18 02:50	
Methylcyclohexane	<0.228	50.0	43.5	87	76-125	ug/L	12.29.18 02:50	
n-Hexane	<5.00	50.0	40.7	81	66-132	ug/L	12.29.18 02:50	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	97		75-131	%	12.29.18 02:50
1,2-Dichloroethane-D4	94		63-144	%	12.29.18 02:50
Toluene-D8	98		80-117	%	12.29.18 02:50
4-Bromofluorobenzene	99		74-124	%	12.29.18 02:50

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074644 Matrix: Water Date Prep: 12.30.18

Parent Sample Id: 609594-004 MS Sample Id: 609594-004 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	48.9	98	75-114	ug/L	12.30.18 16:05	
1,1,1-Trichloroethane	<0.130	50.0	49.4	99	75-118	ug/L	12.30.18 16:05	
1,1,2,2-Tetrachloroethane	<0.365	50.0	48.2	96	75-113	ug/L	12.30.18 16:05	
1,1,2-Trichloroethane	<0.272	50.0	47.7	95	75-114	ug/L	12.30.18 16:05	
1,1-Dichloroethane	<0.182	50.0	47.7	95	71-121	ug/L	12.30.18 16:05	
1,1-Dichloroethene	0.640	50.0	48.9	97	74-124	ug/L	12.30.18 16:05	
1,1-Dichloropropene	<0.257	50.0	48.6	97	77-116	ug/L	12.30.18 16:05	
1,2,3-Trichlorobenzene	<2.00	50.0	51.4	103	70-140	ug/L	12.30.18 16:05	
1,2,3-Trichloropropane	<0.214	50.0	48.7	97	73-115	ug/L	12.30.18 16:05	
1,2,4-Trichlorobenzene	<2.00	50.0	53.0	106	71-135	ug/L	12.30.18 16:05	
1,2,4-Trimethylbenzene	<0.113	50.0	48.7	97	74-118	ug/L	12.30.18 16:05	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	49.8	100	70-124	ug/L	12.30.18 16:05	
1,2-Dibromoethane	<0.380	50.0	48.7	97	75-117	ug/L	12.30.18 16:05	
1,2-Dichlorobenzene	<0.175	50.0	49.1	98	77-115	ug/L	12.30.18 16:05	
1,2-Dichloroethane	<0.283	50.0	47.4	95	72-111	ug/L	12.30.18 16:05	
1,2-Dichloropropane	<0.170	50.0	46.5	93	75-113	ug/L	12.30.18 16:05	
1,3,5-Trimethylbenzene	<0.178	50.0	48.1	96	77-119	ug/L	12.30.18 16:05	
1,3-Dichlorobenzene	<0.169	50.0	47.7	95	79-112	ug/L	12.30.18 16:05	
1,3-Dichloropropane	<0.199	50.0	47.1	94	74-113	ug/L	12.30.18 16:05	
1,4-Dichlorobenzene	<0.222	50.0	47.6	95	76-112	ug/L	12.30.18 16:05	
2,2-Dichloropropane	<0.154	50.0	49.0	98	58-131	ug/L	12.30.18 16:05	
2-Butanone	<1.32	250	231	92	59-114	ug/L	12.30.18 16:05	
2-Chlorotoluene	<0.293	50.0	47.4	95	79-113	ug/L	12.30.18 16:05	
2-Hexanone	<1.05	250	235	94	66-129	ug/L	12.30.18 16:05	
4-Chlorotoluene	<0.114	50.0	47.9	96	76-114	ug/L	12.30.18 16:05	
4-Methyl-2-Pentanone	<0.874	250	238	95	73-126	ug/L	12.30.18 16:05	
Acetone	<20.0	250	220	88	33-121	ug/L	12.30.18 16:05	
Benzene	<0.185	50.0	47.3	95	76-110	ug/L	12.30.18 16:05	
Bromobenzene	<0.258	50.0	48.2	96	77-114	ug/L	12.30.18 16:05	
Bromochloromethane	<0.328	50.0	47.5	95	72-112	ug/L	12.30.18 16:05	
Bromodichloromethane	<0.164	50.0	49.3	99	75-116	ug/L	12.30.18 16:05	
Bromoform	<0.348	50.0	45.2	90	66-119	ug/L	12.30.18 16:05	
Bromomethane	<0.127	50.0	48.4	97	60-110	ug/L	12.30.18 16:05	
Carbon Disulfide	<0.173	50.0	47.1	94	71-128	ug/L	12.30.18 16:05	
Carbon Tetrachloride	<0.243	50.0	50.5	101	77-119	ug/L	12.30.18 16:05	
Chlorobenzene	<0.110	50.0	48.7	97	78-110	ug/L	12.30.18 16:05	
Chloroethane	<0.190	50.0	50.2	100	62-113	ug/L	12.30.18 16:05	
Chloroform	0.200	50.0	47.8	95	79-111	ug/L	12.30.18 16:05	
Chloromethane	<5.00	50.0	48.8	98	64-115	ug/L	12.30.18 16:05	
cis-1,2-Dichloroethene	<0.162	50.0	48.4	97	72-121	ug/L	12.30.18 16:05	
cis-1,3-Dichloropropene	<0.126	50.0	51.9	104	75-119	ug/L	12.30.18 16:05	
Dibromochloromethane	<0.212	50.0	50.6	101	74-117	ug/L	12.30.18 16:05	
Dibromomethane	<0.186	50.0	47.0	94	72-114	ug/L	12.30.18 16:05	
Dichlorodifluoromethane	0.190	50.0	52.9	105	64-138	ug/L	12.30.18 16:05	
Ethylbenzene	<0.190	50.0	48.4	97	80-116	ug/L	12.30.18 16:05	
Hexachlorobutadiene	<2.00	50.0	52.8	106	79-123	ug/L	12.30.18 16:05	
Iodomethane (Methyl Iodide)	<0.170	50.0	47.7	95	74-108	ug/L	12.30.18 16:05	
isopropylbenzene	<0.218	50.0	49.7	99	79-117	ug/L	12.30.18 16:05	
m,p-Xylenes	<1.00	100	96.5	97	79-118	ug/L	12.30.18 16:05	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074644 Matrix: Water Date Prep: 12.30.18

Parent Sample Id: 609594-004 MS Sample Id: 609594-004 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	44.8	90	67-116	ug/L	12.30.18 16:05	
MTBE	<0.500	50.0	48.8	98	70-125	ug/L	12.30.18 16:05	
Naphthalene	<2.00	50.0	53.2	106	72-157	ug/L	12.30.18 16:05	
n-Butylbenzene	<2.00	50.0	51.7	103	74-128	ug/L	12.30.18 16:05	
n-Propylbenzene	<0.173	50.0	48.6	97	75-121	ug/L	12.30.18 16:05	
o-Xylene	<0.500	50.0	49.4	99	78-122	ug/L	12.30.18 16:05	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	50.0	100	71-123	ug/L	12.30.18 16:05	
Sec-Butylbenzene	<0.124	50.0	49.7	99	76-126	ug/L	12.30.18 16:05	
Styrene	<0.197	50.0	49.7	99	74-124	ug/L	12.30.18 16:05	
tert-Butylbenzene	<0.177	50.0	49.9	100	77-124	ug/L	12.30.18 16:05	
Tetrachloroethylene	0.520	50.0	49.0	97	78-117	ug/L	12.30.18 16:05	
Toluene	<0.500	50.0	47.7	95	77-112	ug/L	12.30.18 16:05	
trans-1,2-dichloroethene	<0.167	50.0	47.3	95	72-117	ug/L	12.30.18 16:05	
Trichloroethene	15.9	50.0	63.2	95	70-123	ug/L	12.30.18 16:05	
Trichlorofluoromethane	<0.191	50.0	52.1	104	69-118	ug/L	12.30.18 16:05	
Vinyl Acetate	<0.583	250	251	100	68-114	ug/L	12.30.18 16:05	
Vinyl Chloride	<0.232	50.0	49.1	98	65-114	ug/L	12.30.18 16:05	
trans-1,3-dichloropropene	<0.198	50.0	52.6	105	75-123	ug/L	12.30.18 16:05	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	51.7	103	75-125	ug/L	12.30.18 16:05	
1,3-Butadiene	<2.52	50.0	48.7	97	77-104	ug/L	12.30.18 16:05	
Cyclohexane	<0.309	50.0	48.7	97	74-123	ug/L	12.30.18 16:05	
Dicyclopentadiene	<5.00	50.0	45.5	91	73-108	ug/L	12.30.18 16:05	
Methylcyclohexane	<0.228	50.0	49.4	99	76-125	ug/L	12.30.18 16:05	
n-Hexane	<5.00	50.0	49.7	99	66-132	ug/L	12.30.18 16:05	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		75-131	%	12.30.18 16:05
1,2-Dichloroethane-D4	96		63-144	%	12.30.18 16:05
Toluene-D8	99		80-117	%	12.30.18 16:05
4-Bromofluorobenzene	99		74-124	%	12.30.18 16:05

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074650 Matrix: Water Date Prep: 01.02.19

Parent Sample Id: 609594-010 MS Sample Id: 609594-010 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
1,1,1,2-Tetrachloroethane	<0.195	50.0	46.7	93	75-114	ug/L	01.02.19 14:16	
1,1,1-Trichloroethane	<0.130	50.0	53.8	108	75-118	ug/L	01.02.19 14:16	
1,1,2,2-Tetrachloroethane	<0.365	50.0	47.2	94	75-113	ug/L	01.02.19 14:16	
1,1,2-Trichloroethane	<0.272	50.0	47.7	95	75-114	ug/L	01.02.19 14:16	
1,1-Dichloroethane	<0.182	50.0	58.5	117	71-121	ug/L	01.02.19 14:16	
1,1-Dichloroethene	<0.178	50.0	55.7	111	74-124	ug/L	01.02.19 14:16	
1,1-Dichloropropene	<0.257	50.0	55.6	111	77-116	ug/L	01.02.19 14:16	
1,2,3-Trichlorobenzene	<2.00	50.0	47.8	96	70-140	ug/L	01.02.19 14:16	
1,2,3-Trichloropropane	<0.214	50.0	54.0	108	73-115	ug/L	01.02.19 14:16	
1,2,4-Trichlorobenzene	<2.00	50.0	50.8	102	71-135	ug/L	01.02.19 14:16	
1,2,4-Trimethylbenzene	<0.113	50.0	49.1	98	74-118	ug/L	01.02.19 14:16	
1,2-Dibromo-3-Chloropropane	<0.707	50.0	46.1	92	70-124	ug/L	01.02.19 14:16	
1,2-Dibromoethane	<0.380	50.0	47.6	95	75-117	ug/L	01.02.19 14:16	
1,2-Dichlorobenzene	<0.175	50.0	49.9	100	77-115	ug/L	01.02.19 14:16	
1,2-Dichloroethane	<0.283	50.0	53.1	106	72-111	ug/L	01.02.19 14:16	
1,2-Dichloropropane	<0.170	50.0	51.5	103	75-113	ug/L	01.02.19 14:16	
1,3,5-Trimethylbenzene	<0.178	50.0	50.9	102	77-119	ug/L	01.02.19 14:16	
1,3-Dichlorobenzene	<0.169	50.0	48.5	97	79-112	ug/L	01.02.19 14:16	
1,3-Dichloropropane	<0.199	50.0	48.5	97	74-113	ug/L	01.02.19 14:16	
1,4-Dichlorobenzene	<0.222	50.0	49.0	98	76-112	ug/L	01.02.19 14:16	
2,2-Dichloropropane	<0.154	50.0	55.2	110	58-131	ug/L	01.02.19 14:16	
2-Butanone	<1.32	250	241	96	59-114	ug/L	01.02.19 14:16	
2-Chlorotoluene	<0.293	50.0	49.6	99	79-113	ug/L	01.02.19 14:16	
2-Hexanone	<1.05	250	249	100	66-129	ug/L	01.02.19 14:16	
4-Chlorotoluene	<0.114	50.0	49.4	99	76-114	ug/L	01.02.19 14:16	
4-Methyl-2-Pentanone	<0.874	250	264	106	73-126	ug/L	01.02.19 14:16	
Acetone	<20.0	250	236	94	33-121	ug/L	01.02.19 14:16	
Benzene	<0.185	50.0	51.5	103	76-110	ug/L	01.02.19 14:16	
Bromobenzene	<0.258	50.0	49.2	98	77-114	ug/L	01.02.19 14:16	
Bromochloromethane	<0.328	50.0	50.5	101	72-112	ug/L	01.02.19 14:16	
Bromodichloromethane	<0.164	50.0	52.9	106	75-116	ug/L	01.02.19 14:16	
Bromoform	<0.348	50.0	41.8	84	66-119	ug/L	01.02.19 14:16	
Bromomethane	<0.127	50.0	51.1	102	60-110	ug/L	01.02.19 14:16	
Carbon Disulfide	<0.173	50.0	63.1	126	71-128	ug/L	01.02.19 14:16	
Carbon Tetrachloride	<0.243	50.0	54.3	109	77-119	ug/L	01.02.19 14:16	
Chlorobenzene	<0.110	50.0	47.8	96	78-110	ug/L	01.02.19 14:16	
Chloroethane	<0.190	50.0	47.4	95	62-113	ug/L	01.02.19 14:16	
Chloroform	<0.107	50.0	54.3	109	79-111	ug/L	01.02.19 14:16	
Chloromethane	<5.00	50.0	60.9	122	64-115	ug/L	01.02.19 14:16	M1
cis-1,2-Dichloroethene	<0.162	50.0	54.8	110	72-121	ug/L	01.02.19 14:16	
cis-1,3-Dichloropropene	<0.126	50.0	56.3	113	75-119	ug/L	01.02.19 14:16	
Dibromochloromethane	<0.212	50.0	47.5	95	74-117	ug/L	01.02.19 14:16	
Dibromomethane	<0.186	50.0	50.3	101	72-114	ug/L	01.02.19 14:16	
Dichlorodifluoromethane	<0.148	50.0	70.8	142	64-138	ug/L	01.02.19 14:16	M1
Ethylbenzene	<0.190	50.0	49.8	100	80-116	ug/L	01.02.19 14:16	
Hexachlorobutadiene	<2.00	50.0	50.5	101	79-123	ug/L	01.02.19 14:16	
Iodomethane (Methyl Iodide)	<0.170	50.0	46.1	92	74-108	ug/L	01.02.19 14:16	
isopropylbenzene	<0.218	50.0	48.5	97	79-117	ug/L	01.02.19 14:16	
m,p-Xylenes	<1.00	100	98.2	98	79-118	ug/L	01.02.19 14:16	

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 609594

Wood Environment & Infrastructure Solutions, Inc.

Cave Creek Landfill

Analytical Method: VOCs by SW 8260B Prep Method: SW5030C

Seq Number: 3074650 Matrix: Water Date Prep: 01.02.19

Parent Sample Id: 609594-010 MS Sample Id: 609594-010 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Methylene Chloride	<2.00	50.0	52.9	106	67-116	ug/L	01.02.19 14:16	
MTBE	<0.500	50.0	54.1	108	70-125	ug/L	01.02.19 14:16	
Naphthalene	<2.00	50.0	48.1	96	72-157	ug/L	01.02.19 14:16	
n-Butylbenzene	<2.00	50.0	55.4	111	74-128	ug/L	01.02.19 14:16	
n-Propylbenzene	<0.173	50.0	50.8	102	75-121	ug/L	01.02.19 14:16	
o-Xylene	<0.500	50.0	49.0	98	78-122	ug/L	01.02.19 14:16	
p-Cymene (p-Isopropyltoluene)	<0.150	50.0	47.1	94	71-123	ug/L	01.02.19 14:16	
Sec-Butylbenzene	<0.124	50.0	52.0	104	76-126	ug/L	01.02.19 14:16	
Styrene	<0.197	50.0	50.7	101	74-124	ug/L	01.02.19 14:16	
tert-Butylbenzene	<0.177	50.0	51.9	104	77-124	ug/L	01.02.19 14:16	
Tetrachloroethylene	<0.347	50.0	46.4	93	78-117	ug/L	01.02.19 14:16	
Toluene	<0.500	50.0	48.4	97	77-112	ug/L	01.02.19 14:16	
trans-1,2-dichloroethene	<0.167	50.0	53.6	107	72-117	ug/L	01.02.19 14:16	
Trichloroethene	1.35	50.0	52.3	102	70-123	ug/L	01.02.19 14:16	
Trichlorofluoromethane	<0.191	50.0	53.6	107	69-118	ug/L	01.02.19 14:16	
Vinyl Acetate	<0.583	250	250	100	68-114	ug/L	01.02.19 14:16	
Vinyl Chloride	<0.232	50.0	53.1	106	65-114	ug/L	01.02.19 14:16	
trans-1,3-dichloropropene	<0.198	50.0	54.1	108	75-123	ug/L	01.02.19 14:16	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<0.175	50.0	56.4	113	75-125	ug/L	01.02.19 14:16	
1,3-Butadiene	<2.52	50.0	82.9	166	77-104	ug/L	01.02.19 14:16	M1
Cyclohexane	<0.309	50.0	59.0	118	74-123	ug/L	01.02.19 14:16	
Dicyclopentadiene	<5.00	50.0	47.2	94	73-108	ug/L	01.02.19 14:16	
Methylcyclohexane	<0.228	50.0	54.6	109	76-125	ug/L	01.02.19 14:16	
n-Hexane	<5.00	50.0	55.2	110	66-132	ug/L	01.02.19 14:16	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	108		75-131	%	01.02.19 14:16
1,2-Dichloroethane-D4	100		63-144	%	01.02.19 14:16
Toluene-D8	97		80-117	%	01.02.19 14:16
4-Bromofluorobenzene	99		74-124	%	01.02.19 14:16

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Work Order No: 609594

www.xenco.com Page 1 of 1

Project Manager:	NATALIE CHRISMAN	Bill to: (if different)	SAME
Company Name:	WOOD	Company Name:	
Address:	4600 E WASHINGTON	Address:	
City, State ZIP:	PHOENIX, AZ	City, State ZIP:	
Phone:	602.733.6000	Email:	

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	CAVE CREEK LANDFILL	Turn Around	
Project Number:	14-2017-2034.021	Routine ☐	
P.O. Number:		Rush:	
Sampler's Name:	ERIC MILLER	Due Date:	

SAMPLE RECEIPT

Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.7	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	8260 VOCs	Sample Comments
1	MW11-720-122118	AQ	12.21.18	1015	720	3	X	
2	FUP03-122118	↓	↓	1025	—	↓	X	
3	MW11-745-122118	↓	↓	1035	745	↓	X	
4	MW11-766-122118	↓	↓	1043	766	↓	X	
5	MW13-752-122118	↓	↓	1123	752	↓	X	
6	MW13-772-122118	↓	↓	1138	772	↓	X	
7	MW13-787-122118	↓	↓	1150	787	↓	X	
8	MW12-730-122118	↓	↓	1222	730	↓	X	
9	MW12-755-122118	↓	↓	1232	755	↓	X	
10	MW12-770-122118	↓	↓	1245	770	↓	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	12/21/18 14:00	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

1.000

XENCO LABORATORIES

Sample Receipt Checklist

Client Name: Wood

Date and Time Received: 12/21/18 @ 14:00

Work Order Number: 6091594

Checked by: EP

Checklist completed by: EP

Logged In by: EP Date: 12/21/18

Matrix: W Courier Name: (Client) TWA _____

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒	
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	Not Present ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐		
Samples in proper container/bottle?	Yes ☒	No ☐		
Sample containers intact?	Yes ☒	No ☐		
Sufficient sample volume for indicated test?	Yes ☒	No ☐		
All samples received within holding time?	Yes ☒	No ☐		
All samples received same day of collection?	Yes ☒	No ☐	Temp: 2.7	Wet Ice Present ☒
Where was the temperature reading taken at?	Sample ☐	Temp Blank ☒	Other:	
VOA Water – VOA vials have zero headspace?	Yes ☒	No ☐	N/A ☐	
Water – Microbiological bottles have ≤ 2.5 cm headspace?	Yes ☐	No ☐	N/A ☒	
Water – All sample pH's acceptable upon receipt?	Yes ☐	No ☐	N/A ☒	Checked by: EP

If **No**, list all samples and bottle types that are not acceptable in Additional Comments section. Also state any correction actions.

