# 2015 Annual Monitoring Report
# Prudence Landfill
# Tucson, Arizona

**May 17, 2016**

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CITY OF TUCSON
ENVIRONMENTAL SERVICES

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# Acronyms

| | |
|---|---|
| 1,1-dichloroethane | 1,1 DCA |
| Aquifer Water Quality Standards | AWQS |
| Arizona Department of Environmental Quality | ADEQ |
| Below Ground Surface | bgs |
| Carbon Dioxide | $CO_2$ |
| Cis-1,2 dichloroethene | cis-1,2 DCE |
| City of Tucson Environmental Services | COT-ES |
| Dichlorodifluoromethane | DCFA |
| Feet | ft |
| Feet above mean sea level | ft amsl |
| Non-detect | ND |
| Methane | $CH_4$ |
| Micrograms per liter | µg/l |
| Milligrams per liter | mg/l |
| Oxygen | $O_2$ |
| Quality Assurance / Quality Control | QA/QC |
| Tetrachloroethene | PCE |
| Trichloroethene | TCE |
| Volatile Organic Compounds | VOCs |
| Water Quality Assurance Revolving Fund | WQARF |
| Water Table Elevation | WTE |

## 1.0 Introduction

The City of Tucson - Environmental Services Department (COT-ES) has prepared this report to document groundwater and soil vapor monitoring conducted during 2015 at the Prudence Landfill site. The location of the Prudence landfill site within the City of Tucson is depicted on **Figure 1**. The COT-ES conducts this annual monitoring as part of a discretionary monitoring program at closed landfills within the City.

The Prudence Landfill is approximately 8.5 acres in