Dissolved Metals – Field Filtered?	Yes ☐	No ☐	N/A ☒

Additional Comments: _____

SRChecklist 2016.1

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

Date: December 27, 2018

Client:	Natalie Chrisman	Work Order #:	18L012
Company:	Wood.	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/12/2018

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: December 27, 2018

Client:	Natalie Chrisman	Work Order #:	18L012
Company:	Wood.	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/12/2018

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
18L012-01	MW-10-SG-121018	TO-15	12/10/2018	1221
18L012-02	MW-10S-SG-121018	TO-15	12/10/2018	1237
18L012-03	MW-10M-SG-121018	TO-15	12/10/2018	1302
18L012-04	MW-10D-SG-121018	TO-15	12/10/2018	1321
18L012-05	MW-09-SG-121118	TO-15	12/11/2018	856
18L012-06	MW-09S-SG-121118	TO-15	12/11/2018	912
18L012-07	MW-09M-SG-121118	TO-15	12/11/2018	936
18L012-08	MW-09D-SG-121118	TO-15	12/11/2018	1007
18L012-09	DUP01-121118	TO-15	12/11/2018	1020
18L012-10	TSSV-6S-121118	TO-15	12/11/2018	1046
18L012-11	DUP02-121118	TO-15	12/11/2018	1100
18L012-12	TSSV-6M-SG-121118	TO-15	12/11/2018	1116
18L012-13	TSSV-6D-SG-121118	TO-15	12/11/2018	1138
18L012-14	TSSV-7S-SG-121118	TO-15	12/11/2018	1241
18L012-15	TSSV-7M-SG-121118	TO-15	12/11/2018	1306
18L012-16	TSSV-7D-SG-121118	TO-15	12/11/2018	1332
18L012-17	DUP03-121118	TO-15	12/11/2018	1355
18L012-18	TSSV-7PZ-SG-121118	TO-15	12/11/2018	1436
18L012-19	TSSV-3S-SG-121218	TO-15	12/12/2018	1008
18L012-20	TSSV-3M-SG-121218	TO-15	12/12/2018	1031
18L012-21	TSSV-3PZ-SG-121218	TO-15	12/12/2018	1132

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

Date: December 27, 2018

Client:	Natalie Chrisman	Work Order #:	18L012
Company:	Wood.	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/12/18

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:	18L012	**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#
18L012-01	MW-10-SG-121018	E2297	1811-07	29.0	13.81	193	1811-02
18L012-02	MW-10S-SG-121018	1850	1811-08	29.0	13.77	035	1811-02
18L012-03	MW-10M-SG-121018	E2295	1811-07	29.0	13.75	047	1811-02
18L012-04	MW-10D-SG-121018	E2282	1811-08	29.0	13.75	031	1809-03
18L012-05	MW-09-SG-121118	E2406	1811-08	29.0	13.97	189	1811-02
18L012-06	MW-09S-SG-121118	E2394	1811-08	29.0	14.08	190	1810-07
18L012-07	MW-09M-SG-121118	1857	1811-08	29.0	13.92	104	1811-02
18L012-08	MW-09D-SG-121118	E2348	1811-08	29.0	13.93	021	1809-03
18L012-09	DUP01-121118	1845	1811-08	29.0	13.97	199	1811-02
18L012-10	TSSV-6S-121118	E2097	1811-06	29.0	14.33	164	1811-03
18L012-11	DUP02-121118	E2412	1811-06	29.0	13.80	023	1811-03
18L012-12	TSSV-6M-SG-121118	E2407	1811-05	29.0	13.75	007	1811-03
18L012-13	TSSV-6D-SG-121118	1849	1811-06	29.0	13.73	026	1811-03
18L012-14	TSSV-7S-SG-121118	1854	1811-05	29.0	13.71	085	1811-02
18L012-15	TSSV-7M-SG-121118	1313	1811-06	29.0	13.59	013	1811-03
18L012-16	TSSV-7D-SG-121118	E2408	1811-02	29.0	13.71	107	1811-03
18L012-17	DUP03-121118	E2288	1811-02	29.0	13.68	038	1811-03
18L012-18	TSSV-7PZ-SG-121118	E2392	1811-06	29.0	13.55	001	1811-03
18L012-19	TSSV-3S-SG-121218	1811	1811-09	29.0	13.76	171	1810-02
18L012-20	TSSV-3M-SG-121218	1886	1811-10	29.0	13.86	037	1809-03
18L012-21	TSSV-3PZ-SG-121218	1808	1811-10	29.0	13.60	135	1809-03

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:**	MW-10-SG-121018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/10/2018
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	**6.3**	**1.0**	**25.5**	**4.05**		2	12/19/2018	75-34-3
1,1-Dichloroethene	**1.1**	**1.0**	**4.21**	**3.97**		2	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	12/19/2018	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	12/19/2018	107-06-2
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	12/19/2018	78-93-3
Acetone	< 10	10	< 23.8	23.8		2	12/19/2018	67-64-1
Benzene	**1.4**	**1.0**	**4.40**	**3.19**		2	12/19/2018	71-43-2
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	12/19/2018	108-90-7
Chloroform	< 1.0	1.0	< 4.88	4.88		2	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**6.0**	**2.0**	**29.8**	**9.90**		2	12/19/2018	75-71-8
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	12/19/2018	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	12/19/2018	179601-23-1
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	12/19/2018	75-09-2
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	12/19/2018	95-47-6
Tetrachloroethene	**4.4**	**2.0**	**29.7**	**13.6**		2	12/19/2018	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8		2	12/19/2018	109-99-9
Toluene	**6.6**	**1.0**	**25.0**	**3.77**		2	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	12/19/2018	156-60-5
Trichloroethene	**15**	**1.0**	**82.1**	**5.37**		2	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**3.7**	**1.0**	**20.7**	**5.62**		2	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	12/19/2018	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	92.0	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:**	MW-10S-SG-121018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/10/2018
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	**21**	**10**	**85.1**	**40.5**		20	12/19/2018	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/19/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/19/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/19/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/19/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/19/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/19/2018	108-90-7
Chloroform	< 10	10	< 48.8	48.8		20	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**1,830**	**200**	**9,060**	**990**		200	12/17/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/19/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/19/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/19/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/19/2018	95-47-6
Tetrachloroethene	**301**	**20**	**2,040**	**136**		20	12/19/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/19/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-60-5
Trichloroethene	< 10	10	< 53.7	53.7		20	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**432**	**10**	**2,430**	**56.2**		20	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**71**	**10**	**542**	**76.6**		20	12/19/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	89.3	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:**	MW-10M-SG-121018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/10/2018
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	**774**	**100**	**3,140**	**405**		200	12/17/2018	75-34-3
1,1-Dichloroethene	**436**	**100**	**1,730**	**397**		200	12/17/2018	75-35-4
1,2-Dichlorobenzene	< 100	100	< 601	601		200	12/17/2018	95-50-1
1,2-Dichloroethane	< 100	100	< 405	405		200	12/17/2018	107-06-2
2-Butanone (MEK)	< 1,000	1,000	< 2,950	2,950		200	12/17/2018	78-93-3
Acetone	< 1,000	1,000	< 2,380	2,380		200	12/17/2018	67-64-1
Benzene	< 100	100	< 319	319		200	12/17/2018	71-43-2
Chlorobenzene	< 100	100	< 460	460		200	12/17/2018	108-90-7
Chloroform	< 100	100	< 488	488		200	12/17/2018	67-66-3
cis-1,2-Dichloroethene	< 100	100	< 396	396		200	12/17/2018	156-59-2
Dichlorodifluoromethane(F-12)	**7,770**	**200**	**38,500**	**990**		200	12/17/2018	75-71-8
Ethylbenzene	< 100	100	< 434	434		200	12/17/2018	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	12/17/2018	179601-23-1
Methylene chloride	**532**	**400**	**1,850**	**1,390**		200	12/17/2018	75-09-2
o-Xylene	< 100	100	< 434	434		200	12/17/2018	95-47-6
Tetrachloroethene	**822**	**200**	**5,570**	**1,360**		200	12/17/2018	127-18-4
Tetrahydrofuran	< 400	400	< 1,180	1,180		200	12/17/2018	109-99-9
Toluene	< 100	100	< 377	377		200	12/17/2018	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	12/17/2018	156-60-5
Trichloroethene	**164**	**100**	**881**	**537**		200	12/17/2018	79-01-6
Trichlorofluoromethane(F-11)	**2,550**	**100**	**14,300**	**562**		200	12/17/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**334**	**100**	**2,560**	**766**		200	12/17/2018	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	12/17/2018	75-01-4
Surr: 4-Bromofluorobenzene	94.7	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:**	MW-10D-SG-121018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/10/2018
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	**2,960**	**100**	**12,000**	**405**		200	12/17/2018	75-34-3
1,1-Dichloroethene	**480**	**100**	**1,910**	**397**		200	12/17/2018	75-35-4
1,2-Dichlorobenzene	< 100	100	< 601	601		200	12/17/2018	95-50-1
1,2-Dichloroethane	< 100	100	< 405	405		200	12/17/2018	107-06-2
2-Butanone (MEK)	< 1,000	1,000	< 2,950	2,950		200	12/17/2018	78-93-3
Acetone	< 1,000	1,000	< 2,380	2,380		200	12/17/2018	67-64-1
Benzene	**274**	**100**	**874**	**319**		200	12/17/2018	71-43-2
Chlorobenzene	< 100	100	< 460	460		200	12/17/2018	108-90-7
Chloroform	< 100	100	< 488	488		200	12/17/2018	67-66-3
cis-1,2-Dichloroethene	< 100	100	< 396	396		200	12/17/2018	156-59-2
Dichlorodifluoromethane(F-12)	**7,310**	**200**	**36,200**	**990**		200	12/17/2018	75-71-8
Ethylbenzene	**116**	**100**	**503**	**434**		200	12/17/2018	100-41-4
m&p-Xylene	**242**	**200**	**1,050**	**868**		200	12/17/2018	179601-23-1
Methylene chloride	**576**	**400**	**2,000**	**1,390**		200	12/17/2018	75-09-2
o-Xylene	< 100	100	< 434	434		200	12/17/2018	95-47-6
Tetrachloroethene	**1,120**	**200**	**7,590**	**1,360**		200	12/17/2018	127-18-4
Tetrahydrofuran	< 400	400	< 1,180	1,180		200	12/17/2018	109-99-9
Toluene	**1,260**	**100**	**4,750**	**377**		200	12/17/2018	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	12/17/2018	156-60-5
Trichloroethene	**662**	**100**	**3,560**	**537**		200	12/17/2018	79-01-6
Trichlorofluoromethane(F-11)	**2,690**	**100**	**15,100**	**562**		200	12/17/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**284**	**100**	**2,180**	**766**		200	12/17/2018	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	12/17/2018	75-01-4
Surr: 4-Bromofluorobenzene	98.0	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:**	MW-09-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 10	10	< 40.5	40.5		20	12/19/2018	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/19/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/19/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/19/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/19/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/19/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/19/2018	108-90-7
Chloroform	< 10	10	< 48.8	48.8		20	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 20	20	< 99.0	99.0		20	12/19/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/19/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/19/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/19/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/19/2018	95-47-6
Tetrachloroethene	< 20	20	< 136	136		20	12/19/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/19/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-60-5
Trichloroethene	**307**	**10**	**1,650**	**53.7**		20	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**13**	**10**	**98.0**	**76.6**		20	12/19/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	89.2	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:**	MW-09S-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	12/19/2018	75-34-3
1,1-Dichloroethene	< 2.5	2.5	< 9.93	9.93		5	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	12/19/2018	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	12/19/2018	107-06-2
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	12/19/2018	78-93-3
Acetone	< 25	25	< 59.5	59.5		5	12/19/2018	67-64-1
Benzene	< 2.5	2.5	< 7.98	7.98		5	12/19/2018	71-43-2
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	12/19/2018	108-90-7
Chloroform	< 2.5	2.5	< 12.2	12.2		5	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**9.7**	**5.0**	**48.0**	**24.8**		5	12/19/2018	75-71-8
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	12/19/2018	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	12/19/2018	179601-23-1
Methylene chloride	< 10	10	< 34.7	34.7		5	12/19/2018	75-09-2
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	12/19/2018	95-47-6
Tetrachloroethene	**45**	**5.0**	**304**	**33.9**		5	12/19/2018	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5		5	12/19/2018	109-99-9
Toluene	< 2.5	2.5	< 9.43	9.43		5	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	12/19/2018	156-60-5
Trichloroethene	< 2.5	2.5	< 13.4	13.4		5	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**12**	**2.5**	**68.0**	**14.1**		5	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**6.4**	**2.5**	**48.6**	**19.2**		5	12/19/2018	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	91.4	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:**	MW-09M-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	**94**	**5.0**	**379**	**20.3**		10	12/18/2018	75-34-3
1,1-Dichloroethene	**9.2**	**5.0**	**36.5**	**19.9**		10	12/18/2018	75-35-4
1,2-Dichlorobenzene	< 5.0	5.0	< 30.1	30.1		10	12/18/2018	95-50-1
1,2-Dichloroethane	< 5.0	5.0	< 20.3	20.3		10	12/18/2018	107-06-2
2-Butanone (MEK)	< 50	50	< 148	148		10	12/18/2018	78-93-3
Acetone	< 50	50	< 119	119		10	12/18/2018	67-64-1
Benzene	< 5.0	5.0	< 16.0	16.0		10	12/18/2018	71-43-2
Chlorobenzene	< 5.0	5.0	< 23.0	23.0		10	12/18/2018	108-90-7
Chloroform	**8.4**	**5.0**	**41.0**	**24.4**		10	12/18/2018	67-66-3
cis-1,2-Dichloroethene	**13**	**5.0**	**51.9**	**19.8**		10	12/18/2018	156-59-2
Dichlorodifluoromethane(F-12)	**187**	**10**	**924**	**49.5**		10	12/18/2018	75-71-8
Ethylbenzene	< 5.0	5.0	< 21.7	21.7		10	12/18/2018	100-41-4
m&p-Xylene	< 10	10	< 43.4	43.4		10	12/18/2018	179601-23-1
Methylene chloride	**166**	**20**	**576**	**69.4**		10	12/18/2018	75-09-2
o-Xylene	< 5.0	5.0	< 21.7	21.7		10	12/18/2018	95-47-6
Tetrachloroethene	**192**	**10**	**1,300**	**67.8**		10	12/18/2018	127-18-4
Tetrahydrofuran	< 20	20	< 59.0	59.0		10	12/18/2018	109-99-9
Toluene	< 5.0	5.0	< 18.9	18.9		10	12/18/2018	108-88-3
trans-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	12/18/2018	156-60-5
Trichloroethene	**127**	**5.0**	**683**	**26.9**		10	12/18/2018	79-01-6
Trichlorofluoromethane(F-11)	**202**	**5.0**	**1,130**	**28.1**		10	12/18/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**374**	**5.0**	**2,860**	**38.3**		10	12/18/2018	76-13-1
Vinyl chloride	**12**	**5.0**	**31.5**	**12.8**		10	12/18/2018	75-01-4
Surr: 4-Bromofluorobenzene	104	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:**	MW-09D-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 5.0	5.0	< 20.3	20.3		10	12/19/2018	75-34-3
1,1-Dichloroethene	< 5.0	5.0	< 19.9	19.9		10	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 5.0	5.0	< 30.1	30.1		10	12/19/2018	95-50-1
1,2-Dichloroethane	< 5.0	5.0	< 20.3	20.3		10	12/19/2018	107-06-2
2-Butanone (MEK)	< 50	50	< 148	148		10	12/19/2018	78-93-3
Acetone	< 50	50	< 119	119		10	12/19/2018	67-64-1
Benzene	< 5.0	5.0	< 16.0	16.0		10	12/19/2018	71-43-2
Chlorobenzene	< 5.0	5.0	< 23.0	23.0		10	12/19/2018	108-90-7
Chloroform	< 5.0	5.0	< 24.4	24.4		10	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**24**	**10**	**117**	**49.5**		10	12/19/2018	75-71-8
Ethylbenzene	< 5.0	5.0	< 21.7	21.7		10	12/19/2018	100-41-4
m&p-Xylene	< 10	10	< 43.4	43.4		10	12/19/2018	179601-23-1
Methylene chloride	< 20	20	< 69.4	69.4		10	12/19/2018	75-09-2
o-Xylene	< 5.0	5.0	< 21.7	21.7		10	12/19/2018	95-47-6
Tetrachloroethene	**34**	**10**	**231**	**67.8**		10	12/19/2018	127-18-4
Tetrahydrofuran	< 20	20	< 59.0	59.0		10	12/19/2018	109-99-9
Toluene	< 5.0	5.0	< 18.9	18.9		10	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	12/19/2018	156-60-5
Trichloroethene	**298**	**5.0**	**1,600**	**26.9**		10	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**11**	**5.0**	**60.7**	**28.1**		10	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**150**	**5.0**	**1,150**	**38.3**		10	12/19/2018	76-13-1
Vinyl chloride	< 5.0	5.0	< 12.8	12.8		10	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	92.7	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:**	DUP01-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 5.0	5.0	< 20.3	20.3		10	12/19/2018	75-34-3
1,1-Dichloroethene	< 5.0	5.0	< 19.9	19.9		10	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 5.0	5.0	< 30.1	30.1		10	12/19/2018	95-50-1
1,2-Dichloroethane	< 5.0	5.0	< 20.3	20.3		10	12/19/2018	107-06-2
2-Butanone (MEK)	< 50	50	< 148	148		10	12/19/2018	78-93-3
Acetone	< 50	50	< 119	119		10	12/19/2018	67-64-1
Benzene	< 5.0	5.0	< 16.0	16.0		10	12/19/2018	71-43-2
Chlorobenzene	< 5.0	5.0	< 23.0	23.0		10	12/19/2018	108-90-7
Chloroform	< 5.0	5.0	< 24.4	24.4		10	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**23**	**10**	**114**	**49.5**		10	12/19/2018	75-71-8
Ethylbenzene	< 5.0	5.0	< 21.7	21.7		10	12/19/2018	100-41-4
m&p-Xylene	< 10	10	< 43.4	43.4		10	12/19/2018	179601-23-1
Methylene chloride	< 20	20	< 69.4	69.4		10	12/19/2018	75-09-2
o-Xylene	< 5.0	5.0	< 21.7	21.7		10	12/19/2018	95-47-6
Tetrachloroethene	**28**	**10**	**193**	**67.8**		10	12/19/2018	127-18-4
Tetrahydrofuran	< 20	20	< 59.0	59.0		10	12/19/2018	109-99-9
Toluene	< 5.0	5.0	< 18.9	18.9		10	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	12/19/2018	156-60-5
Trichloroethene	**268**	**5.0**	**1,440**	**26.9**		10	12/17/2018	79-01-6
Trichlorofluoromethane(F-11)	**10**	**5.0**	**56.8**	**28.1**		10	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**139**	**5.0**	**1,060**	**38.3**		10	12/19/2018	76-13-1
Vinyl chloride	< 5.0	5.0	< 12.8	12.8		10	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	92.7	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:**	TSSV-6S-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	12/17/2018	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	12/17/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/17/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/17/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/17/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/17/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/17/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/17/2018	108-90-7
Chloroform	**17**	**10**	**82.0**	**48.8**		20	12/17/2018	67-66-3
cis-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/17/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 20	20	< 99.0	99.0		20	12/17/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/17/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/17/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/17/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/17/2018	95-47-6
Tetrachloroethene	**86**	**20**	**580**	**136**		20	12/17/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/17/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/17/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/17/2018	156-60-5
Trichloroethene	**818**	**10**	**4,390**	**53.7**		20	12/17/2018	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	12/17/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**117**	**10**	**896**	**76.6**		20	12/17/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/17/2018	75-01-4
Surr: 4-Bromofluorobenzene	99.6	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:**	DUP02-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 10	10	< 40.5	40.5		20	12/17/2018	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	12/17/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/17/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/17/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/17/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/17/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/17/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/17/2018	108-90-7
Chloroform	**21**	**10**	**104**	**48.8**		20	12/17/2018	67-66-3
cis-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/17/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 20	20	< 99.0	99.0		20	12/17/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/17/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/17/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/17/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/17/2018	95-47-6
Tetrachloroethene	**91**	**20**	**614**	**136**		20	12/17/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/17/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/17/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/17/2018	156-60-5
Trichloroethene	**972**	**10**	**5,220**	**53.7**		20	12/17/2018	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	12/17/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**141**	**10**	**1,080**	**76.6**		20	12/17/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/17/2018	75-01-4
Surr: 4-Bromofluorobenzene	104	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:**	TSSV-6M-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 10	10	< 40.5	40.5		20	12/17/2018	75-34-3
1,1-Dichloroethene	**15**	**10**	**58.8**	**39.7**		20	12/17/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/17/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/17/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/17/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/17/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/17/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/17/2018	108-90-7
Chloroform	**44**	**10**	**217**	**48.8**		20	12/17/2018	67-66-3
cis-1,2-Dichloroethene	**110**	**10**	**435**	**39.6**		20	12/17/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 20	20	< 99.0	99.0		20	12/17/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/17/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/17/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/17/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/17/2018	95-47-6
Tetrachloroethene	**177**	**20**	**1,200**	**136**		20	12/17/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/17/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/17/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/17/2018	156-60-5
Trichloroethene	**2,930**	**100**	**15,700**	**537**		200	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	12/17/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**62**	**10**	**473**	**76.6**		20	12/17/2018	76-13-1
Vinyl chloride	**12**	**10**	**30.7**	**25.6**		20	12/17/2018	75-01-4
Surr: 4-Bromofluorobenzene	103	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:**	TSSV-6D-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 250	250	< 1,010	1,010		500	12/19/2018	75-34-3
1,1-Dichloroethene	< 250	250	< 993	993		500	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 250	250	< 1,500	1,500		500	12/19/2018	95-50-1
1,2-Dichloroethane	< 250	250	< 1,010	1,010		500	12/19/2018	107-06-2
2-Butanone (MEK)	< 2,500	2,500	< 7,380	7,380		500	12/19/2018	78-93-3
Acetone	< 2,500	2,500	< 5,950	5,950		500	12/19/2018	67-64-1
Benzene	< 250	250	< 798	798		500	12/19/2018	71-43-2
Chlorobenzene	< 250	250	< 1,150	1,150		500	12/19/2018	108-90-7
Chloroform	**305**	**250**	**1,490**	**1,220**		500	12/19/2018	67-66-3
cis-1,2-Dichloroethene	**1,060**	**250**	**4,200**	**990**		500	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 500	500	< 2,480	2,480		500	12/19/2018	75-71-8
Ethylbenzene	< 250	250	< 1,090	1,090		500	12/19/2018	100-41-4
m&p-Xylene	< 500	500	< 2,170	2,170		500	12/19/2018	179601-23-1
Methylene chloride	< 1,000	1,000	< 3,470	3,470		500	12/19/2018	75-09-2
o-Xylene	< 250	250	< 1,090	1,090		500	12/19/2018	95-47-6
Tetrachloroethene	< 500	500	< 3,390	3,390		500	12/19/2018	127-18-4
Tetrahydrofuran	< 1,000	1,000	< 2,950	2,950		500	12/19/2018	109-99-9
Toluene	< 250	250	< 943	943		500	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 250	250	< 990	990		500	12/19/2018	156-60-5
Trichloroethene	**8,260**	**250**	**44,400**	**1,340**		500	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	< 250	250	< 1,410	1,410		500	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**2,660**	**250**	**20,400**	**1,920**		500	12/19/2018	76-13-1
Vinyl chloride	< 250	250	< 640	640		500	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	87.9	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:**	TSSV-7S-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 10	10	< 40.5	40.5		20	12/17/2018	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	12/17/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/17/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/17/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/17/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/17/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/17/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/17/2018	108-90-7
Chloroform	**25**	**10**	**120**	**48.8**		20	12/17/2018	67-66-3
cis-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/17/2018	156-59-2
Dichlorodifluoromethane(F-12)	**28**	**20**	**140**	**99.0**		20	12/17/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/17/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/17/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/17/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/17/2018	95-47-6
Tetrachloroethene	**36**	**20**	**247**	**136**		20	12/17/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/17/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/17/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/17/2018	156-60-5
Trichloroethene	**308**	**10**	**1,660**	**53.7**		20	12/17/2018	79-01-6
Trichlorofluoromethane(F-11)	**120**	**10**	**673**	**56.2**		20	12/17/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**19**	**10**	**142**	**76.6**		20	12/17/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/17/2018	75-01-4
Surr: 4-Bromofluorobenzene	103	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:**	TSSV-7M-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	**19**	**10**	**77.0**	**40.5**		20	12/19/2018	75-34-3
1,1-Dichloroethene	**277**	**10**	**1,100**	**39.7**		20	12/19/2018	75-35-4
1,2-Dichlorobenzene	**55**	**10**	**329**	**60.1**		20	12/19/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/19/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/19/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/19/2018	67-64-1
Benzene	**15**	**10**	**47.2**	**31.9**		20	12/19/2018	71-43-2
Chlorobenzene	**258**	**10**	**1,190**	**46.0**		20	12/19/2018	108-90-7
Chloroform	**14**	**10**	**68.3**	**48.8**		20	12/19/2018	67-66-3
cis-1,2-Dichloroethene	**107**	**10**	**425**	**39.6**		20	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**322**	**20**	**1,600**	**99.0**		20	12/19/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/19/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/19/2018	179601-23-1
Methylene chloride	**97**	**40**	**336**	**139**		20	12/19/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/19/2018	95-47-6
Tetrachloroethene	**169**	**20**	**1,150**	**136**		20	12/19/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/19/2018	109-99-9
Toluene	**12**	**10**	**43.7**	**37.7**		20	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-60-5
Trichloroethene	**530**	**10**	**2,850**	**53.7**		20	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**90**	**10**	**505**	**56.2**		20	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**23**	**10**	**176**	**76.6**		20	12/19/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	97.1	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:**	TSSV-7D-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 2,500	2,500	< 10,100	10,100		5,000	12/19/2018	75-34-3
1,1-Dichloroethene	**28,900**	**2,500**	**115,000**	**9,930**		5,000	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 2,500	2,500	< 15,000	15,000		5,000	12/19/2018	95-50-1
1,2-Dichloroethane	< 2,500	2,500	< 10,100	10,100		5,000	12/19/2018	107-06-2
2-Butanone (MEK)	< 25,000	25,000	< 73,800	73,800		5,000	12/19/2018	78-93-3
Acetone	< 25,000	25,000	< 59,500	59,500		5,000	12/19/2018	67-64-1
Benzene	< 2,500	2,500	< 7,980	7,980		5,000	12/19/2018	71-43-2
Chlorobenzene	< 2,500	2,500	< 11,500	11,500		5,000	12/19/2018	108-90-7
Chloroform	< 2,500	2,500	< 12,200	12,200		5,000	12/19/2018	67-66-3
cis-1,2-Dichloroethene	**2,950**	**2,500**	**11,700**	**9,900**		5,000	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 5,000	5,000	< 24,800	24,800		5,000	12/19/2018	75-71-8
Ethylbenzene	< 2,500	2,500	< 10,900	10,900		5,000	12/19/2018	100-41-4
m&p-Xylene	< 5,000	5,000	< 21,700	21,700		5,000	12/19/2018	179601-23-1
Methylene chloride	< 10,000	10,000	34,700	34,700		5,000	12/19/2018	75-09-2
o-Xylene	< 2,500	2,500	< 10,900	10,900		5,000	12/19/2018	95-47-6
Tetrachloroethene	< 5,000	5,000	33,900	33,900		5,000	12/19/2018	127-18-4
Tetrahydrofuran	< 10,000	10,000	< 29,500	29,500		5,000	12/19/2018	109-99-9
Toluene	< 2,500	2,500	< 9,430	9,430		5,000	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 2,500	2,500	< 9,900	9,900		5,000	12/19/2018	156-60-5
Trichloroethene	**87,600**	**2,500**	**470,000**	**13,400**		5,000	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	< 2,500	2,500	< 14,100	14,100		5,000	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**11,300**	**2,500**	**86,600**	**19,200**		5,000	12/19/2018	76-13-1
Vinyl chloride	< 2,500	2,500	< 6,400	6,400		5,000	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	87.1	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:**	DUP03-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	< 2,500	2,500	< 10,100	10,100		5,000	12/19/2018	75-34-3
1,1-Dichloroethene	**30,700**	**2,500**	**122,000**	**9,930**		5,000	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 2,500	2,500	< 15,000	15,000		5,000	12/19/2018	95-50-1
1,2-Dichloroethane	< 2,500	2,500	< 10,100	10,100		5,000	12/19/2018	107-06-2
2-Butanone (MEK)	< 25,000	25,000	< 73,800	73,800		5,000	12/19/2018	78-93-3
Acetone	< 25,000	25,000	< 59,500	59,500		5,000	12/19/2018	67-64-1
Benzene	< 2,500	2,500	< 7,980	7,980		5,000	12/19/2018	71-43-2
Chlorobenzene	< 2,500	2,500	< 11,500	11,500		5,000	12/19/2018	108-90-7
Chloroform	< 2,500	2,500	< 12,200	12,200		5,000	12/19/2018	67-66-3
cis-1,2-Dichloroethene	**2,850**	**2,500**	**11,300**	**9,900**		5,000	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 5,000	5,000	< 24,800	24,800		5,000	12/19/2018	75-71-8
Ethylbenzene	< 2,500	2,500	< 10,900	10,900		5,000	12/19/2018	100-41-4
m&p-Xylene	< 5,000	5,000	< 21,700	21,700		5,000	12/19/2018	179601-23-1
Methylene chloride	< 10,000	10,000	34,700	34,700		5,000	12/19/2018	75-09-2
o-Xylene	< 2,500	2,500	< 10,900	10,900		5,000	12/19/2018	95-47-6
Tetrachloroethene	< 5,000	5,000	33,900	33,900		5,000	12/19/2018	127-18-4
Tetrahydrofuran	< 10,000	10,000	< 29,500	29,500		5,000	12/19/2018	109-99-9
Toluene	< 2,500	2,500	< 9,430	9,430		5,000	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 2,500	2,500	< 9,900	9,900		5,000	12/19/2018	156-60-5
Trichloroethene	**97,500**	**2,500**	**524,000**	**13,400**		5,000	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	< 2,500	2,500	< 14,100	14,100		5,000	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**11,200**	**2,500**	**85,800**	**19,200**		5,000	12/19/2018	76-13-1
Vinyl chloride	< 2,500	2,500	< 6,400	6,400		5,000	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	85.2	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:**	TSSV-7PZ-SG-121118
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/11/2018
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	**1,500**	**500**	**6,080**	**2,030**		1,000	12/19/2018	75-34-3
1,1-Dichloroethene	**86,600**	**2,500**	**344,000**	**9,930**		5,000	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 500	500	< 3,010	3,010		1,000	12/19/2018	95-50-1
1,2-Dichloroethane	< 500	500	< 2,030	2,030		1,000	12/19/2018	107-06-2
2-Butanone (MEK)	< 5,000	5,000	< 14,800	14,800		1,000	12/19/2018	78-93-3
Acetone	< 5,000	5,000	< 11,900	11,900		1,000	12/19/2018	67-64-1
Benzene	< 500	500	< 1,600	1,600		1,000	12/19/2018	71-43-2
Chlorobenzene	< 500	500	< 2,300	2,300		1,000	12/19/2018	108-90-7
Chloroform	**510**	**500**	**2,490**	**2,440**		1,000	12/19/2018	67-66-3
cis-1,2-Dichloroethene	**34,700**	**500**	**137,000**	**1,980**		1,000	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**2,370**	**1,000**	**11,700**	**4,950**		1,000	12/19/2018	75-71-8
Ethylbenzene	< 500	500	< 2,170	2,170		1,000	12/19/2018	100-41-4
m&p-Xylene	< 1,000	1,000	< 4,340	4,340		1,000	12/19/2018	179601-23-1
Methylene chloride	**2,300**	**2,000**	**7,980**	**6,940**		1,000	12/19/2018	75-09-2
o-Xylene	< 500	500	< 2,170	2,170		1,000	12/19/2018	95-47-6
Tetrachloroethene	**11,200**	**1,000**	**76,000**	**6,780**		1,000	12/19/2018	127-18-4
Tetrahydrofuran	< 2,000	2,000	< 5,900	5,900		1,000	12/19/2018	109-99-9
Toluene	< 500	500	< 1,890	1,890		1,000	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 500	500	< 1,980	1,980		1,000	12/19/2018	156-60-5
Trichloroethene	**150,000**	**2,500**	**806,000**	**13,400**		5,000	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**550**	**500**	**3,090**	**2,810**		1,000	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**31,000**	**500**	**237,000**	**3,830**		1,000	12/19/2018	76-13-1
Vinyl chloride	**6,810**	**500**	**17,400**	**1,280**		1,000	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	86.9	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:**	TSSV-3S-SG-121218
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/12/2018
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	**51**	**10**	**205**	**40.5**		**20**	12/19/2018	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/19/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/19/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/19/2018	78-93-3
Acetone	**216**	**100**	**514**	**238**		20	12/19/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/19/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/19/2018	108-90-7
Chloroform	< 10	10	< 48.8	48.8		20	12/19/2018	67-66-3
cis-1,2-Dichloroethene	**28**	**10**	**110**	**39.6**		20	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**631**	**20**	**3,130**	**99.0**		20	12/19/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/19/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/19/2018	179601-23-1
Methylene chloride	**131**	**40**	**453**	**139**		20	12/19/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/19/2018	95-47-6
Tetrachloroethene	**175**	**20**	**1,180**	**136**		20	12/19/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/19/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-60-5
Trichloroethene	**35**	**10**	**187**	**53.7**		20	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**73**	**10**	**411**	**56.2**		20	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**34**	**10**	**257**	**76.6**		20	12/19/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	90.1	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:**	TSSV-3M-SG-121218
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/12/2018
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	**919**	**50**	**3,720**	**203**		100	12/19/2018	75-34-3
1,1-Dichloroethene	**70**	**50**	**278**	**199**		100	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	12/19/2018	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	12/19/2018	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	12/19/2018	78-93-3
Acetone	< 500	500	< 1,190	1,190		100	12/19/2018	67-64-1
Benzene	**95**	**50**	**303**	**160**		100	12/19/2018	71-43-2
Chlorobenzene	< 50	50	< 230	230		100	12/19/2018	108-90-7
Chloroform	< 50	50	< 244	244		100	12/19/2018	67-66-3
cis-1,2-Dichloroethene	**153**	**50**	**606**	**198**		100	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**4,130**	**100**	**20,400**	**495**		100	12/19/2018	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	12/19/2018	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	12/19/2018	179601-23-1
Methylene chloride	**1,130**	**200**	**3,920**	**694**		100	12/19/2018	75-09-2
o-Xylene	**52**	**50**	**226**	**217**		100	12/19/2018	95-47-6
Tetrachloroethene	**663**	**100**	**4,500**	**678**		100	12/19/2018	127-18-4
Tetrahydrofuran	< 200	200	< 590	590		100	12/19/2018	109-99-9
Toluene	< 50	50	< 189	189		100	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	12/19/2018	156-60-5
Trichloroethene	**454**	**50**	**2,440**	**269**		100	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**1,270**	**50**	**7,140**	**281**		100	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**302**	**50**	**2,310**	**383**		100	12/19/2018	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	87.5	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:**	TSSV-3PZ-SG-121218
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	12/12/2018
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	**26**	**10**	**104**	**40.5**		20	12/19/2018	75-34-3
1,1-Dichloroethene	**19**	**10**	**73.8**	**39.7**		20	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/19/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/19/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/19/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/19/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/19/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/19/2018	108-90-7
Chloroform	< 10	10	< 48.8	48.8		20	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	**375**	**20**	**1,860**	**99.0**		20	12/19/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/19/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/19/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/19/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/19/2018	95-47-6
Tetrachloroethene	**49**	**20**	**331**	**136**		20	12/19/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/19/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/19/2018	156-60-5
Trichloroethene	**287**	**10**	**1,540**	**53.7**		20	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	**221**	**10**	**1,240**	**56.2**		20	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**57**	**10**	**435**	**76.6**		20	12/19/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	93.3	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:**	14-2017-2034
Lab Order:	18L012	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS011217 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	12/17/2018	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	12/17/2018	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	12/17/2018	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	12/17/2018	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	12/17/2018	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	12/17/2018	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	12/17/2018	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	12/17/2018	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	12/17/2018	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/17/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	12/17/2018	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	12/17/2018	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	12/17/2018	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	12/17/2018	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	12/17/2018	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	12/17/2018	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	12/17/2018	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	12/17/2018	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/17/2018	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	12/17/2018	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	12/17/2018	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	12/17/2018	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	12/17/2018	75-01-4
Surr: 4-Bromofluorobenzene	98.5	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:	18L012	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 12/17/2018 Batch: MS011217 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)	11.3	113	10.9	109	10.0	3.2	ppbv			
Vinyl Chloride	11.8	118	11.2	112	10.0	4.8	ppbv			
Trichlorofluoromethane (F-11)	12.7	127	12.4	124	10.0	2.5	ppbv			
Acetone	10.4	104	11.3	113	10.0	8.5	ppbv			
1,1-Dichloroethene	10.9	109	10.5	105	10.0	3.3	ppbv			
Trichlorotrifluoroethane (F-113)	9.1	91.4	9.1	91.4	10.0	0.0	ppbv			
Methylene Chloride	11.8	118	11.3	113	10.0	4.3	ppbv			
trans-1,2-Dichloroethene	8.8	87.8	8.7	87.1	10.0	0.8	ppbv			
1,1-Dichloroethane	10.4	104	10.6	106	10.0	1.7	ppbv			
2-Butanone (MEK)	10.8	108	10.9	109	10.0	0.9	ppbv			
cis-1,2-Dichloroethene	8.5	85.3	8.9	89.2	10.0	4.5	ppbv			
Chloroform	9.0	90.2	9.6	95.8	10.0	6.0	ppbv			
Tetrahydrofuran	11.6	116	12.3	123	10.0	6.0	ppbv			
1,2-Dichloroethane	10.6	106	10.3	103	10.0	3.3	ppbv			
Benzene	9.7	97.0	9.2	92.4	10.0	4.9	ppbv			
Trichloroethene	7.7	77.2	8.6	85.5	10.0	10.2	ppbv			
Toluene	8.3	82.6	9.1	91.2	10.0	9.9	ppbv			
Tetrachloroethene	8.1	80.8	8.8	88.1	10.0	8.6	ppbv			
Chlorobenzene	8.3	82.5	8.5	85.0	10.0	3.0	ppbv			
Ethylbenzene	8.3	82.8	9.0	90.2	10.0	8.6	ppbv			
m&p-Xylene	16.7	83.6	18.5	92.3	20.0	9.9	ppbv			
o-Xylene	8.0	79.8	9.0	90.3	10.0	12.3	ppbv			
1,2-Dichlorobenzene	8.9	88.8	9.4	93.5	10.0	5.2	ppbv			
Surr: 4-Bromofluorobenzene	11.1	111	11.4	114		2.9	%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:**	14-2017-2034
Lab Order:	18L012	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS011219 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	12/19/2018	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	12/19/2018	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	12/19/2018	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	12/19/2018	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	12/19/2018	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	12/19/2018	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	12/19/2018	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	12/19/2018	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	12/19/2018	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/19/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	12/19/2018	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	12/19/2018	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	12/19/2018	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	12/19/2018	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	12/19/2018	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	12/19/2018	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	12/19/2018	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	12/19/2018	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/19/2018	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	12/19/2018	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	12/19/2018	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	12/19/2018	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	12/19/2018	75-01-4
Surr: 4-Bromofluorobenzene	88.7	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:**	N/A
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L012	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 12/19/2018 Batch: MS011219 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)	9.4	94.2	10.0	99.5	10.0	5.5	ppbv			
Vinyl Chloride	9.5	95.1	9.9	99.1	10.0	4.1	ppbv			
Trichlorofluoromethane (F-11)	8.5	85.0	9.5	95.0	10.0	11.1	ppbv			
Acetone	9.4	94.0	10.3	103	10.0	9.0	ppbv			
1,1-Dichloroethene	8.9	89.2	10.0	100	10.0	11.8	ppbv			
Trichlorotrifluoroethane (F-113)	8.5	84.6	9.4	94.2	10.0	10.7	ppbv			
Methylene Chloride	8.6	86.1	9.4	93.5	10.0	8.2	ppbv			
trans-1,2-Dichloroethene	8.8	87.9	10.1	101	10.0	14.1	ppbv			
1,1-Dichloroethane	9.5	95.3	10.4	104	10.0	8.4	ppbv			
2-Butanone (MEK)	8.4	84.2	9.1	91.0	10.0	7.8	ppbv			
cis-1,2-Dichloroethene	8.9	88.8	9.9	98.9	10.0	10.8	ppbv			
Chloroform	8.8	88.2	9.6	96.3	10.0	8.8	ppbv			
Tetrahydrofuran	9.7	97.1	10.1	101	10.0	3.4	ppbv			
1,2-Dichloroethane	8.5	84.8	9.1	90.9	10.0	6.9	ppbv			
Benzene	8.7	87.4	9.6	95.9	10.0	9.3	ppbv			
Trichloroethene	8.7	87.1	9.9	99.4	10.0	13.2	ppbv			
Toluene	8.9	89.4	10.2	102	10.0	12.9	ppbv			
Tetrachloroethene	9.0	90.0	10.2	102	10.0	12.9	ppbv			
Chlorobenzene	8.8	88.2	9.5	94.6	10.0	7.0	ppbv			
Ethylbenzene	9.4	93.6	10.1	101	10.0	7.6	ppbv			
m&p-Xylene	19.2	95.8	20.5	103	20.0	6.9	ppbv			
o-Xylene	9.8	97.9	10.4	104	10.0	6.2	ppbv			
1,2-Dichlorobenzene	9.9	98.6	10.6	106	10.0	7.2	ppbv			
Surr: 4-Bromofluorobenzene	10.4	104	10.2	102		2.6	%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:	18L012	**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-181204-01	Working Std	AEL Dilution		TO-15 74 Analytes	10 ppbv	± 5%	3/4/2019
A-181204-02	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	3/4/2019

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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	18L012
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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

Analyses Requested

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	E2297	193	6 (1) bag	(1) 2 5	MW-10-SG-121018	12.10.18	1221	S	1	X									X
02	1850	035	6 (1) bag	(1) 2 5	MW-10S-SG-121018	↓	1237	↓	↓	X									X
03	E2295	047	6 (1) bag	(1) 2 5	MW-10M-SG-121018	↓	1302	↓	↓	X									X
04	E2282	031	6 (1) bag	(1) 2 5	MW-10D-SG-121018	↓	1321	↓	↓	X									X
05	E2406	189	6 (1) bag	(1) 2 5	MW-09-SG-121118	12.11.18	856	↓	↓	X									X
06	E2394	190	6 (1) bag	(1) 2 5	MW-09S-SG-121118	↓	912	↓	↓	X									X
07	1857	104	6 (1) bag	(1) 2 5	MW-09M-SG-121118	↓	936	↓	↓	X									X
08	E2348	021	6 (1) bag	(1) 2 5	MW-09D-SG-121118	↓	1007	↓	↓	X									X
09	1845	199	6 (1) bag	(1) 2 5	DUP01-121118	↓	1020	↓	↓	X									X
10	E2097	164	6 (1) bag	(1) 2 5	TSSV-6S-121118	↓	1046	↓	↓	X									X

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12.12.18	1547	E. Mill	Jamm Jones - Airtech

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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	18L012
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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~~ 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	E2412	023	6 (1) bag	(1) 2 5	DUP02-121118	12.11.18	1100	S	1	X									X
12	E2407	007	6 (1) bag	(1) 2 5	TSSV-6M-SG-121118		1116			X									X
13	1849	026	6 (1) bag	(1) 2 5	TSSV-6D-SG-121118		1138			X									X
14	1854	085	6 (1) bag	(1) 2 5	TSSV-7S-SG-121118		1241			X									X
15	1313	013	6 (1) bag	(1) 2 5	TSSV-7M-SG-121118		1306			X									X
16	E2408	107	6 (1) bag	(1) 2 5	TSSV-7D-SG-121118		1332			X									X
17	E2288	038	6 (1) bag	(1) 2 5	DUP03-121118		1355			X									X
18	E2392	001	6 (1) bag	(1) 2 5	TSSV-7PZ SG-121118		1436			X									X
19	1811	171	6 (1) bag	(1) 2 5	TSSV-3S-SG-121218	12.12.18	1008			X									X
20	1886	037	6 (1) bag	(1) 2 5	TSSV-3M-SG-121218		1031			X									X

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12.12.18	1547	E. Miller	James Jones - Airtech

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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	18L012
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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~~ (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	1808	135	6 (1) bag	(1) 2 5	TSSV-3PZ-S6-121218	12.12.18	1132	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:
12.12.18	1547	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: January 4, 2019

Client:	Natalie Chrisman	Work Order #:	18L021
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/18/2018

Dear Client:

Airtech Environmental Laboratories received sixteen (16) 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 4, 2019

Client:	Natalie Chrisman	Work Order #:	18L021
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/18/2018

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
18L021-01	TSSV-5PZ-SG-121318	TO-15	12/13/2018	836
18L021-02	TSSV-5D-SG-121318	TO-15	12/13/2018	902
18L021-03	TSSV-4S-SG-121318	TO-15	12/13/2018	1021
18L021-04	TSSV-4PZ-SG-121318	TO-15	12/13/2018	1126
18L021-05	TSSV-4D-SG-121318	TO-15	12/13/2018	1156
18L021-06	TSSV-1S-SG-121318	TO-15	12/13/2018	1231
18L021-07	TSSV-1M-SG-121318	TO-15	12/13/2018	1253
18L021-08	TSSV-1D-SG-121318	TO-15	12/13/2018	1316
18L021-09	TSSV-2S-SG-121418	TO-15	12/14/2019	911
18L021-10	TSSV-2M-SG-121418	TO-15	12/14/2019	935
18L021-11	DUP04-121418	TO-15	12/14/2019	943
18L021-12	TSSV-2D-SG-121418	TO-15	12/14/2019	1009
18L021-13	TSSV-2PZ-SG-121418	TO-15	12/14/2019	1031
18L021-14	SVE-1S-SG-121418	TO-15	12/14/2019	1105
18L021-15	SVE-1M-SG-121418	TO-15	12/14/2019	1129
18L021-16	SVE-1D-SG-121418	TO-15	12/14/2019	1146

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

Date: January 4, 2019

Client:	Natalie Chrisman	Work Order #:	18L021
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/18/18

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:	18L021	**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#
18L021-01	TSSV-5PZ-SG-121318	E2368	1811-10	29.0	14.03	194	1809-03
18L021-02	TSSV-5D-SG-121318	E2356	1811-10	29.0	14.01	117	1809-03
18L021-03	TSSV-4S-SG-121318	E2293	1811-10	29.0	13.95	068	1809-03
18L021-04	TSSV-4PZ-SG-121318	1843	1811-09	29.0	13.78	207	1809-03
18L021-05	TSSV-4D-SG-121318	E2362	1811-09	29.0	13.73	191	1809-03
18L021-06	TSSV-1S-SG-121318	E2385	1811-09	29.0	13.68	057	1809-03
18L021-07	TSSV-1M-SG-121318	E2353	1811-09	29.0	13.57	143	1809-03
18L021-08	TSSV-1D-SG-121318	1844	1811-09	29.0	13.52	012	1809-03
18L021-09	TSSV-2S-SG-121418	1803	1811-09	29.0	14.19	010	1809-03
18L021-10	TSSV-2M-SG-121418	1866	1811-09	29.0	14.15	009	1809-03
18L021-11	DUP04-121418	1859	1811-09	29.0	14.13	053	1809-03
18L021-12	TSSV-2D-SG-121418	1797	1811-09	29.0	13.89	123	1809-03
18L021-13	TSSV-2PZ-SG-121418	1871	1811-08	29.0	13.97	048	1809-03
18L021-14	SVE-1S-SG-121418	1826	1811-08	29.0	14.01	201	1809-03
18L021-15	SVE-1M-SG-121418	1810	1811-08	29.0	13.88	137	1809-03
18L021-16	SVE-1D-SG-121418	E2375	1811-07	29.0	13.86	150	1811-02

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-5PZ-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	< 10	10	< 40.5	40.5		20	12/21/2018	75-34-3
1,1-Dichloroethene	**61**	**10**	**244**	**39.7**		20	12/21/2018	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	12/21/2018	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	12/21/2018	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	12/21/2018	78-93-3
Acetone	< 100	100	< 238	238		20	12/21/2018	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	12/21/2018	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	12/21/2018	108-90-7
Chloroform	< 10	10	< 48.8	48.8		20	12/21/2018	67-66-3
cis-1,2-Dichloroethene	**27**	**10**	**105**	**39.6**		20	12/21/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 20	20	< 99.0	99.0		20	12/21/2018	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	12/21/2018	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	12/21/2018	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	12/21/2018	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	12/21/2018	95-47-6
Tetrachloroethene	**27**	**20**	**180**	**136**		20	12/21/2018	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	12/21/2018	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	12/21/2018	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	12/21/2018	156-60-5
Trichloroethene	**260**	**10**	**1,390**	**53.7**		20	12/21/2018	79-01-6
Trichlorofluoromethane(F-11)	< 10	10	< 56.2	56.2		20	12/21/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**28**	**10**	**218**	**76.6**		20	12/21/2018	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	12/21/2018	75-01-4
Surr: 4-Bromofluorobenzene	99.4	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:**	TSSV-5D-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	**746**	**100**	**3,020**	**405**		200	12/26/2018	75-34-3
1,1-Dichloroethene	**136**	**100**	**540**	**397**		200	12/26/2018	75-35-4
1,2-Dichlorobenzene	< 100	100	< 601	601		200	12/26/2018	95-50-1
1,2-Dichloroethane	< 100	100	< 405	405		200	12/26/2018	107-06-2
2-Butanone (MEK)	< 1,000	1,000	< 2,950	2,950		200	12/26/2018	78-93-3
Acetone	< 1,000	1,000	< 2,380	2,380		200	12/26/2018	67-64-1
Benzene	< 100	100	< 319	319		200	12/26/2018	71-43-2
Chlorobenzene	< 100	100	< 460	460		200	12/26/2018	108-90-7
Chloroform	< 100	100	< 488	488		200	12/26/2018	67-66-3
cis-1,2-Dichloroethene	< 100	100	< 396	396		200	12/26/2018	156-59-2
Dichlorodifluoromethane(F-12)	**6,370**	**200**	**31,500**	**990**		200	12/26/2018	75-71-8
Ethylbenzene	< 100	100	< 434	434		200	12/26/2018	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	12/26/2018	179601-23-1
Methylene chloride	< 400	400	< 1,390	1,390		200	12/26/2018	75-09-2
o-Xylene	< 100	100	< 434	434		200	12/26/2018	95-47-6
Tetrachloroethene	**694**	**200**	**4,710**	**1,360**		200	12/26/2018	127-18-4
Tetrahydrofuran	< 400	400	< 1,180	1,180		200	12/26/2018	109-99-9
Toluene	**360**	**100**	**1,360**	**377**		200	12/26/2018	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	12/26/2018	156-60-5
Trichloroethene	**488**	**100**	**2,620**	**537**		200	12/26/2018	79-01-6
Trichlorofluoromethane(F-11)	**2,630**	**100**	**14,800**	**562**		200	12/26/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**362**	**100**	**2,770**	**766**		200	12/26/2018	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	12/26/2018	75-01-4
Surr: 4-Bromofluorobenzene	91.9	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:**	TSSV-4S-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	12/26/2018	75-34-3
1,1-Dichloroethene	**29**	**2.5**	**116**	**9.93**		5	12/26/2018	75-35-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	12/26/2018	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	12/26/2018	107-06-2
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	12/26/2018	78-93-3
Acetone	< 25	25	< 59.5	59.5		5	12/26/2018	67-64-1
Benzene	< 2.5	2.5	< 7.98	7.98		5	12/26/2018	71-43-2
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	12/26/2018	108-90-7
Chloroform	< 2.5	2.5	< 12.2	12.2		5	12/26/2018	67-66-3
cis-1,2-Dichloroethene	**19**	**2.5**	**74.3**	**9.90**		5	12/26/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 5.0	5.0	< 24.8	24.8		5	12/26/2018	75-71-8
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	12/26/2018	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	12/26/2018	179601-23-1
Methylene chloride	< 10	10	< 34.7	34.7		5	12/26/2018	75-09-2
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	12/26/2018	95-47-6
Tetrachloroethene	**21**	**5.0**	**142**	**33.9**		5	12/26/2018	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5		5	12/26/2018	109-99-9
Toluene	< 2.5	2.5	< 9.43	9.43		5	12/26/2018	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	12/26/2018	156-60-5
Trichloroethene	**92**	**2.5**	**495**	**13.4**		5	12/26/2018	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	12/26/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**14**	**2.5**	**103**	**19.2**		5	12/26/2018	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	12/26/2018	75-01-4
Surr: 4-Bromofluorobenzene	97.3	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:**	TSSV-4PZ-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	< 2.5	2.5	< 10.1	10.1		5	12/26/2018	75-34-3
1,1-Dichloroethene	**14**	**2.5**	**53.6**	**9.93**		5	12/26/2018	75-35-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	12/26/2018	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	12/26/2018	107-06-2
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	12/26/2018	78-93-3
Acetone	< 25	25	< 59.5	59.5		5	12/26/2018	67-64-1
Benzene	< 2.5	2.5	< 7.98	7.98		5	12/26/2018	71-43-2
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	12/26/2018	108-90-7
Chloroform	< 2.5	2.5	< 12.2	12.2		5	12/26/2018	67-66-3
cis-1,2-Dichloroethene	**23**	**2.5**	**92.7**	**9.90**		5	12/26/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 5.0	5.0	< 24.8	24.8		5	12/26/2018	75-71-8
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	12/26/2018	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	12/26/2018	179601-23-1
Methylene chloride	< 10	10	< 34.7	34.7		5	12/26/2018	75-09-2
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	12/26/2018	95-47-6
Tetrachloroethene	**24**	**5.0**	**160**	**33.9**		5	12/26/2018	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5		5	12/26/2018	109-99-9
Toluene	< 2.5	2.5	< 9.43	9.43		5	12/26/2018	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	12/26/2018	156-60-5
Trichloroethene	**126**	**2.5**	**677**	**13.4**		5	12/26/2018	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	12/26/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**22**	**2.5**	**172**	**19.2**		5	12/26/2018	76-13-1
Vinyl chloride	< 2.5	2.5	< 6.40	6.40		5	12/26/2018	75-01-4
Surr: 4-Bromofluorobenzene	95.5	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:**	TSSV-4D-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	< 50	50	< 203	203	L5	100	12/28/2018	75-34-3
1,1-Dichloroethene	**62**	**50**	**246**	**199**		100	12/28/2018	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	12/28/2018	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	12/28/2018	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	12/28/2018	78-93-3
Acetone	< 500	500	< 1,190	1,190	L5	100	12/28/2018	67-64-1
Benzene	< 50	50	< 160	160		100	12/28/2018	71-43-2
Chlorobenzene	< 50	50	< 230	230		100	12/28/2018	108-90-7
Chloroform	< 50	50	< 244	244		100	12/28/2018	67-66-3
cis-1,2-Dichloroethene	**198**	**50**	**784**	**198**		100	12/28/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 100	100	< 495	495		100	12/28/2018	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	12/28/2018	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	12/28/2018	179601-23-1
Methylene chloride	< 200	200	< 694	694		100	12/28/2018	75-09-2
o-Xylene	< 50	50	< 217	217		100	12/28/2018	95-47-6
Tetrachloroethene	**156**	**100**	**1,060**	**678**		100	12/28/2018	127-18-4
Tetrahydrofuran	< 200	200	< 590	590	L5	100	12/28/2018	109-99-9
Toluene	< 50	50	< 189	189		100	12/28/2018	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	12/28/2018	156-60-5
Trichloroethene	**2,370**	**50**	**12,700**	**269**		100	12/28/2018	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	12/28/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**317**	**50**	**2,430**	**383**		100	12/28/2018	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	12/28/2018	75-01-4
Surr: 4-Bromofluorobenzene	95.9	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:**	TSSV-1S-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	< 50	50	< 203	203	L5	100	12/28/2018	75-34-3
1,1-Dichloroethene	< 50	50	< 199	199		100	12/28/2018	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	12/28/2018	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	12/28/2018	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	12/28/2018	78-93-3
Acetone	< 500	500	< 1,190	1,190	L5	100	12/28/2018	67-64-1
Benzene	< 50	50	< 160	160		100	12/28/2018	71-43-2
Chlorobenzene	< 50	50	< 230	230		100	12/28/2018	108-90-7
Chloroform	< 50	50	< 244	244		100	12/28/2018	67-66-3
cis-1,2-Dichloroethene	**63**	**50**	**249**	**198**		100	12/28/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 100	100	< 495	495		100	12/28/2018	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	12/28/2018	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	12/28/2018	179601-23-1
Methylene chloride	< 200	200	< 694	694		100	12/28/2018	75-09-2
o-Xylene	< 50	50	< 217	217		100	12/28/2018	95-47-6
Tetrachloroethene	**161**	**100**	**1,090**	**678**		100	12/28/2018	127-18-4
Tetrahydrofuran	< 200	200	< 590	590	L5	100	12/28/2018	109-99-9
Toluene	< 50	50	< 189	189		100	12/28/2018	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	12/28/2018	156-60-5
Trichloroethene	**2,180**	**50**	**11,700**	**269**		100	12/28/2018	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	12/28/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**134**	**50**	**1,030**	**383**		100	12/28/2018	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	12/28/2018	75-01-4
Surr: 4-Bromofluorobenzene	101	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:**	TSSV-1M-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	< 100	100	< 405	405	L5	200	12/27/2018	75-34-3
1,1-Dichloroethene	< 100	100	< 397	397		200	12/27/2018	75-35-4
1,2-Dichlorobenzene	< 100	100	< 601	601		200	12/27/2018	95-50-1
1,2-Dichloroethane	< 100	100	< 405	405		200	12/27/2018	107-06-2
2-Butanone (MEK)	< 1,000	1,000	< 2,950	2,950		200	12/27/2018	78-93-3
Acetone	< 1,000	1,000	< 2,380	2,380	L5	200	12/27/2018	67-64-1
Benzene	< 100	100	< 319	319		200	12/27/2018	71-43-2
Chlorobenzene	**1,930**	**100**	**8,880**	**460**		200	12/27/2018	108-90-7
Chloroform	**258**	**100**	**1,260**	**488**		200	12/27/2018	67-66-3
cis-1,2-Dichloroethene	**144**	**100**	**570**	**396**		200	12/27/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 200	200	< 990	990		200	12/27/2018	75-71-8
Ethylbenzene	< 100	100	< 434	434		200	12/27/2018	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	12/27/2018	179601-23-1
Methylene chloride	< 400	400	< 1,390	1,390		200	12/27/2018	75-09-2
o-Xylene	< 100	100	< 434	434		200	12/27/2018	95-47-6
Tetrachloroethene	**342**	**200**	**2,320**	**1,360**		200	12/27/2018	127-18-4
Tetrahydrofuran	< 400	400	< 1,180	1,180	L5	200	12/27/2018	109-99-9
Toluene	< 100	100	< 377	377		200	12/27/2018	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	12/27/2018	156-60-5
Trichloroethene	**4,470**	**100**	**24,000**	**537**		200	12/27/2018	79-01-6
Trichlorofluoromethane(F-11)	< 100	100	< 562	562		200	12/27/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**116**	**100**	**889**	**766**		200	12/27/2018	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	12/27/2018	75-01-4
Surr: 4-Bromofluorobenzene	102	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:**	TSSV-1D-SG-121318
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/13/2018
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	< 250	250	< 1,010	1,010	L5	500	12/28/2018	75-34-3
1,1-Dichloroethene	**410**	**250**	**1,630**	**993**		500	12/28/2018	75-35-4
1,2-Dichlorobenzene	< 250	250	< 1,500	1,500		500	12/28/2018	95-50-1
1,2-Dichloroethane	< 250	250	< 1,010	1,010		500	12/28/2018	107-06-2
2-Butanone (MEK)	< 2,500	2,500	< 7,380	7,380		500	12/28/2018	78-93-3
Acetone	< 2,500	2,500	< 5,950	5,950	L5	500	12/28/2018	67-64-1
Benzene	< 250	250	< 798	798		500	12/28/2018	71-43-2
Chlorobenzene	**590**	**250**	**2,710**	**1,150**		500	12/28/2018	108-90-7
Chloroform	**440**	**250**	**2,150**	**1,220**		500	12/28/2018	67-66-3
cis-1,2-Dichloroethene	**1,740**	**250**	**6,890**	**990**		500	12/28/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 500	500	< 2,480	2,480		500	12/28/2018	75-71-8
Ethylbenzene	< 250	250	< 1,090	1,090		500	12/28/2018	100-41-4
m&p-Xylene	< 500	500	< 2,170	2,170		500	12/28/2018	179601-23-1
Methylene chloride	< 1,000	1,000	< 3,470	3,470		500	12/28/2018	75-09-2
o-Xylene	< 250	250	< 1,090	1,090		500	12/28/2018	95-47-6
Tetrachloroethene	**705**	**500**	**4,780**	**3,390**		500	12/28/2018	127-18-4
Tetrahydrofuran	< 1,000	1,000	< 2,950	2,950	L5	500	12/28/2018	109-99-9
Toluene	< 250	250	< 943	943		500	12/28/2018	108-88-3
trans-1,2-Dichloroethene	< 250	250	< 990	990		500	12/28/2018	156-60-5
Trichloroethene	**15,000**	**250**	**80,600**	**1,340**		500	12/28/2018	79-01-6
Trichlorofluoromethane(F-11)	< 250	250	< 1,410	1,410		500	12/28/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**1,390**	**250**	**10,600**	**1,920**		500	12/28/2018	76-13-1
Vinyl chloride	< 250	250	< 640	640		500	12/28/2018	75-01-4
Surr: 4-Bromofluorobenzene	97.7	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:**	TSSV-2S-SG-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	< 25	25	< 101	101		50	1/3/2019	75-34-3
1,1-Dichloroethene	< 25	25	< 99.3	99.3		50	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 25	25	< 150	150		50	1/3/2019	95-50-1
1,2-Dichloroethane	< 25	25	< 101	101		50	1/3/2019	107-06-2
2-Butanone (MEK)	< 250	250	< 738	738		50	1/3/2019	78-93-3
Acetone	< 250	250	< 595	595		50	1/3/2019	67-64-1
Benzene	< 25	25	< 79.8	79.8		50	1/3/2019	71-43-2
Chlorobenzene	< 25	25	< 115	115		50	1/3/2019	108-90-7
Chloroform	< 25	25	< 122	122		50	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 25	25	< 99.0	99.0		50	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 50	50	< 248	248		50	1/3/2019	75-71-8
Ethylbenzene	< 25	25	< 109	109		50	1/3/2019	100-41-4
m&p-Xylene	< 50	50	< 217	217		50	1/3/2019	179601-23-1
Methylene chloride	< 100	100	< 347	347		50	1/3/2019	75-09-2
o-Xylene	< 25	25	< 109	109		50	1/3/2019	95-47-6
Tetrachloroethene	**201**	**50**	**1,360**	**339**		50	1/3/2019	127-18-4
Tetrahydrofuran	**1,620**	**100**	**4,780**	**295**		50	1/3/2019	109-99-9
Toluene	< 25	25	< 94.3	94.3		50	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 25	25	< 99.0	99.0		50	1/3/2019	156-60-5
Trichloroethene	**1,640**	**25**	**8,810**	**134**		50	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 25	25	< 141	141		50	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**33**	**25**	**253**	**192**		50	1/3/2019	76-13-1
Vinyl chloride	< 25	25	< 64.0	64.0		50	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	91.3	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:**	TSSV-2M-SG-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	< 1.0	1.0	< 4.05	4.05		2	1/3/2019	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	1/3/2019	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	1/3/2019	107-06-2
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	1/3/2019	78-93-3
Acetone	< 10	10	< 23.8	23.8		2	1/3/2019	67-64-1
Benzene	**1.8**	**1.0**	**5.81**	**3.19**		2	1/3/2019	71-43-2
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	1/3/2019	108-90-7
Chloroform	< 1.0	1.0	< 4.88	4.88		2	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	1/3/2019	75-71-8
Ethylbenzene	**1.9**	**1.0**	**8.16**	**4.34**		2	1/3/2019	100-41-4
m&p-Xylene	**4.3**	**2.0**	**18.7**	**8.68**		2	1/3/2019	179601-23-1
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	1/3/2019	75-09-2
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	1/3/2019	95-47-6
Tetrachloroethene	< 2.0	2.0	< 13.6	13.6		2	1/3/2019	127-18-4
Tetrahydrofuran	**67**	**4.0**	**198**	**11.8**		2	1/3/2019	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/3/2019	156-60-5
Trichloroethene	**7.4**	**1.0**	**39.7**	**5.37**		2	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	1/3/2019	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	94.1	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:**	DUP04-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	1/3/2019	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 1.0	1.0	< 6.01	6.01		2	1/3/2019	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	1/3/2019	107-06-2
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	1/3/2019	78-93-3
Acetone	< 10	10	< 23.8	23.8		2	1/3/2019	67-64-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	1/3/2019	71-43-2
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	1/3/2019	108-90-7
Chloroform	< 1.0	1.0	< 4.88	4.88		2	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	1/3/2019	75-71-8
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	1/3/2019	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	1/3/2019	179601-23-1
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	1/3/2019	75-09-2
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	1/3/2019	95-47-6
Tetrachloroethene	< 2.0	2.0	< 13.6	13.6		2	1/3/2019	127-18-4
Tetrahydrofuran	**82**	**4.0**	**243**	**11.8**		2	1/3/2019	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/3/2019	156-60-5
Trichloroethene	**8.2**	**1.0**	**44.1**	**5.37**		2	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	1/3/2019	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	1/3/2019	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:**	TSSV-2D-SG-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	< 500	500	< 2,030	2,030	L5	1,000	12/27/2018	75-34-3
1,1-Dichloroethene	< 500	500	< 1,990	1,990		1,000	12/27/2018	75-35-4
1,2-Dichlorobenzene	< 500	500	< 3,010	3,010		1,000	12/27/2018	95-50-1
1,2-Dichloroethane	< 500	500	< 2,030	2,030		1,000	12/27/2018	107-06-2
2-Butanone (MEK)	< 5,000	5,000	< 14,800	14,800		1,000	12/27/2018	78-93-3
Acetone	< 5,000	5,000	< 11,900	11,900	L5	1,000	12/27/2018	67-64-1
Benzene	< 500	500	< 1,600	1,600		1,000	12/27/2018	71-43-2
Chlorobenzene	< 500	500	< 2,300	2,300		1,000	12/27/2018	108-90-7
Chloroform	< 500	500	< 2,440	2,440		1,000	12/27/2018	67-66-3
cis-1,2-Dichloroethene	**2,360**	**500**	**9,350**	**1,980**		1,000	12/27/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 1,000	1,000	< 4,950	4,950		1,000	12/27/2018	75-71-8
Ethylbenzene	< 500	500	< 2,170	2,170		1,000	12/27/2018	100-41-4
m&p-Xylene	< 1,000	1,000	< 4,340	4,340		1,000	12/27/2018	179601-23-1
Methylene chloride	< 2,000	2,000	< 6,940	6,940		1,000	12/27/2018	75-09-2
o-Xylene	< 500	500	< 2,170	2,170		1,000	12/27/2018	95-47-6
Tetrachloroethene	< 1,000	1,000	< 6,780	6,780		1,000	12/27/2018	127-18-4
Tetrahydrofuran	< 2,000	2,000	< 5,900	5,900	L5	1,000	12/27/2018	109-99-9
Toluene	< 500	500	< 1,890	1,890		1,000	12/27/2018	108-88-3
trans-1,2-Dichloroethene	< 500	500	< 1,980	1,980		1,000	12/27/2018	156-60-5
Trichloroethene	**11,900**	**500**	**63,900**	**2,690**		1,000	12/27/2018	79-01-6
Trichlorofluoromethane(F-11)	< 500	500	< 2,810	2,810		1,000	12/27/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**530**	**500**	**4,060**	**3,830**		1,000	12/27/2018	76-13-1
Vinyl chloride	< 500	500	< 1,280	1,280		1,000	12/27/2018	75-01-4
Surr: 4-Bromofluorobenzene	95.5	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:**	TSSV-2PZ-SG-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	< 500	500	< 2,030	2,030		1,000	1/3/2019	75-34-3
1,1-Dichloroethene	**600**	**500**	**2,380**	**1,990**		1,000	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 500	500	< 3,010	3,010		1,000	1/3/2019	95-50-1
1,2-Dichloroethane	< 500	500	< 2,030	2,030		1,000	1/3/2019	107-06-2
2-Butanone (MEK)	< 5,000	5,000	< 14,800	14,800		1,000	1/3/2019	78-93-3
Acetone	< 5,000	5,000	< 11,900	11,900		1,000	1/3/2019	67-64-1
Benzene	< 500	500	< 1,600	1,600		1,000	1/3/2019	71-43-2
Chlorobenzene	< 500	500	< 2,300	2,300		1,000	1/3/2019	108-90-7
Chloroform	< 500	500	< 2,440	2,440		1,000	1/3/2019	67-66-3
cis-1,2-Dichloroethene	**29,700**	**500**	**118,000**	**1,980**		1,000	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 1,000	1,000	< 4,950	4,950		1,000	1/3/2019	75-71-8
Ethylbenzene	< 500	500	< 2,170	2,170		1,000	1/3/2019	100-41-4
m&p-Xylene	< 1,000	1,000	< 4,340	4,340		1,000	1/3/2019	179601-23-1
Methylene chloride	< 2,000	2,000	< 6,940	6,940		1,000	1/3/2019	75-09-2
o-Xylene	< 500	500	< 2,170	2,170		1,000	1/3/2019	95-47-6
Tetrachloroethene	< 1,000	1,000	< 6,780	6,780		1,000	1/3/2019	127-18-4
Tetrahydrofuran	< 2,000	2,000	< 5,900	5,900		1,000	1/3/2019	109-99-9
Toluene	< 500	500	< 1,890	1,890		1,000	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 500	500	< 1,980	1,980		1,000	1/3/2019	156-60-5
Trichloroethene	**13,900**	**500**	**74,600**	**2,690**		1,000	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 500	500	< 2,810	2,810		1,000	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 500	500	< 3,830	3,830		1,000	1/3/2019	76-13-1
Vinyl chloride	< 500	500	< 1,280	1,280		1,000	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	86.5	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:**	SVE-1S-SG-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	< 50	50	< 203	203	L5	100	12/27/2018	75-34-3
1,1-Dichloroethene	< 50	50	< 199	199		100	12/27/2018	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	12/27/2018	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	12/27/2018	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	12/27/2018	78-93-3
Acetone	< 500	500	< 1,190	1,190	L5	100	12/27/2018	67-64-1
Benzene	< 50	50	< 160	160		100	12/27/2018	71-43-2
Chlorobenzene	**165**	**50**	**759**	**230**		100	12/27/2018	108-90-7
Chloroform	**71**	**50**	**346**	**244**		100	12/27/2018	67-66-3
cis-1,2-Dichloroethene	**169**	**50**	**669**	**198**		100	12/27/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 100	100	< 495	495		100	12/27/2018	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	12/27/2018	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	12/27/2018	179601-23-1
Methylene chloride	< 200	200	< 694	694		100	12/27/2018	75-09-2
o-Xylene	< 50	50	< 217	217		100	12/27/2018	95-47-6
Tetrachloroethene	**142**	**100**	**963**	**678**		100	12/27/2018	127-18-4
Tetrahydrofuran	< 200	200	< 590	590	L5	100	12/27/2018	109-99-9
Toluene	< 50	50	< 189	189		100	12/27/2018	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	12/27/2018	156-60-5
Trichloroethene	**2,110**	**50**	**11,300**	**269**		100	12/27/2018	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	12/27/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**90**	**50**	**689**	**383**		100	12/27/2018	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	12/27/2018	75-01-4
Surr: 4-Bromofluorobenzene	96.1	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:**	SVE-1M-SG-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	L5	100	12/27/2018	75-34-3
1,1-Dichloroethene	< 50	50	< 199	199		100	12/27/2018	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	12/27/2018	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	12/27/2018	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	12/27/2018	78-93-3
Acetone	< 500	500	< 1,190	1,190	L5	100	12/27/2018	67-64-1
Benzene	< 50	50	< 160	160		100	12/27/2018	71-43-2
Chlorobenzene	**319**	**50**	**1,470**	**230**		100	12/27/2018	108-90-7
Chloroform	**56**	**50**	**273**	**244**		100	12/27/2018	67-66-3
cis-1,2-Dichloroethene	**172**	**50**	**681**	**198**		100	12/27/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 100	100	< 495	495		100	12/27/2018	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	12/27/2018	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	12/27/2018	179601-23-1
Methylene chloride	< 200	200	< 694	694		100	12/27/2018	75-09-2
o-Xylene	< 50	50	< 217	217		100	12/27/2018	95-47-6
Tetrachloroethene	**142**	**100**	**963**	**678**		100	12/27/2018	127-18-4
Tetrahydrofuran	< 200	200	< 590	590	L5	100	12/27/2018	109-99-9
Toluene	< 50	50	< 189	189		100	12/27/2018	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	12/27/2018	156-60-5
Trichloroethene	**1,780**	**50**	**9,560**	**269**		100	12/27/2018	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	12/27/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**74**	**50**	**567**	**383**		100	12/27/2018	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	12/27/2018	75-01-4
Surr: 4-Bromofluorobenzene	99.4	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:**	SVE-1D-SG-121418
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	12/14/2019
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	L5	100	12/27/2018	75-34-3
1,1-Dichloroethene	< 50	50	< 199	199		100	12/27/2018	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	12/27/2018	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	12/27/2018	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	12/27/2018	78-93-3
Acetone	< 500	500	< 1,190	1,190	L5	100	12/27/2018	67-64-1
Benzene	< 50	50	< 160	160		100	12/27/2018	71-43-2
Chlorobenzene	**384**	**50**	**1,770**	**230**		100	12/27/2018	108-90-7
Chloroform	**56**	**50**	**273**	**244**		100	12/27/2018	67-66-3
cis-1,2-Dichloroethene	**121**	**50**	**479**	**198**		100	12/27/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 100	100	< 495	495		100	12/27/2018	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	12/27/2018	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	12/27/2018	179601-23-1
Methylene chloride	< 200	200	< 694	694		100	12/27/2018	75-09-2
o-Xylene	< 50	50	< 217	217		100	12/27/2018	95-47-6
Tetrachloroethene	**168**	**100**	**1,140**	**678**		100	12/27/2018	127-18-4
Tetrahydrofuran	< 200	200	< 590	590	L5	100	12/27/2018	109-99-9
Toluene	< 50	50	< 189	189		100	12/27/2018	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	12/27/2018	156-60-5
Trichloroethene	**1,900**	**50**	**10,200**	**269**		100	12/27/2018	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	12/27/2018	75-69-4
Trichlorotrifluoroethane(F-113)	**98**	**50**	**751**	**383**		100	12/27/2018	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	12/27/2018	75-01-4
Surr: 4-Bromofluorobenzene	98.5	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:	18L021	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS011221 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	12/21/2018	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	12/21/2018	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	12/21/2018	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	12/21/2018	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	12/21/2018	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	12/21/2018	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	12/21/2018	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	12/21/2018	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	12/21/2018	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/21/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	12/21/2018	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	12/21/2018	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	12/21/2018	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	12/21/2018	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	12/21/2018	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	12/21/2018	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	12/21/2018	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	12/21/2018	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/21/2018	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	12/21/2018	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	12/21/2018	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	12/21/2018	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	12/21/2018	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:**	N/A
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 12/21/2018 Batch: MS011221 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)	10.8	108	11.0	110	10.0	1.7	ppbv			
Vinyl Chloride	11.0	110	10.6	106	10.0	4.2	ppbv			
Trichlorofluoromethane (F-11)	10.3	103	10.7	107	10.0	3.5	ppbv			
Acetone	11.1	111	11.7	117	10.0	5.5	ppbv			
1,1-Dichloroethene	11.3	113	11.3	113	10.0	0.3	ppbv			
Trichlorotrifluoroethane (F-113)	10.1	101	10.5	105	10.0	3.9	ppbv			
Methylene Chloride	10.9	109	11.0	110	10.0	0.5	ppbv			
trans-1,2-Dichloroethene	10.2	102	10.8	108	10.0	5.9	ppbv			
1,1-Dichloroethane	11.6	116	11.7	117	10.0	0.9	ppbv			
2-Butanone (MEK)	11.0	110	10.6	106	10.0	3.9	ppbv			
cis-1,2-Dichloroethene	10.4	104	10.4	104	10.0	0.3	ppbv			
Chloroform	10.7	107	10.7	107	10.0	0.2	ppbv			
Tetrahydrofuran	12.6	126	12.1	121	10.0	3.8	ppbv			
1,2-Dichloroethane	10.7	107	10.7	107	10.0	0.0	ppbv			
Benzene	11.0	110	10.8	108	10.0	1.5	ppbv			
Trichloroethene	10.6	106	10.4	104	10.0	2.1	ppbv			
Toluene	11.7	117	11.4	114	10.0	2.5	ppbv			
Tetrachloroethene	10.9	109	10.4	104	10.0	4.1	ppbv			
Chlorobenzene	10.6	106	10.6	106	10.0	0.6	ppbv			
Ethylbenzene	11.1	111	11.0	110	10.0	1.0	ppbv			
m&p-Xylene	22.9	114	22.7	114	20.0	0.8	ppbv			
o-Xylene	11.4	114	11.4	114	10.0	0.1	ppbv			
1,2-Dichlorobenzene	11.4	114	11.3	113	10.0	0.8	ppbv			
Surr: 4-Bromofluorobenzene	10.8	108	10.7	107		0.1	%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:**	14-2017-2034
Lab Order:	18L021	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS011226 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	12/26/2019	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	12/26/2019	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	12/26/2019	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	12/26/2019	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	12/26/2019	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	12/26/2019	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	12/26/2019	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	12/26/2019	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	12/26/2019	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/26/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	12/26/2019	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	12/26/2019	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	12/26/2019	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	12/26/2019	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	12/26/2019	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	12/26/2019	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	12/26/2019	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	12/26/2019	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/26/2019	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	12/26/2019	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	12/26/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	12/26/2019	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	12/26/2019	75-01-4
Surr: 4-Bromofluorobenzene	90.3	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:**	14-2017-2034
Lab Order:	18L021	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 12/26/2018 Batch: MS011226 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)	9.3	92.6	9.7	96.7	10.0	4.3	ppbv			
Vinyl Chloride	9.8	98.1	9.6	95.6	10.0	2.6	ppbv			
Trichlorofluoromethane (F-11)	9.0	90.2	9.7	97.3	10.0	7.6	ppbv			
Acetone	9.9	99.4	11.4	114	10.0	13.6	ppbv			
1,1-Dichloroethene	10.0	100	10.7	107	10.0	6.9	ppbv			
Trichlorotrifluoroethane (F-113)	9.2	91.6	9.8	97.7	10.0	6.4	ppbv			
Methylene Chloride	10.1	101	10.4	104	10.0	2.7	ppbv			
trans-1,2-Dichloroethene	9.4	93.7	10.4	104	10.0	10.1	ppbv			
1,1-Dichloroethane	10.4	104	11.5	115	10.0	9.4	ppbv			
2-Butanone (MEK)	9.7	97.3	10.9	109	10.0	11.5	ppbv			
cis-1,2-Dichloroethene	9.1	91.2	9.9	99.4	10.0	8.6	ppbv			
Chloroform	9.2	92.4	9.9	98.8	10.0	6.7	ppbv			
Tetrahydrofuran	11.0	110	12.1	121	10.0	9.3	ppbv			
1,2-Dichloroethane	9.3	93.4	10.0	100	10.0	7.2	ppbv			
Benzene	9.8	97.9	10.8	108	10.0	9.8	ppbv			
Trichloroethene	8.8	88.1	9.1	90.7	10.0	2.9	ppbv			
Toluene	10.0	100	10.6	106	10.0	5.6	ppbv			
Tetrachloroethene	9.1	91.2	9.2	92.0	10.0	0.9	ppbv			
Chlorobenzene	9.2	92.2	9.5	95.1	10.0	3.1	ppbv			
Ethylbenzene	9.6	96.2	10.4	104	10.0	7.6	ppbv			
m&p-Xylene	20.2	101	20.6	103	20.0	2.1	ppbv			
o-Xylene	10.2	102	10.3	103	10.0	0.2	ppbv			
1,2-Dichlorobenzene	10.2	102	10.3	103	10.0	1.4	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:**	N/A
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L021	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS011227 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	12/27/2018	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	12/27/2018	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	12/27/2018	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	12/27/2018	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	12/27/2018	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	12/27/2018	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	12/27/2018	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	12/27/2018	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	12/27/2018	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/27/2018	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	12/27/2018	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	12/27/2018	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	12/27/2018	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	12/27/2018	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	12/27/2018	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	12/27/2018	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	12/27/2018	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	12/27/2018	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	12/27/2018	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	12/27/2018	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	12/27/2018	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	12/27/2018	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	12/27/2018	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:**	14-2017-2034
Lab Order:	18L021	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 12/27/2018 Batch: MS011227 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)	10.8	108	11.3	113	10.0	5.2	ppbv			
Vinyl Chloride	11.1	111	10.9	109	10.0	1.5	ppbv			
Trichlorofluoromethane (F-11)	10.5	105	11.2	112	10.0	6.7	ppbv			
Acetone	13.8	138	14.0	140	10.0	1.7	ppbv	L5	L5	
1,1-Dichloroethene	11.8	118	12.6	126	10.0	7.0	ppbv			
Trichlorotrifluoroethane (F-113)	10.4	104	11.1	111	10.0	6.5	ppbv			
Methylene Chloride	11.3	113	12.3	123	10.0	8.2	ppbv			
trans-1,2-Dichloroethene	10.4	104	12.1	121	10.0	14.3	ppbv			
1,1-Dichloroethane	12.5	125	13.5	135	10.0	8.2	ppbv		L5	
2-Butanone (MEK)	12.0	120	13.0	130	10.0	7.7	ppbv			
cis-1,2-Dichloroethene	10.5	105	11.5	115	10.0	9.0	ppbv			
Chloroform	11.2	112	12.0	120	10.0	7.1	ppbv			
Tetrahydrofuran	13.6	136	15.5	155	10.0	13.1	ppbv	L5	L5	
1,2-Dichloroethane	11.7	117	12.4	124	10.0	5.8	ppbv			
Benzene	11.8	118	12.9	129	10.0	8.4	ppbv			
Trichloroethene	9.5	95.1	10.3	103	10.0	8.3	ppbv			
Toluene	11.5	115	12.3	123	10.0	6.6	ppbv			
Tetrachloroethene	9.8	97.6	10.6	106	10.0	8.3	ppbv			
Chlorobenzene	10.6	106	11.5	115	10.0	8.2	ppbv			
Ethylbenzene	11.3	113	12.0	120	10.0	6.6	ppbv			
m&p-Xylene	23.2	116	24.3	122	20.0	4.5	ppbv			
o-Xylene	11.2	112	12.2	122	10.0	9.1	ppbv			
1,2-Dichlorobenzene	11.2	112	12.2	122	10.0	9.1	ppbv			
Surr: 4-Bromofluorobenzene	11.1	111	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:**	14-2017-2034
Lab Order:	18L021	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010103 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	1/3/2019	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	1/3/2019	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	1/3/2019	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	1/3/2019	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	1/3/2019	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	1/3/2019	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	1/3/2019	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	1/3/2019	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	1/3/2019	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	1/3/2019	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	1/3/2019	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	1/3/2019	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	1/3/2019	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	1/3/2019	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/3/2019	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	1/3/2019	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	90.0	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:**	14-2017-2034
Lab Order:	18L021	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 1/3/2019 Batch: MS010103 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)	9.7	96.9	9.7	96.5	10.0	0.4	ppbv			
Vinyl Chloride	10.0	100	9.1	91.0	10.0	9.6	ppbv			
Trichlorofluoromethane (F-11)	8.6	86.3	8.8	87.5	10.0	1.4	ppbv			
Acetone	9.5	95.3	10.3	103	10.0	8.0	ppbv			
1,1-Dichloroethene	9.7	97.2	10.0	99.7	10.0	2.5	ppbv			
Trichlorotrifluoroethane (F-113)	8.6	85.8	8.8	88.4	10.0	3.0	ppbv			
Methylene Chloride	9.5	95.3	9.8	98.1	10.0	2.9	ppbv			
trans-1,2-Dichloroethene	8.8	88.1	9.1	91.1	10.0	3.3	ppbv			
1,1-Dichloroethane	10.5	105	10.4	104	10.0	1.0	ppbv			
2-Butanone (MEK)	9.4	93.5	9.3	92.8	10.0	0.8	ppbv			
cis-1,2-Dichloroethene	8.8	87.8	9.3	93.0	10.0	5.8	ppbv			
Chloroform	9.2	91.5	9.2	92.1	10.0	0.7	ppbv			
Tetrahydrofuran	11.1	111	11.6	116	10.0	4.1	ppbv			
1,2-Dichloroethane	9.3	92.7	8.9	89.4	10.0	3.6	ppbv			
Benzene	9.3	92.6	9.5	94.6	10.0	2.1	ppbv			
Trichloroethene	9.0	90.3	9.3	92.5	10.0	2.4	ppbv			
Toluene	9.7	97.0	10.3	103	10.0	5.7	ppbv			
Tetrachloroethene	9.8	97.5	9.7	97.2	10.0	0.3	ppbv			
Chlorobenzene	9.1	90.9	9.2	92.2	10.0	1.4	ppbv			
Ethylbenzene	9.9	98.5	10.0	100	10.0	1.5	ppbv			
m&p-Xylene	20.5	102	20.0	100	20.0	2.1	ppbv			
o-Xylene	9.8	98.4	9.7	97.4	10.0	1.0	ppbv			
1,2-Dichlorobenzene	10.7	107	10.7	107	10.0	0.1	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:	18L021	**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-181204-01	Working Std	AEL Dilution		TO-15 74 Analytes	10 ppbv	± 5%	3/4/2019
A-181204-02	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	3/4/2019

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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	18L021
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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

Analyses Requested

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	E2368	194	6 (1) bag	(1) 2 5	TSSV-5AZ-SG-121318	12.13.18	836	S	1	X									X
02	E2356	117	6 (1) bag	(1) 2 5	TSSV-5D-SG-121318		902			X									X
03	E2293	068	6 (1) bag	(1) 2 5	TSSV-4S-SG-121318		1021			X									X
04	1843	207	6 (1) bag	(1) 2 5	TSSV-4AZ-SG-121318		1126			X									X
05	E2362	191	6 (1) bag	(1) 2 5	TSSV-4D-SG-121318		1156			X									X
06	E2385	057	6 (1) bag	(1) 2 5	TSSV-1S-SG-121318		1231			X									X
07	E2353	143	6 (1) bag	(1) 2 5	TSSV-1M-SG-121318		1253			X									X
08	1844	012	6 (1) bag	(1) 2 5	TSSV-1D-SG-121318		1316			X									X
09	1803	010	6 (1) bag	(1) 2 5	TSSV-2S-SG-121418	12.14.18	911			X									X
10	1866	009	6 (1) bag	(1) 2 5	TSSV-2M-SG-121418		935			X									X

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12.18.18	838	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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	18L021
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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~~ (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	1859	053	6 1 bag	1 2 5	DUP04-121418	12.14.18	943	S	1	X									X
12	1797	123	6 1 bag	1 2 5	TSSV-2D-SG-121418	↓	1009	↓	↓	X									X
13	1871	048	6 1 bag	1 2 5	TSSV-2AZ-SG-121418	↓	1031	↓	↓	X									X
14	1826	201	6 1 bag	1 2 5	SVE-1S-SG-121418	↓	1105	↓	↓	X									X
15	1810	137	6 1 bag	1 2 5	SVE-1M-SG-121418	↓	1129	↓	↓	X									X
16	E2375	150	6 1 bag	1 2 5	SVE-1D-SG-121418	↓	1146	↓	↓	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															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12.18.18	838	[signature]	[signature]

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

Date: January 11, 2019

Client:	Natalie Chrisman	Work Order #:	18L029
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/21/2018

Dear Client:

Airtech Environmental Laboratories received sixteen (16) samples for analysis.

All analyses met laboratory QA/QC with any exceptions addressed in the Case Narrative.

If you have any questions or concerns regarding your samples analysis, please contact the laboratory at 480-968-5888

Sincerely,

Yu Min Shi
Technical Director
Airtech Environmental Labs

Arizona ADHS License No. AZ0740

Airtech Environmental Laboratories (AEL)

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

Date: January 11, 2019

Client:	Natalie Chrisman	Work Order #:	18L029
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/21/2018

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
18L029-01	SVE-3M-SG-121918	TO-15	12/19/2018	1006
18L029-02	SVE-3D-SG-121918	TO-15	12/19/2018	1020
18L029-03	DUP05-121918	TO-15	12/19/2018	1030
18L029-04	SVE-4M-SG-121918	TO-15	12/19/2018	1316
18L029-05	SVE-4-SG-121918	TO-15	12/19/2018	1326
18L029-06	SVE-2S-SG-121918	TO-15	12/19/2018	1349
18L029-07	SVE-2M-SG-121918	TO-15	12/19/2018	1411
18L029-08	SVE-2-SG-121918	TO-15	12/19/2018	1437
18L029-09	TSSV-PW-SG-121918	TO-15	12/19/2018	1452
18L029-10	SVE-1-SG-121918	TO-15	12/19/2018	1512
18L029-11	MW-13M-SG-122018	TO-15	12/20/2018	745
18L029-12	MW-13S-SG-122018	TO-15	12/20/2018	821
18L029-13	MW-13D-SG-122018	TO-15	12/20/2018	844
18L029-14	MW-12S-SG-122018	TO-15	12/20/2018	912
18L029-15	MW-12M-SG-122018	TO-15	12/20/2018	941
18L029-16	MW-12D-SG-122018	TO-15	12/20/2018	1001

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

Date: January 11, 2019

Client:	Natalie Chrisman	Work Order #:	18L029
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/21/18

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:	18L029	**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#
18L029-01	SVE-3M-SG-121918	E2099	1811-07	29.0	13.96	074	1811-02
18L029-02	SVE-3D-SG-121918	E2372	1811-07	29.0	13.25	046	1811-02
18L029-03	DUP05-121918	E2284	1811-07	29.0	13.22	117	1811-03
18L029-04	SVE-4M-SG-121918	E2290	1811-06	29.0	13.74	196	1811-03
18L029-05	SVE-4-SG-121918	1860	1811-07	29.0	12.88	105	1811-02
18L029-06	SVE-2S-SG-121918	1825	1811-07	29.0	13.71	092	1811-02
18L029-07	SVE-2M-SG-121918	1816	1811-07	29.0	13.70	062	1811-02
18L029-08	SVE-2-SG-121918	1851	1812-05	29.0	12.30	026	1812-03
18L029-09	TSSV-PW-SG-121918	1802	1812-05	29.0	12.45	028	1812-03
18L029-10	SVE-1-SG-121918	1676	1812-05	29.0	13.20	198	1812-03
18L029-11	MW-13M-SG-122018	1834	1812-03	29.0	14.38	164	1812-03
18L029-12	MW-13S-SG-122018	1830	1812-05	29.0	14.30	190	1812-03
18L029-13	MW-13D-SG-122018	1800	1812-03	29.0	14.20	086	1812-03
18L029-14	MW-12S-SG-122018	E2361	1812-03	29.0	14.06	064	1812-03
18L029-15	MW-12M-SG-122018	1867	1812-03	29.0	13.68	037	1812-03
18L029-16	MW-12D-SG-122018	E2401	1812-03	29.0	13.88	171	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:**	SVE-3M-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	**21**	**10**	**85.1**	**40.5**		20	1/7/2019	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	1/7/2019	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	1/7/2019	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	1/7/2019	78-93-3
Acetone	< 100	100	< 238	238		20	1/7/2019	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	1/7/2019	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	1/7/2019	108-90-7
Chloroform	**36**	**10**	**175**	**48.8**		20	1/7/2019	67-66-3
cis-1,2-Dichloroethene	**14**	**10**	**54.6**	**39.6**		20	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	**212**	**20**	**1,050**	**99.0**		20	1/7/2019	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	1/7/2019	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	1/7/2019	179601-23-1
Methylene chloride	**374**	**40**	**1,300**	**139**		20	1/7/2019	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	1/7/2019	95-47-6
Tetrachloroethene	**185**	**20**	**1,250**	**136**		20	1/7/2019	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	1/7/2019	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	1/7/2019	156-60-5
Trichloroethene	**305**	**10**	**1,640**	**53.7**		20	1/7/2019	79-01-6
Trichlorofluoromethane(F-11)	**205**	**10**	**1,150**	**56.2**		20	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**69**	**10**	**530**	**76.6**		20	1/7/2019	76-13-1
Vinyl chloride	< 10	10	< 25.6	25.6		20	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	98.1	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:**	SVE-3D-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	**191**	**50**	**774**	**203**		100	1/7/2019	75-34-3
1,1-Dichloroethene	**1,740**	**50**	**6,910**	**199**		100	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	1/7/2019	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	1/7/2019	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	1/7/2019	78-93-3
Acetone	< 500	500	< 1,190	1,190		100	1/7/2019	67-64-1
Benzene	< 50	50	< 160	160		100	1/7/2019	71-43-2
Chlorobenzene	< 50	50	< 230	230		100	1/7/2019	108-90-7
Chloroform	**106**	**50**	**517**	**244**		100	1/7/2019	67-66-3
cis-1,2-Dichloroethene	**1,760**	**50**	**6,970**	**198**		100	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	**1,160**	**100**	**5,740**	**495**		100	1/7/2019	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	1/7/2019	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	1/7/2019	179601-23-1
Methylene chloride	**227**	**200**	**788**	**694**		100	1/7/2019	75-09-2
o-Xylene	< 50	50	< 217	217		100	1/7/2019	95-47-6
Tetrachloroethene	**837**	**100**	**5,680**	**678**		100	1/7/2019	127-18-4
Tetrahydrofuran	< 200	200	< 590	590		100	1/7/2019	109-99-9
Toluene	**57**	**50**	**215**	**189**		100	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	1/7/2019	156-60-5
Trichloroethene	**12,200**	**250**	**65,500**	**1,340**		500	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	**473**	**50**	**2,660**	**281**		100	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**2,630**	**50**	**20,100**	**383**		100	1/7/2019	76-13-1
Vinyl chloride	**51**	**50**	**131**	**128**		100	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	94.4	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:**	DUP05-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	**172**	**50**	**697**	**203**		100	1/7/2019	75-34-3
1,1-Dichloroethene	**1,610**	**50**	**6,392**	**199**		100	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	1/7/2019	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	1/7/2019	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	1/7/2019	78-93-3
Acetone	< 500	500	< 1,190	1,190		100	1/7/2019	67-64-1
Benzene	< 50	50	< 160	160		100	1/7/2019	71-43-2
Chlorobenzene	< 50	50	< 230	230		100	1/7/2019	108-90-7
Chloroform	**106**	**50**	**517**	**244**		100	1/7/2019	67-66-3
cis-1,2-Dichloroethene	**1,600**	**50**	**6,336**	**198**		100	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	**1,160**	**100**	**5,742**	**495**		100	1/7/2019	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	1/7/2019	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	1/7/2019	179601-23-1
Methylene chloride	**240**	**200**	**833**	**694**		100	1/7/2019	75-09-2
o-Xylene	< 50	50	< 217	217		100	1/7/2019	95-47-6
Tetrachloroethene	**734**	**100**	**4,977**	**678**		100	1/7/2019	127-18-4
Tetrahydrofuran	< 200	200	< 590	590		100	1/7/2019	109-99-9
Toluene	**53**	**50**	**200**	**189**		100	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	1/7/2019	156-60-5
Trichloroethene	**8,420**	**250**	**45,200**	**1,340**		500	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	**450**	**50**	**2,529**	**281**		100	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**2,450**	**50**	**18,767**	**383**		100	1/7/2019	76-13-1
Vinyl chloride	**55**	**50**	**141**	**128**		100	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	96.6	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:**	SVE-4M-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	< 5.0	5.0	< 20.3	20.3		10	1/8/2019	75-34-3
1,1-Dichloroethene	**18**	**5.0**	**69.5**	**19.9**		10	1/8/2019	75-35-4
1,2-Dichlorobenzene	**99**	**5.0**	**594**	**30.1**		10	1/8/2019	95-50-1
1,2-Dichloroethane	< 5.0	5.0	< 20.3	20.3		10	1/8/2019	107-06-2
2-Butanone (MEK)	< 50	50	< 148	148		10	1/8/2019	78-93-3
Acetone	**66**	**50**	**157**	**119**		10	1/8/2019	67-64-1
Benzene	< 5.0	5.0	< 16.0	16.0		10	1/8/2019	71-43-2
Chlorobenzene	**243**	**5.0**	**1,117**	**23.0**		10	1/8/2019	108-90-7
Chloroform	< 5.0	5.0	< 24.4	24.4		10	1/8/2019	67-66-3
cis-1,2-Dichloroethene	**48**	**5.0**	**190**	**19.8**		10	1/8/2019	156-59-2
Dichlorodifluoromethane(F-12)	**21**	**10**	**103**	**49.5**		10	1/8/2019	75-71-8
Ethylbenzene	< 5.0	5.0	< 21.7	21.7		10	1/8/2019	100-41-4
m&p-Xylene	< 10	10	< 43.4	43.4		10	1/8/2019	179601-23-1
Methylene chloride	< 20	20	< 69.4	69.4		10	1/8/2019	75-09-2
o-Xylene	< 5.0	5.0	< 21.7	21.7		10	1/8/2019	95-47-6
Tetrachloroethene	**30**	**10**	**201**	**67.8**		10	1/8/2019	127-18-4
Tetrahydrofuran	< 20	20	< 59.0	59.0		10	1/8/2019	109-99-9
Toluene	< 5.0	5.0	< 18.9	18.9		10	1/8/2019	108-88-3
trans-1,2-Dichloroethene	< 5.0	5.0	< 19.8	19.8		10	1/8/2019	156-60-5
Trichloroethene	**53**	**5.0**	**286**	**26.9**		10	1/8/2019	79-01-6
Trichlorofluoromethane(F-11)	**10**	**5.0**	**56.2**	**28.1**		10	1/8/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 5.0	5.0	< 38.3	38.3		10	1/8/2019	76-13-1
Vinyl chloride	**6.7**	**5.0**	**17.2**	**12.8**		10	1/8/2019	75-01-4
Surr: 4-Bromofluorobenzene	109	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:**	SVE-4-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	< 2,500	2,500	< 10,100	10,100		5,000	1/7/2019	75-34-3
1,1-Dichloroethene	**61,000**	**2,500**	**242,000**	**9,930**		5,000	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 2,500	2,500	< 15,000	15,000		5,000	1/7/2019	95-50-1
1,2-Dichloroethane	< 2,500	2,500	< 10,100	10,100		5,000	1/7/2019	107-06-2
2-Butanone (MEK)	< 25,000	25,000	< 73,800	73,800		5,000	1/7/2019	78-93-3
Acetone	< 25,000	25,000	< 59,500	59,500		5,000	1/7/2019	67-64-1
Benzene	< 2,500	2,500	< 7,980	7,980		5,000	1/7/2019	71-43-2
Chlorobenzene	< 2,500	2,500	< 11,500	11,500		5,000	1/7/2019	108-90-7
Chloroform	< 2,500	2,500	< 12,200	12,200		5,000	1/7/2019	67-66-3
cis-1,2-Dichloroethene	< 2,500	2,500	< 9,900	9,900		5,000	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 5,000	5,000	< 24,800	24,800		5,000	1/7/2019	75-71-8
Ethylbenzene	< 2,500	2,500	< 10,900	10,900		5,000	1/7/2019	100-41-4
m&p-Xylene	< 5,000	5,000	< 21,700	21,700		5,000	1/7/2019	179601-23-1
Methylene chloride	**97,200**	**10,000**	**337,000**	**34,700**		5,000	1/7/2019	75-09-2
o-Xylene	< 2,500	2,500	< 10,900	10,900		5,000	1/7/2019	95-47-6
Tetrachloroethene	**11,600**	**5,000**	**78,600**	**33,900**		5,000	1/7/2019	127-18-4
Tetrahydrofuran	< 10,000	10,000	< 29,500	29,500		5,000	1/7/2019	109-99-9
Toluene	< 2,500	2,500	< 9,430	9,430		5,000	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 2,500	2,500	< 9,900	9,900		5,000	1/7/2019	156-60-5
Trichloroethene	**61,200**	**2,500**	**329,000**	**13,400**		5,000	1/7/2019	79-01-6
Trichlorofluoromethane(F-11)	< 2,500	2,500	< 14,100	14,100		5,000	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**16,400**	**2,500**	**126,000**	**19,200**		5,000	1/7/2019	76-13-1
Vinyl chloride	< 2,500	2,500	< 6,400	6,400		5,000	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	94.8	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:**	SVE-2S-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	< 10	10	< 40.5	40.5		20	1/8/2019	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	1/8/2019	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	1/8/2019	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	1/8/2019	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	1/8/2019	78-93-3
Acetone	**201**	**100**	**479**	**238**		20	1/8/2019	67-64-1
Benzene	**84**	**10**	**268**	**31.9**		20	1/8/2019	71-43-2
Chlorobenzene	**14**	**10**	**66.2**	**46.0**		20	1/8/2019	108-90-7
Chloroform	**13**	**10**	**65.4**	**48.8**		20	1/8/2019	67-66-3
cis-1,2-Dichloroethene	**1,130**	**50**	**4,480**	**198**		100	1/10/2019	156-59-2
Dichlorodifluoromethane(F-12)	**112**	**20**	**552**	**99.0**		20	1/8/2019	75-71-8
Ethylbenzene	**35**	**10**	**154**	**43.4**		20	1/8/2019	100-41-4
m&p-Xylene	**60**	**20**	**262**	**86.8**		20	1/8/2019	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	1/8/2019	75-09-2
o-Xylene	**17**	**10**	**74.6**	**43.4**		20	1/8/2019	95-47-6
Tetrachloroethene	**156**	**20**	**1,055**	**136**		20	1/8/2019	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	1/8/2019	109-99-9
Toluene	**72**	**10**	**271**	**37.7**		20	1/8/2019	108-88-3
trans-1,2-Dichloroethene	**12**	**10**	**48.3**	**39.6**		20	1/8/2019	156-60-5
Trichloroethene	**232**	**10**	**1,245**	**53.7**		20	1/8/2019	79-01-6
Trichlorofluoromethane(F-11)	**45**	**10**	**252**	**56.2**		20	1/8/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**11**	**10**	**87.3**	**76.6**		20	1/8/2019	76-13-1
Vinyl chloride	**414**	**10**	**1,061**	**25.6**		20	1/8/2019	75-01-4
Surr: 4-Bromofluorobenzene	95.4	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:**	SVE-2M-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	1/8/2019	75-34-3
1,1-Dichloroethene	< 10	10	< 39.7	39.7		20	1/8/2019	75-35-4
1,2-Dichlorobenzene	< 10	10	< 60.1	60.1		20	1/8/2019	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	1/8/2019	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	1/8/2019	78-93-3
Acetone	< 100	100	< 238	238		20	1/8/2019	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	1/8/2019	71-43-2
Chlorobenzene	< 10	10	< 46.0	46.0		20	1/8/2019	108-90-7
Chloroform	**37**	**10**	**182**	**48.8**		20	1/8/2019	67-66-3
cis-1,2-Dichloroethene	**40**	**10**	**157**	**39.6**		20	1/8/2019	156-59-2
Dichlorodifluoromethane(F-12)	**175**	**20**	**868**	**99.0**		20	1/8/2019	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	1/8/2019	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	1/8/2019	179601-23-1
Methylene chloride	< 40	40	< 139	139		20	1/8/2019	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	1/8/2019	95-47-6
Tetrachloroethene	**216**	**20**	**1,463**	**136**		20	1/8/2019	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	1/8/2019	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	1/8/2019	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	1/8/2019	156-60-5
Trichloroethene	**284**	**10**	**1,523**	**53.7**		20	1/8/2019	79-01-6
Trichlorofluoromethane(F-11)	**70**	**10**	**391**	**56.2**		20	1/8/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**20**	**10**	**155**	**76.6**		20	1/8/2019	76-13-1
Vinyl chloride	**116**	**10**	**296**	**25.6**		20	1/8/2019	75-01-4
Surr: 4-Bromofluorobenzene	106	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:**	SVE-2-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	< 100	100	< 405	405		200	1/7/2019	75-34-3
1,1-Dichloroethene	**120**	**100**	**476**	**397**		200	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 100	100	< 601	601		200	1/7/2019	95-50-1
1,2-Dichloroethane	< 100	100	< 405	405		200	1/7/2019	107-06-2
2-Butanone (MEK)	< 1,000	1,000	< 2,950	2,950		200	1/7/2019	78-93-3
Acetone	< 1,000	1,000	< 2,380	2,380		200	1/7/2019	67-64-1
Benzene	< 100	100	< 319	319		200	1/7/2019	71-43-2
Chlorobenzene	< 100	100	< 460	460		200	1/7/2019	108-90-7
Chloroform	**118**	**100**	**576**	**488**		200	1/7/2019	67-66-3
cis-1,2-Dichloroethene	< 100	100	< 396	396		200	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 200	200	< 990	990		200	1/7/2019	75-71-8
Ethylbenzene	< 100	100	< 434	434		200	1/7/2019	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	1/7/2019	179601-23-1
Methylene chloride	< 400	400	< 1,390	1,390		200	1/7/2019	75-09-2
o-Xylene	< 100	100	< 434	434		200	1/7/2019	95-47-6
Tetrachloroethene	**420**	**200**	**2,850**	**1,360**		200	1/7/2019	127-18-4
Tetrahydrofuran	< 400	400	< 1,180	1,180		200	1/7/2019	109-99-9
Toluene	< 100	100	< 377	377		200	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	1/7/2019	156-60-5
Trichloroethene	**4,600**	**100**	**24,700**	**537**		200	1/7/2019	79-01-6
Trichlorofluoromethane(F-11)	< 100	100	< 562	562		200	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**406**	**100**	**3,110**	**766**		200	1/7/2019	76-13-1
Vinyl chloride	< 100	100	< 256	256		200	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	97.4	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:**	TSSV-PW-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	< 50	50	< 203	203		100	1/7/2019	75-34-3
1,1-Dichloroethene	< 50	50	< 199	199		100	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	1/7/2019	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	1/7/2019	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	1/7/2019	78-93-3
Acetone	< 500	500	< 1,190	1,190		100	1/7/2019	67-64-1
Benzene	< 50	50	< 160	160		100	1/7/2019	71-43-2
Chlorobenzene	< 50	50	< 230	230		100	1/7/2019	108-90-7
Chloroform	< 50	50	< 244	244		100	1/7/2019	67-66-3
cis-1,2-Dichloroethene	< 50	50	< 198	198		100	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 100	100	< 495	495		100	1/7/2019	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	1/7/2019	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	1/7/2019	179601-23-1
Methylene chloride	< 200	200	< 694	694		100	1/7/2019	75-09-2
o-Xylene	< 50	50	< 217	217		100	1/7/2019	95-47-6
Tetrachloroethene	**150**	**100**	**1,020**	**678**		100	1/7/2019	127-18-4
Tetrahydrofuran	< 200	200	< 590	590		100	1/7/2019	109-99-9
Toluene	< 50	50	< 189	189		100	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	1/7/2019	156-60-5
Trichloroethene	**1,690**	**50**	**9,080**	**269**		100	1/7/2019	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**142**	**50**	**1,090**	**383**		100	1/7/2019	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	88.6	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:**	SVE-1-SG-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/19/2018
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	< 50	50	< 203	203		100	1/7/2019	75-34-3
1,1-Dichloroethene	**75**	**50**	**298**	**199**		100	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	1/7/2019	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	1/7/2019	107-06-2
2-Butanone (MEK)	< 500	500	< 1,480	1,480		100	1/7/2019	78-93-3
Acetone	< 500	500	< 1,190	1,190		100	1/7/2019	67-64-1
Benzene	< 50	50	< 160	160		100	1/7/2019	71-43-2
Chlorobenzene	**1,400**	**50**	**6,440**	**230**		100	1/7/2019	108-90-7
Chloroform	**79**	**50**	**386**	**244**		100	1/7/2019	67-66-3
cis-1,2-Dichloroethene	**257**	**50**	**1,020**	**198**		100	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 100	100	< 495	495		100	1/7/2019	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	1/7/2019	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	1/7/2019	179601-23-1
Methylene chloride	< 200	200	< 694	694		100	1/7/2019	75-09-2
o-Xylene	< 50	50	< 217	217		100	1/7/2019	95-47-6
Tetrachloroethene	**262**	**100**	**1,780**	**678**		100	1/7/2019	127-18-4
Tetrahydrofuran	< 200	200	< 590	590		100	1/7/2019	109-99-9
Toluene	< 50	50	< 189	189		100	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	1/7/2019	156-60-5
Trichloroethene	**2,860**	**50**	**15,400**	**269**		100	1/7/2019	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**127**	**50**	**973**	**383**		100	1/7/2019	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	96.7	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:**	MW-13M-SG-122018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/20/2018
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	**56**	**50**	**227**	**203**		100	1/10/2019	75-34-3
1,1-Dichloroethene	**6,050**	**500**	**24,000**	**1,990**		1,000	1/8/2019	75-35-4
1,2-Dichlorobenzene	< 50	50	< 301	301		100	1/10/2019	95-50-1
1,2-Dichloroethane	< 50	50	< 203	203		100	1/10/2019	107-06-2
2-Butanone (MEK)	< 500	500	< 1,475	1,475		100	1/10/2019	78-93-3
Acetone	< 500	500	< 1,190	1,190		100	1/10/2019	67-64-1
Benzene	< 50	50	< 160	160		100	1/10/2019	71-43-2
Chlorobenzene	< 50	50	< 230	230		100	1/10/2019	108-90-7
Chloroform	< 50	50	< 244	244		100	1/10/2019	67-66-3
cis-1,2-Dichloroethene	< 50	50	< 198	198		100	1/10/2019	156-59-2
Dichlorodifluoromethane(F-12)	**100**	**100**	**495**	**495**		100	1/10/2019	75-71-8
Ethylbenzene	< 50	50	< 217	217		100	1/10/2019	100-41-4
m&p-Xylene	< 100	100	< 434	434		100	1/10/2019	179601-23-1
Methylene chloride	**1,400**	**200**	**4,858**	**694**		100	1/10/2019	75-09-2
o-Xylene	< 50	50	< 217	217		100	1/10/2019	95-47-6
Tetrachloroethene	**550**	**100**	**3,729**	**678**		100	1/10/2019	127-18-4
Tetrahydrofuran	< 200	200	< 590	590		100	1/10/2019	109-99-9
Toluene	< 50	50	< 189	189		100	1/10/2019	108-88-3
trans-1,2-Dichloroethene	< 50	50	< 198	198		100	1/10/2019	156-60-5
Trichloroethene	**498**	**50**	**2,674**	**269**		100	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	< 50	50	< 281	281		100	1/10/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**372**	**50**	**2,850**	**383**		100	1/10/2019	76-13-1
Vinyl chloride	< 50	50	< 128	128		100	1/10/2019	75-01-4
Surr: 4-Bromofluorobenzene	102	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:**	MW-13S-SG-122018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/20/2018
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	< 2.5	2.5	< 10.1	10.1		5	1/10/2019	75-34-3
1,1-Dichloroethene	**127**	**2.5**	**503**	**9.93**		5	1/10/2019	75-35-4
1,2-Dichlorobenzene	< 2.5	2.5	< 15.0	15.0		5	1/10/2019	95-50-1
1,2-Dichloroethane	< 2.5	2.5	< 10.1	10.1		5	1/10/2019	107-06-2
2-Butanone (MEK)	< 25	25	< 73.8	73.8		5	1/10/2019	78-93-3
Acetone	< 25	25	< 59.5	59.5		5	1/10/2019	67-64-1
Benzene	< 2.5	2.5	< 7.98	7.98		5	1/10/2019	71-43-2
Chlorobenzene	< 2.5	2.5	< 11.5	11.5		5	1/10/2019	108-90-7
Chloroform	**35**	**2.5**	**170**	**12.2**		5	1/10/2019	67-66-3
cis-1,2-Dichloroethene	**3.7**	**2.5**	**14.5**	**9.90**		5	1/10/2019	156-59-2
Dichlorodifluoromethane(F-12)	**43**	**5.0**	**211**	**24.8**		5	1/10/2019	75-71-8
Ethylbenzene	< 2.5	2.5	< 10.9	10.9		5	1/10/2019	100-41-4
m&p-Xylene	< 5.0	5.0	< 21.7	21.7		5	1/10/2019	179601-23-1
Methylene chloride	**17**	**10**	**59.7**	**34.7**		5	1/10/2019	75-09-2
o-Xylene	< 2.5	2.5	< 10.9	10.9		5	1/10/2019	95-47-6
Tetrachloroethene	**32**	**5.0**	**215**	**33.9**		5	1/10/2019	127-18-4
Tetrahydrofuran	< 10	10	< 29.5	29.5		5	1/10/2019	109-99-9
Toluene	< 2.5	2.5	< 9.43	9.43		5	1/10/2019	108-88-3
trans-1,2-Dichloroethene	< 2.5	2.5	< 9.90	9.90		5	1/10/2019	156-60-5
Trichloroethene	**16**	**2.5**	**83.5**	**13.4**		5	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	< 2.5	2.5	< 14.1	14.1		5	1/10/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**11**	**2.5**	**82.7**	**19.2**		5	1/10/2019	76-13-1
Vinyl chloride	**6.2**	**2.5**	**15.9**	**6.40**		5	1/10/2019	75-01-4
Surr: 4-Bromofluorobenzene	102	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:**	MW-13D-SG-122018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/20/2018
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	< 10	10	< 40.5	40.5		20	1/8/2019	75-34-3
1,1-Dichloroethene	**669**	**10**	**2,655**	**39.7**		20	1/8/2019	75-35-4
1,2-Dichlorobenzene	**13**	**10**	**79.3**	**60.1**		20	1/8/2019	95-50-1
1,2-Dichloroethane	< 10	10	< 40.5	40.5		20	1/8/2019	107-06-2
2-Butanone (MEK)	< 100	100	< 295	295		20	1/8/2019	78-93-3
Acetone	< 100	100	< 238	238		20	1/8/2019	67-64-1
Benzene	< 10	10	< 31.9	31.9		20	1/8/2019	71-43-2
Chlorobenzene	**16**	**10**	**71.8**	**46.0**		20	1/8/2019	108-90-7
Chloroform	< 10	10	< 48.8	48.8		20	1/8/2019	67-66-3
cis-1,2-Dichloroethene	**53**	**10**	**208**	**39.6**		20	1/8/2019	156-59-2
Dichlorodifluoromethane(F-12)	**103**	**20**	**511**	**99.0**		20	1/8/2019	75-71-8
Ethylbenzene	< 10	10	< 43.4	43.4		20	1/8/2019	100-41-4
m&p-Xylene	< 20	20	< 86.8	86.8		20	1/8/2019	179601-23-1
Methylene chloride	**541**	**40**	**1,877**	**139**		20	1/8/2019	75-09-2
o-Xylene	< 10	10	< 43.4	43.4		20	1/8/2019	95-47-6
Tetrachloroethene	**137**	**20**	**928**	**136**		20	1/8/2019	127-18-4
Tetrahydrofuran	< 40	40	< 118	118		20	1/8/2019	109-99-9
Toluene	< 10	10	< 37.7	37.7		20	1/8/2019	108-88-3
trans-1,2-Dichloroethene	< 10	10	< 39.6	39.6		20	1/8/2019	156-60-5
Trichloroethene	**208**	**10**	**1,116**	**53.7**		20	1/8/2019	79-01-6
Trichlorofluoromethane(F-11)	**25**	**10**	**138**	**56.2**		20	1/8/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**197**	**10**	**1,511**	**76.6**		20	1/8/2019	76-13-1
Vinyl chloride	**20**	**10**	**52.2**	**25.6**		20	1/8/2019	75-01-4
Surr: 4-Bromofluorobenzene	101	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:**	MW-12S-SG-122018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/20/2018
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	< 1.0	1.0	< 4.05	4.05		2	1/10/2019	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	1/10/2019	75-35-4
1,2-Dichlorobenzene	**3.0**	**1.0**	**18.0**	**6.01**		2	1/10/2019	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	1/10/2019	107-06-2
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	1/10/2019	78-93-3
Acetone	< 10	10	< 23.8	23.8		2	1/10/2019	67-64-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	1/10/2019	71-43-2
Chlorobenzene	**4.0**	**1.0**	**18.2**	**4.60**		2	1/10/2019	108-90-7
Chloroform	< 1.0	1.0	< 4.88	4.88		2	1/10/2019	67-66-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/10/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	1/10/2019	75-71-8
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	1/10/2019	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	1/10/2019	179601-23-1
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	1/10/2019	75-09-2
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	1/10/2019	95-47-6
Tetrachloroethene	**2.3**	**2.0**	**15.5**	**13.6**		2	1/10/2019	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8		2	1/10/2019	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	1/10/2019	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/10/2019	156-60-5
Trichloroethene	**1.4**	**1.0**	**7.41**	**5.37**		2	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	1/10/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 1.0	1.0	< 7.66	7.66		2	1/10/2019	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	1/10/2019	75-01-4
Surr: 4-Bromofluorobenzene	99.0	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:**	MW-12M-SG-122018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/20/2018
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	< 1.0	1.0	< 4.05	4.05		2	1/10/2019	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	1/10/2019	75-35-4
1,2-Dichlorobenzene	**1.3**	**1.0**	**7.57**	**6.01**		2	1/10/2019	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	1/10/2019	107-06-2
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	1/10/2019	78-93-3
Acetone	< 10	10	< 23.8	23.8		2	1/10/2019	67-64-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	1/10/2019	71-43-2
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	1/10/2019	108-90-7
Chloroform	< 1.0	1.0	< 4.88	4.88		2	1/10/2019	67-66-3
cis-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/10/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	1/10/2019	75-71-8
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	1/10/2019	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	1/10/2019	179601-23-1
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	1/10/2019	75-09-2
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	1/10/2019	95-47-6
Tetrachloroethene	< 2.0	2.0	< 13.6	13.6		2	1/10/2019	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8		2	1/10/2019	109-99-9
Toluene	< 1.0	1.0	< 3.77	3.77		2	1/10/2019	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/10/2019	156-60-5
Trichloroethene	< 1.0	1.0	< 5.37	5.37		2	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	1/10/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**1.7**	**1.0**	**13.2**	**7.66**		2	1/10/2019	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	1/10/2019	75-01-4
Surr: 4-Bromofluorobenzene	98.2	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:**	MW-12D-SG-122018
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	12/20/2018
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	< 1.0	1.0	< 4.05	4.05		2	1/10/2019	75-34-3
1,1-Dichloroethene	< 1.0	1.0	< 3.97	3.97		2	1/10/2019	75-35-4
1,2-Dichlorobenzene	**1.4**	**1.0**	**8.17**	**6.01**		2	1/10/2019	95-50-1
1,2-Dichloroethane	< 1.0	1.0	< 4.05	4.05		2	1/10/2019	107-06-2
2-Butanone (MEK)	< 10	10	< 29.5	29.5		2	1/10/2019	78-93-3
Acetone	**86**	**10**	**204**	**23.8**		2	1/10/2019	67-64-1
Benzene	< 1.0	1.0	< 3.19	3.19		2	1/10/2019	71-43-2
Chlorobenzene	< 1.0	1.0	< 4.60	4.60		2	1/10/2019	108-90-7
Chloroform	< 1.0	1.0	< 4.88	4.88		2	1/10/2019	67-66-3
cis-1,2-Dichloroethene	**3.2**	**1.0**	**12.7**	**3.96**		2	1/10/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 2.0	2.0	< 9.90	9.90		2	1/10/2019	75-71-8
Ethylbenzene	< 1.0	1.0	< 4.34	4.34		2	1/10/2019	100-41-4
m&p-Xylene	< 2.0	2.0	< 8.68	8.68		2	1/10/2019	179601-23-1
Methylene chloride	< 4.0	4.0	< 13.9	13.9		2	1/10/2019	75-09-2
o-Xylene	< 1.0	1.0	< 4.34	4.34		2	1/10/2019	95-47-6
Tetrachloroethene	**3.7**	**2.0**	**25.4**	**13.6**		2	1/10/2019	127-18-4
Tetrahydrofuran	< 4.0	4.0	< 11.8	11.8		2	1/10/2019	109-99-9
Toluene	**83**	**1.0**	**314**	**3.77**		2	1/10/2019	108-88-3
trans-1,2-Dichloroethene	< 1.0	1.0	< 3.96	3.96		2	1/10/2019	156-60-5
Trichloroethene	**6.9**	**1.0**	**37.1**	**5.37**		2	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	< 1.0	1.0	< 5.62	5.62		2	1/10/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**2.5**	**1.0**	**19.3**	**7.66**		2	1/10/2019	76-13-1
Vinyl chloride	< 1.0	1.0	< 2.56	2.56		2	1/10/2019	75-01-4
Surr: 4-Bromofluorobenzene	98.9	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:**	N/A
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010107 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	1/7/2019	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	1/7/2019	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	1/7/2019	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	1/7/2019	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	1/7/2019	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	1/7/2019	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	1/7/2019	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	1/7/2019	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	1/7/2019	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/7/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	1/7/2019	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	1/7/2019	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	1/7/2019	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	1/7/2019	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	1/7/2019	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	1/7/2019	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	1/7/2019	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	1/7/2019	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/7/2019	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	1/7/2019	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	1/7/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	1/7/2019	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	1/7/2019	75-01-4
Surr: 4-Bromofluorobenzene	88.5	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:	18L029	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 1/7/2019 Batch: MS010107 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)	9.6	96.4	9.5	94.5	10.0	2.0	ppbv			
Vinyl Chloride	10.5	105	9.2	91.5	10.0	14.1	ppbv			
Trichlorofluoromethane (F-11)	9.2	91.6	8.7	87.0	10.0	5.2	ppbv			
Acetone	9.2	92.4	9.2	92.2	10.0	0.2	ppbv			
1,1-Dichloroethene	9.9	99.1	9.5	95.3	10.0	3.9	ppbv			
Trichlorotrifluoroethane (F-113)	9.0	89.5	8.6	85.9	10.0	4.1	ppbv			
Methylene Chloride	10.7	107	9.0	89.8	10.0	17.8	ppbv			
trans-1,2-Dichloroethene	8.8	87.8	8.9	89.2	10.0	1.6	ppbv			
1,1-Dichloroethane	10.8	108	10.2	102	10.0	5.9	ppbv			
2-Butanone (MEK)	8.1	80.5	8.4	83.7	10.0	3.9	ppbv			
cis-1,2-Dichloroethene	8.9	89.2	8.8	87.9	10.0	1.5	ppbv			
Chloroform	9.3	93.1	8.9	88.8	10.0	4.7	ppbv			
Tetrahydrofuran	10.7	107	9.7	96.6	10.0	10.0	ppbv			
1,2-Dichloroethane	8.9	89.1	8.6	85.8	10.0	3.8	ppbv			
Benzene	9.4	94.0	8.8	88.3	10.0	6.3	ppbv			
Trichloroethene	8.5	84.9	8.0	80.3	10.0	5.6	ppbv			
Toluene	8.9	88.5	8.7	87.0	10.0	1.7	ppbv			
Tetrachloroethene	9.1	90.8	8.4	83.9	10.0	7.9	ppbv			
Chlorobenzene	8.3	82.5	8.2	81.7	10.0	1.0	ppbv			
Ethylbenzene	8.9	88.9	8.4	83.5	10.0	6.3	ppbv			
m&p-Xylene	17.9	89.3	17.8	89.2	20.0	0.2	ppbv			
o-Xylene	8.9	88.5	8.8	87.5	10.0	1.1	ppbv			
1,2-Dichlorobenzene	9.6	96.3	9.1	90.5	10.0	6.2	ppbv			
Surr: 4-Bromofluorobenzene	10.8	108	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:**	N/A
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L029	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010110 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	1/10/2019	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	1/10/2019	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	1/10/2019	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	1/10/2019	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	1/10/2019	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	1/10/2019	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	1/10/2019	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	1/10/2019	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	1/10/2019	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/10/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	1/10/2019	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	1/10/2019	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	1/10/2019	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	1/10/2019	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	1/10/2019	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	1/10/2019	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	1/10/2019	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	1/10/2019	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/10/2019	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	1/10/2019	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	1/10/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	1/10/2019	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	1/10/2019	75-01-4
Surr: 4-Bromofluorobenzene	92.8	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:	18L029	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 1/10/2019 Batch: MS010110 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)	10.2	102	10.1	101	10.0	1.0	ppbv			
Vinyl Chloride	9.8	98.4	9.8	98.1	10.0	0.3	ppbv			
Trichlorofluoromethane (F-11)	10.6	106	10.5	105	10.0	0.7	ppbv			
Acetone	11.3	113	11.4	114	10.0	1.5	ppbv			
1,1-Dichloroethene	10.9	109	10.9	109	10.0	0.3	ppbv			
Trichlorotrifluoroethane (F-113)	10.6	106	10.6	106	10.0	0.1	ppbv			
Methylene Chloride	10.5	105	10.2	102	10.0	2.7	ppbv			
trans-1,2-Dichloroethene	11.0	110	11.4	114	10.0	3.9	ppbv			
1,1-Dichloroethane	10.8	108	10.7	107	10.0	1.4	ppbv			
2-Butanone (MEK)	12.0	120	11.7	117	10.0	2.6	ppbv			
cis-1,2-Dichloroethene	10.8	108	10.8	108	10.0	0.0	ppbv			
Chloroform	10.7	107	10.5	105	10.0	1.0	ppbv			
Tetrahydrofuran	12.1	121	12.4	124	10.0	2.8	ppbv			
1,2-Dichloroethane	10.9	109	10.7	107	10.0	2.1	ppbv			
Benzene	11.1	111	11.1	111	10.0	0.4	ppbv			
Trichloroethene	10.6	106	10.6	106	10.0	0.6	ppbv			
Toluene	11.8	118	11.6	116	10.0	1.1	ppbv			
Tetrachloroethene	11.0	110	11.1	111	10.0	0.8	ppbv			
Chlorobenzene	11.0	110	11.1	111	10.0	0.7	ppbv			
Ethylbenzene	12.0	120	11.9	119	10.0	0.8	ppbv			
m&p-Xylene	22.0	110	21.1	106	20.0	4.3	ppbv			
o-Xylene	12.0	120	11.7	117	10.0	2.1	ppbv			
1,2-Dichlorobenzene	11.2	112	11.0	110	10.0	1.9	ppbv			
Surr: 4-Bromofluorobenzene	10.3	103	10.1	101			%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:	18L029	**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-181217-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	3/17/2019

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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	181029
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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
✓ 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

Analyses Requested

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	E2099	074	6 1 bag	1 2 5	SVE-3M-SG-121918	12.19.18	1006	S	1	✓									✓
02	E2372	046	6 1 bag	1 2 5	SVE-3D-SG-121918	↓	1020	↓	↓	✓									✓
03	E2284	117	6 1 bag	1 2 5	DUP05-121918	↓	1030	↓	↓	✓									✓
04	E2290	196	6 1 bag	1 2 5	SVE-4M-SG-121918	↓	1316	↓	↓	✓									✓
05	1860	105	6 1 bag	1 2 5	SVE-4-SG-121918	↓	1326	↓	↓	✓									✓
06	1825	092	6 1 bag	1 2 5	SVE-2S-SG-121918	↓	1349	↓	↓	✓									✓
07	1816	062	6 1 bag	1 2 5	SVE-2M-SG-121918	↓	1411	↓	↓	✓									✓
08	1851	026	6 1 bag	1 2 5	SVE-2-SG-121918	↓	1437	↓	↓	✓									✓
09	1802	028	6 1 bag	1 2 5	TSSV-PW-SG-121918	↓	1452	↓	↓	✓									✓
10	1676	198	6 1 bag	1 2 5	SVE-1-SG-121918	↓	1512	↓	↓	✓									✓

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12.21.18	1425	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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	181029
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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

Analyses Requested

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	1834	164	6 1 bag	1 2 5	MW-13~~X~~M-SG-122018	12.20.18	745	S	1	X									X
12	1830	190	6 1 bag	1 2 5	MW-13~~M~~S-SG-122018	↓	821	↓	↓	X									X
13	1800	086	6 1 bag	1 2 5	MW-13D-SG-122018	↓	844	↓	↓	X									X
14	E2367	064	6 1 bag	1 2 5	MW-12S-SG-122018	↓	912	↓	↓	X									X
15	1867	037	6 1 bag	1 2 5	MW-12M-SG-122018	↓	941	↓	↓	X									X
16	E2401	171	6 1 bag	1 2 5	MW-12D-SG-122018	↓	1001	↓	↓	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															

Instructions / Special Requirements:

Date:	Time:	Samples Relinquished By:	Received By:
12.21.18	1425	E. Miller	

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

Date: January 10, 2019

Client:	Natalie Chrisman	Work Order #:	18L030
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/21/2018

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 10, 2019

Client:	Natalie Chrisman	Work Order #:	18L030
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/21/2018

SAMPLE SUMMARY

LAB ID	CLIENT ID	METHOD	SAMPLE DATE	SAMPLE TIME
18L030-01	SP4-H1-121918	TO-15	12/19/2018	855
18L030-02	SP3-C1-121918	TO-15	12/19/2018	900
18L030-03	SP2-C3-121918	TO-15	12/19/2018	905
18L030-04	SP1-SkidOutlet-121918	TO-15	12/19/2018	910

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

Date: January 10, 2019

Client:	Natalie Chrisman	Work Order #:	18L030
Company:	Wood	Project Name:	Cave Creek Landfill
Address:	4600 E Washington St, #600	Project Number:	14-2017-2034
	Phoenix, AZ 85034	Received Date:	12/21/18

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.

L5: The associated blank spike recovery was above the laboratory/method acceptance limits. The analyte was not detected in the sample.

Airtech Environmental Laboratories (AEL) - AZ 0740

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

Client:	Wood	**Client Sample ID:**	N/A
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L030	**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#
18L030-01	SP4-H1-121918	1837	1812-06	29.0	14.37	091	1812-03
18L030-02	SP3-C1-121918	1807	1812-06	29.0	14.64	022	1812-03
18L030-03	SP2-C3-121918	E2087	1812-05	29.0	14.88	024	1812-03
18L030-04	SP1-SkidOutlet-121918	1847	1811-07	29.0	15.54	071	1811-03

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-H1-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L030	**Collection:**	12/19/2018
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	1/3/2019	75-34-3
1,1-Dichloroethene	< 100	100	< 397	397		200	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 100	100	< 601	601		200	1/3/2019	95-50-1
1,2-Dichloroethane	< 100	100	< 405	405		200	1/3/2019	107-06-2
2-Butanone (MEK)	< 1,000	1,000	< 2,950	2,950		200	1/3/2019	78-93-3
Acetone	< 1,000	1,000	< 2,380	2,380		200	1/3/2019	67-64-1
Benzene	< 100	100	< 319	319		200	1/3/2019	71-43-2
Chlorobenzene	< 100	100	< 460	460		200	1/3/2019	108-90-7
Chloroform	< 100	100	< 488	488		200	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 100	100	< 396	396		200	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	**1,510**	**200**	**7,480**	**990**		200	1/3/2019	75-71-8
Ethylbenzene	< 100	100	< 434	434		200	1/3/2019	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	1/3/2019	179601-23-1
Methylene chloride	**5,800**	**400**	**20,100**	**1,390**		200	1/3/2019	75-09-2
o-Xylene	< 100	100	< 434	434		200	1/3/2019	95-47-6
Tetrachloroethene	< 200	200	< 1,360	1,360		200	1/3/2019	127-18-4
Tetrahydrofuran	< 400	400	< 1,180	1,180	L5	200	1/3/2019	109-99-9
Toluene	< 100	100	< 377	377		200	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	1/3/2019	156-60-5
Trichloroethene	< 100	100	< 537	537		200	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 100	100	< 562	562		200	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 100	100	< 766	766		200	1/3/2019	76-13-1
Vinyl chloride	**458**	**100**	**1,170**	**256**		200	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	98.5	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:**	SP3-C1-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L030	**Collection:**	12/19/2018
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	1/3/2019	75-34-3
1,1-Dichloroethene	< 100	100	< 397	397		200	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 100	100	< 601	601		200	1/3/2019	95-50-1
1,2-Dichloroethane	< 100	100	< 405	405		200	1/3/2019	107-06-2
2-Butanone (MEK)	< 1,000	1,000	< 2,950	2,950		200	1/3/2019	78-93-3
Acetone	< 1,000	1,000	< 2,380	2,380		200	1/3/2019	67-64-1
Benzene	< 100	100	< 319	319		200	1/3/2019	71-43-2
Chlorobenzene	< 100	100	< 460	460		200	1/3/2019	108-90-7
Chloroform	< 100	100	< 488	488		200	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 100	100	< 396	396		200	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	**1,230**	**200**	**6,090**	**990**		200	1/3/2019	75-71-8
Ethylbenzene	< 100	100	< 434	434		200	1/3/2019	100-41-4
m&p-Xylene	< 200	200	< 868	868		200	1/3/2019	179601-23-1
Methylene chloride	**4,970**	**400**	**17,200**	**1,390**		200	1/3/2019	75-09-2
o-Xylene	< 100	100	< 434	434		200	1/3/2019	95-47-6
Tetrachloroethene	< 200	200	< 1,360	1,360		200	1/3/2019	127-18-4
Tetrahydrofuran	< 400	400	< 1,180	1,180	L5	200	1/3/2019	109-99-9
Toluene	< 100	100	< 377	377		200	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 100	100	< 396	396		200	1/3/2019	156-60-5
Trichloroethene	< 100	100	< 537	537		200	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 100	100	< 562	562		200	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 100	100	< 766	766		200	1/3/2019	76-13-1
Vinyl chloride	**400**	**100**	**1,020**	**256**		200	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	90.2	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-C3-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L030	**Collection:**	12/19/2018
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	1/3/2019	75-34-3
1,1-Dichloroethene	< 500	500	< 1,990	1,990		1,000	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 500	500	< 3,010	3,010		1,000	1/3/2019	95-50-1
1,2-Dichloroethane	< 500	500	< 2,030	2,030		1,000	1/3/2019	107-06-2
2-Butanone (MEK)	< 5,000	5,000	< 14,800	14,800		1,000	1/3/2019	78-93-3
Acetone	< 5,000	5,000	< 11,900	11,900		1,000	1/3/2019	67-64-1
Benzene	< 500	500	< 1,595	1,600		1,000	1/3/2019	71-43-2
Chlorobenzene	< 500	500	< 2,300	2,300		1,000	1/3/2019	108-90-7
Chloroform	< 500	500	< 2,440	2,440		1,000	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 500	500	< 1,980	1,980		1,000	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	**1,150**	**1,000**	**5,690**	**4,950**		1,000	1/3/2019	75-71-8
Ethylbenzene	< 500	500	< 2,170	2,170		1,000	1/3/2019	100-41-4
m&p-Xylene	< 1,000	1,000	< 4,340	4,340		1,000	1/3/2019	179601-23-1
Methylene chloride	**26,000**	**4,000**	**90,200**	**13,900**		2,000	1/3/2019	75-09-2
o-Xylene	< 500	500	< 2,170	2,170		1,000	1/3/2019	95-47-6
Tetrachloroethene	< 1,000	1,000	< 6,780	6,780		1,000	1/3/2019	127-18-4
Tetrahydrofuran	< 2,000	2,000	< 5,900	5,900	L5	1,000	1/3/2019	109-99-9
Toluene	< 500	500	< 1,890	1,890		1,000	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 500	500	< 1,980	1,980		1,000	1/3/2019	156-60-5
Trichloroethene	< 500	500	< 2,690	2,690		1,000	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 500	500	< 2,810	2,810		1,000	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 500	500	< 3,830	3,830		1,000	1/3/2019	76-13-1
Vinyl chloride	< 500	500	< 1,280	1,280		1,000	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	87.3	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:**	SP1-SkidOutlet-121918
Project:	Cave Creek Landfill	**Project Number:**	14-2017-2034
Lab Order:	18L030	**Collection:**	12/19/2018
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	1/3/2019	75-34-3
1,1-Dichloroethene	**44,600**	**1,000**	**177,000**	**3,970**		2,000	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 1,000	1,000	< 6,010	6,010		2,000	1/3/2019	95-50-1
1,2-Dichloroethane	< 1,000	1,000	< 4,050	4,050		2,000	1/3/2019	107-06-2
2-Butanone (MEK)	< 10,000	10,000	< 29,500	29,500		2,000	1/3/2019	78-93-3
Acetone	< 10,000	10,000	< 23,800	23,800		2,000	1/3/2019	67-64-1
Benzene	< 1,000	1,000	< 3,190	3,190		2,000	1/3/2019	71-43-2
Chlorobenzene	**1,280**	**1,000**	**5,890**	**4,600**		2,000	1/3/2019	108-90-7
Chloroform	< 1,000	1,000	< 4,880	4,880		2,000	1/3/2019	67-66-3
cis-1,2-Dichloroethene	**8,880**	**1,000**	**35,200**	**3,960**		2,000	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 2,000	2,000	< 9,900	9,900		2,000	1/3/2019	75-71-8
Ethylbenzene	< 1,000	1,000	< 4,340	4,340		2,000	1/3/2019	100-41-4
m&p-Xylene	< 2,000	2,000	< 8,680	8,680		2,000	1/3/2019	179601-23-1
Methylene chloride	**70,000**	**4,000**	**243,000**	**13,900**		2,000	1/3/2019	75-09-2
o-Xylene	< 1,000	1,000	< 4,340	4,340		2,000	1/3/2019	95-47-6
Tetrachloroethene	**13,700**	**2,000**	**92,900**	**13,600**		2,000	1/3/2019	127-18-4
Tetrahydrofuran	< 4,000	4,000	< 11,800	11,800		2,000	1/3/2019	109-99-9
Toluene	< 1,000	1,000	< 3,770	3,770		2,000	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 1,000	1,000	< 3,960	3,960		2,000	1/3/2019	156-60-5
Trichloroethene	**69,300**	**1,000**	**372,000**	**5,370**		2,000	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 1,000	1,000	< 5,620	5,620		2,000	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	**14,300**	**1,000**	**110,000**	**7,660**		2,000	1/3/2019	76-13-1
Vinyl chloride	< 1,000	1,000	< 2,560	2,560		2,000	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	89.4	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:	18L030	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010102 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	1/2/2019	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	1/2/2019	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	1/2/2019	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	1/2/2019	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	1/2/2019	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	1/2/2019	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	1/2/2019	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	1/2/2019	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	1/2/2019	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/2/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	1/2/2019	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	1/2/2019	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	1/2/2019	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	1/2/2019	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	1/2/2019	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	1/2/2019	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	1/2/2019	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	1/2/2019	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/2/2019	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	1/2/2019	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	1/2/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	1/2/2019	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	1/2/2019	75-01-4
Surr: 4-Bromofluorobenzene	86.3	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:**	14-2017-2034
Lab Order:	18L030	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 1/2/2019 Batch: MS010102 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)	9.4	93.8	10.1	101	10.0	7.6	ppbv			
Vinyl Chloride	10.6	106	11.0	110	10.0	3.4	ppbv			
Trichlorofluoromethane (F-11)	8.7	86.8	10.5	105	10.0	19.2	ppbv			
Acetone	10.0	100.3	11.7	117	10.0	15.5	ppbv			
1,1-Dichloroethene	9.2	92.1	11.5	115	10.0	21.7	ppbv			
Trichlorotrifluoroethane (F-113)	8.4	84.3	9.8	98.4	10.0	15.4	ppbv			
Methylene Chloride	9.8	97.7	11.3	113	10.0	14.4	ppbv			
trans-1,2-Dichloroethene	8.3	82.5	10.6	106	10.0	24.9	ppbv			
1,1-Dichloroethane	10.4	104	11.9	119	10.0	13.6	ppbv			
2-Butanone (MEK)	8.6	86.0	10.2	102	10.0	16.5	ppbv			
cis-1,2-Dichloroethene	9.0	90.0	10.2	102	10.0	12.4	ppbv			
Chloroform	9.0	90.4	10.3	103	10.0	13.2	ppbv			
Tetrahydrofuran	10.3	103.2	13.1	131	10.0	23.7	ppbv		L5	
1,2-Dichloroethane	8.7	86.6	10.3	103	10.0	17.1	ppbv			
Benzene	9.0	90.3	10.4	104	10.0	14.5	ppbv			
Trichloroethene	9.2	91.9	10.4	104	10.0	12.2	ppbv			
Toluene	9.6	96.2	11.4	114	10.0	16.9	ppbv			
Tetrachloroethene	10.1	100.6	11.2	112	10.0	10.9	ppbv			
Chlorobenzene	9.0	90.2	10.8	108	10.0	17.6	ppbv			
Ethylbenzene	9.2	92.1	11.0	110	10.0	17.7	ppbv			
m&p-Xylene	20.3	101.6	22.8	114	20.0	11.6	ppbv			
o-Xylene	10.0	99.9	10.9	109	10.0	9.0	ppbv			
1,2-Dichlorobenzene	11.2	112.0	12.7	127	10.0	12.2	ppbv			
Surr: 4-Bromofluorobenzene	10.6	106	10.2	102			%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:**	14-2017-2034
Lab Order:	18L030	**Collection:**	N/A
Lab ID:	Blank	**Matrix:**	Nitrogen

Method QC Data

Batch: MS010103 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	1/3/2019	75-34-3
1,1-Dichloroethene	< 0.5	0.5	< 1.99	1.99		1	1/3/2019	75-35-4
1,2-Dichlorobenzene	< 0.5	0.5	< 3.01	3.01		1	1/3/2019	95-50-1
1,2-Dichloroethane	< 0.5	0.5	< 2.03	2.03		1	1/3/2019	107-06-2
2-Butanone (MEK)	< 5.0	5.0	< 14.8	14.8		1	1/3/2019	78-93-3
Acetone	< 5.0	5.0	< 11.9	11.9		1	1/3/2019	67-64-1
Benzene	< 0.5	0.5	< 1.60	1.60		1	1/3/2019	71-43-2
Chlorobenzene	< 0.5	0.5	< 2.30	2.30		1	1/3/2019	108-90-7
Chloroform	< 0.5	0.5	< 2.44	2.44		1	1/3/2019	67-66-3
cis-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/3/2019	156-59-2
Dichlorodifluoromethane(F-12)	< 1.0	1.0	< 4.95	4.95		1	1/3/2019	75-71-8
Ethylbenzene	< 0.5	0.5	< 2.17	2.17		1	1/3/2019	100-41-4
m&p-Xylene	< 1.0	1.0	< 4.34	4.34		1	1/3/2019	179601-23-1
Methylene chloride	< 2.0	2.0	< 6.94	6.94		1	1/3/2019	75-09-2
o-Xylene	< 0.5	0.5	< 2.17	2.17		1	1/3/2019	95-47-6
Tetrachloroethene	< 1.0	1.0	< 6.78	6.78		1	1/3/2019	127-18-4
Tetrahydrofuran	< 2.0	2.0	< 5.90	5.90		1	1/3/2019	109-99-9
Toluene	< 0.5	0.5	< 1.89	1.89		1	1/3/2019	108-88-3
trans-1,2-Dichloroethene	< 0.5	0.5	< 1.98	1.98		1	1/3/2019	156-60-5
Trichloroethene	< 0.5	0.5	< 2.69	2.69		1	1/3/2019	79-01-6
Trichlorofluoromethane(F-11)	< 0.5	0.5	< 2.81	2.81		1	1/3/2019	75-69-4
Trichlorotrifluoroethane(F-113)	< 0.5	0.5	< 3.83	3.83		1	1/3/2019	76-13-1
Vinyl chloride	< 0.5	0.5	< 1.28	1.28		1	1/3/2019	75-01-4
Surr: 4-Bromofluorobenzene	90.0	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:**	14-2017-2034
Lab Order:	18L030	**Collection:**	N/A
Lab ID:	LCS/LCSD	**Matrix:**	Nitrogen

Method QC Data

Date Analyzed: 1/3/2019 Batch: MS010103 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)	9.7	96.9	9.7	96.5	10.0	0.4	ppbv			
Vinyl Chloride	10.0	100	9.1	91.0	10.0	9.6	ppbv			
Trichlorofluoromethane (F-11)	8.6	86.3	8.8	87.5	10.0	1.4	ppbv			
Acetone	9.5	95.3	10.3	103	10.0	8.0	ppbv			
1,1-Dichloroethene	9.7	97.2	10.0	100	10.0	2.5	ppbv			
Trichlorotrifluoroethane (F-113)	8.6	85.8	8.8	88.4	10.0	3.0	ppbv			
Methylene Chloride	9.5	95.3	9.8	98.1	10.0	2.9	ppbv			
trans-1,2-Dichloroethene	8.8	88.1	9.1	91.1	10.0	3.3	ppbv			
1,1-Dichloroethane	10.5	105	10.4	104	10.0	1.0	ppbv			
2-Butanone (MEK)	9.4	93.5	9.3	92.8	10.0	0.8	ppbv			
cis-1,2-Dichloroethene	8.8	87.8	9.3	93.0	10.0	5.8	ppbv			
Chloroform	9.2	91.5	9.2	92.1	10.0	0.7	ppbv			
Tetrahydrofuran	11.1	111	11.6	116	10.0	4.1	ppbv			
1,2-Dichloroethane	9.3	92.7	8.9	89.4	10.0	3.6	ppbv			
Benzene	9.3	92.6	9.5	94.6	10.0	2.1	ppbv			
Trichloroethene	9.0	90.3	9.3	92.5	10.0	2.4	ppbv			
Toluene	9.7	97.0	10.3	103	10.0	5.7	ppbv			
Tetrachloroethene	9.8	97.5	9.7	97.2	10.0	0.3	ppbv			
Chlorobenzene	9.1	90.9	9.2	92.2	10.0	1.4	ppbv			
Ethylbenzene	9.9	98.5	10.0	100	10.0	1.5	ppbv			
m&p-Xylene	20.5	102	20.0	100	20.0	2.1	ppbv			
o-Xylene	9.8	98.4	9.7	97.4	10.0	1.0	ppbv			
1,2-Dichlorobenzene	10.7	107	10.7	107	10.0	0.1	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:	18L030	**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-181217-01	Working IS	AEL Dilution		TO-15 IS 4 Compounds	50 ppbv	± 5%	3/17/2019

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 Street, Suite #600	Sampler: Eric Miller	Phone: (602) 300-8313	181030
	Project Name: Cave Creek Landfill	Project Number: 14-2017-2034	
City, State, Zip: Phoenix, AZ 85034	Project location: Cave Creek, AZ		
Contact: Natalie Chrisman	P.O. Number:		
Phone: (602) 733-6000 Fax: (602) 733-6100	Fax Results: Y N		
E-Mail Address: Natalie.Chrisman@amecfw.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	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	1837	091	6 1 bag	1 2 5	SP4-H1-121918	12.19.18	855	SVE	1			X							
02	1807	022	6 1 bag	1 2 5	SP3-C1-121918	↓	900	↓	↓			X							
03	E2087	024	6 1 bag	1 2 5	SP2-C3-121918	↓	905	↓	↓			X							
04	1847	071	6 1 bag	1 2 5	SP1-SKIDOUTLET-121918	↓	910	↓	↓			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:
12.21.18	1422	E. Miller	

EXHIBIT 1

CAVE CREEK LANDFILL PROGRESS SCHEDULE

ID		Task Name	Duration	Start	Finish	Predecessors
1		**SVE Operations**	1306 days?	Tue 9/15/15	Tue 9/15/20	
2		**GWTS Installation**	**931 days**	**Fri 12/16/16**	**Fri 7/10/20**	
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 10/7/19**	**Fri 7/10/20**	
14		*Design*	3 mons	Mon 10/7/19	Fri 12/27/19	21
15		*Permitting*	1 mon	Mon 12/30/19	Fri 1/24/20	14
16		*Contractor Procurement*	2 mons	Mon 1/27/20	Fri 3/20/20	15
17		*Construction*	4 mons	Mon 3/23/20	Fri 7/10/20	16
18		**Injection Well (IW-01) Installation**	**110 days**	**Mon 5/6/19**	**Fri 10/4/19**	
19		*Drilling/Installation*	51 days	Mon 5/6/19	Sun 7/14/19	
20		*Testing*	13 days	Mon 7/15/19	Wed 7/31/19	
21		*IW-01 Installation Reporting*	45 days	Mon 8/5/19	Fri 10/4/19	
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	17
24		GWTS Operations Planning	2 mons	Mon 7/13/20	Fri 9/4/20	17
25		**2018 Well Installation Program**	**160 days**	**Sun 8/12/18**	**Fri 3/22/19**	
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	75 days	Mon 12/10/18	Fri 3/22/19	
30		**Old Landfill Groundwater Characterization Work Plan**	3.5 mons	Mon 3/18/19	Fri 6/21/19	
31		**Groundwater Model Update**	4 mons	Mon 10/7/19	Fri 1/24/20	21

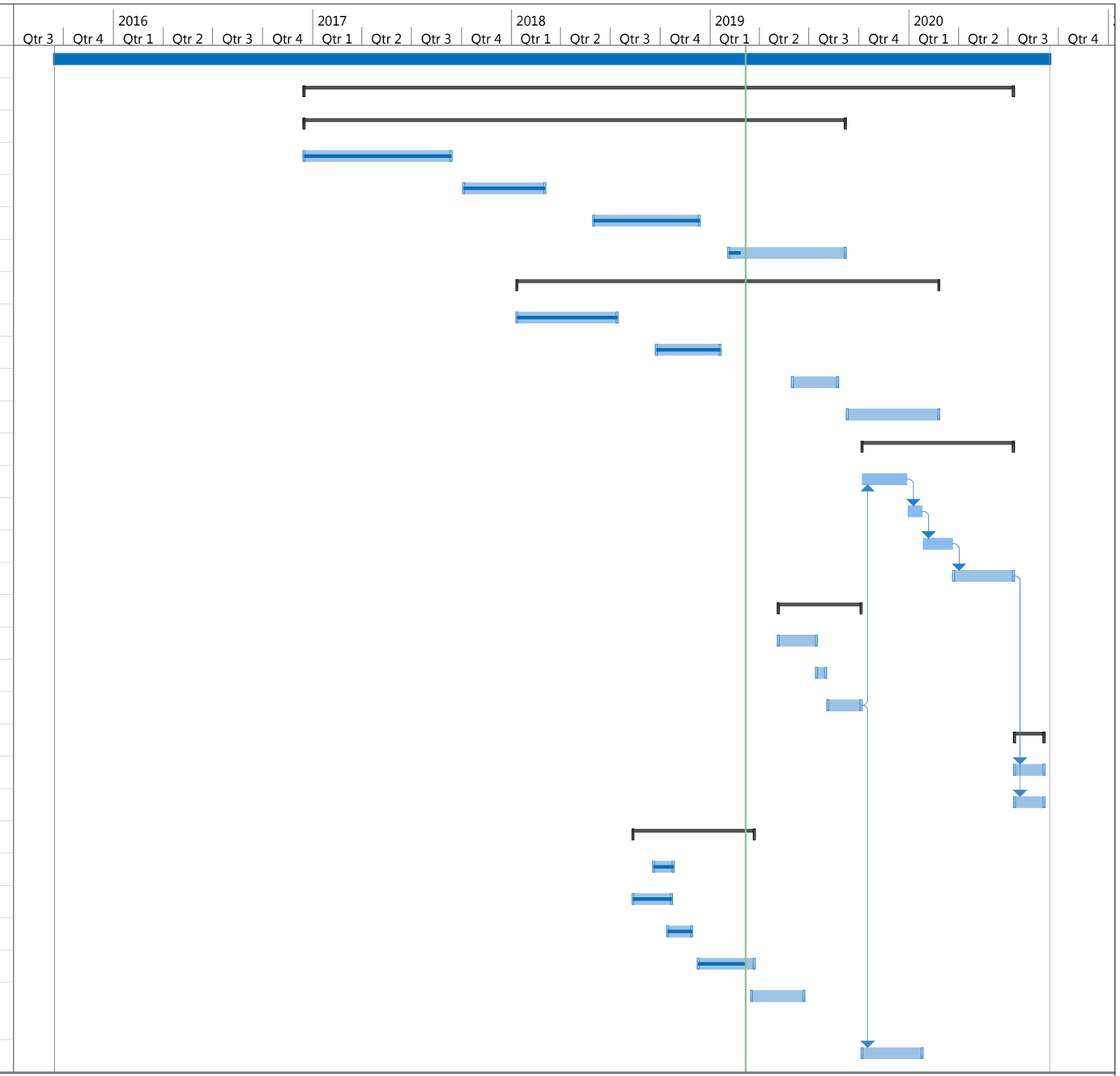
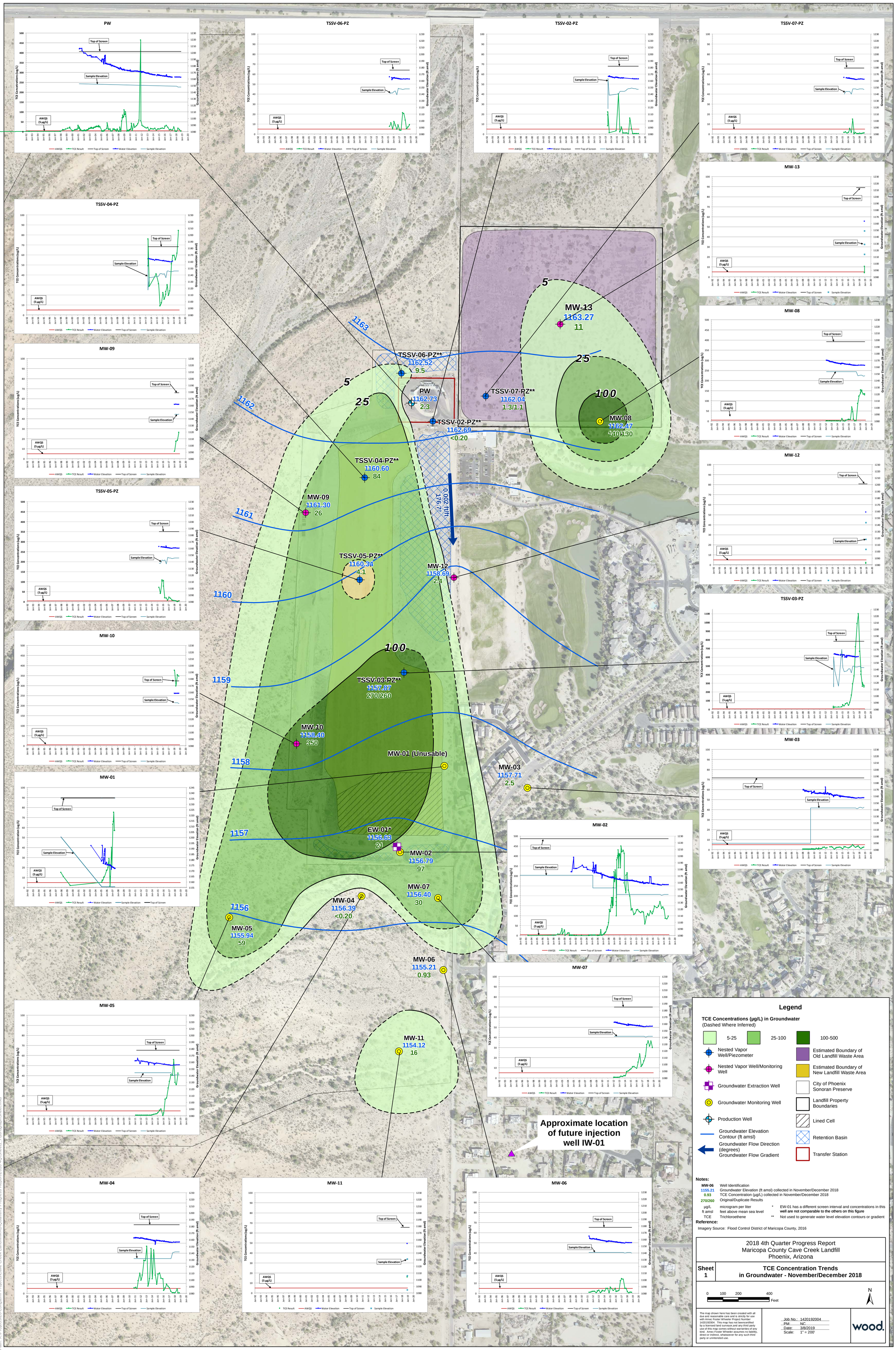


EXHIBIT 1
Project: CCL Project Progress S
Date: Thu 3/7/19

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			

SHEET 1

TCE CONCENTRATION TRENDS IN GROUNDWATER
NOVEMBER/DECEMBER 2018


PW
TSSV-06-PZ
TSSV-02-PZ
TSSV-07-PZ
TSSV-04-PZ
MW-13
MW-09
MW-08
MW-12
TSSV-03-PZ
MW-10
MW-03
MW-01
MW-02
MW-05
MW-07
MW-04
MW-11
MW-06
Top of Screen
Sample Elevation
AWQS (5 µg/L)
TCE Concentrations (ug/L)
Groundwater Elevation (ft amsl)
AWQS
TCE Result
Water Elevation
Top of Screen
Sample Elevation
MW-13
1163.27
11
TSSV-06-PZ**
1162.52
9.5
PW
1162.73
2.3
TSSV-07-PZ**
1162.04
1.3/1.1
TSSV-02-PZ**
1162.69
<0.20
MW-08
1162.47
140/130
TSSV-04-PZ**
1160.60
84
MW-09
1161.30
26
TSSV-05-PZ**
1160.34
4.1
MW-12
1158.69
2.4
0.002 ft/ft
176.7°
TSSV-03-PZ**
1157.87
270/260
MW-10
1158.40
350
MW-01 (Unusable)
MW-03
1157.71
2.5
EW-01*
1156.63
21
MW-02
1156.79
97
MW-07
1156.40
30
MW-04
1156.39
<0.20
MW-05
1155.94
59
MW-06
1155.21
0.93
MW-11
1154.12
16
1163
1162
1161
1160
1159
1158
1157
1156
5
25
100
Approximate location of future injection well IW-01
Legend
TCE Concentrations (µg/L) in Groundwater
(Dashed Where Inferred)
5-25
25-100
100-500
Nested Vapor Well/Piezometer
Nested Vapor Well/Monitoring Well
Groundwater Extraction Well
Groundwater Monitoring Well
Production Well
Groundwater Elevation Contour (ft amsl)
Groundwater Flow Direction (degrees)
Groundwater Flow Gradient
Estimated Boundary of Old Landfill Waste Area
Estimated Boundary of New Landfill Waste Area
City of Phoenix Sonoran Preserve
Landfill Property Boundaries
Lined Cell
Retention Basin
Transfer Station
Notes:
MW-06 Well Identification
1155.21 Groundwater Elevation (ft amsl) collected in November/December 2018
0.93 TCE Concentration (µg/L) collected in November/December 2018
270/260 Original/Duplicate Results
µg/L microgram per liter
ft amsl feet above mean sea level
TCE Trichloroethene
* EW-01 has a different screen interval and concentrations in this well are not comparable to the others on this figure
** Not used to generate water level elevation contours or gradient
Reference:
Imagery Source: Flood Control District of Maricopa County, 2016
2018 4th Quarter Progress Report
Maricopa County Cave Creek Landfill
Phoenix, Arizona
Sheet 1
TCE Concentration Trends in Groundwater - November/December 2018
0 100 200 400 Feet
N
The map shown here has been created with all due and reasonable care and is strictly for use with Amec Foster Wheeler Project Number 1420192004. This map has not beencertified by a licensed land surveyor,and any third party use of this map comes without warranties of any kind. Amec Foster Wheeler assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.
Job No.: 1420192004
PM: NC
Date: 3/8/2019
Scale: 1" = 200'
wood.
Path: X:\Projects\20-Longterm Projects\Cave Creek Landfill\MXD\Quarterly Progress Report\2018 4Q\Sheet1_HydrographSheet.mxd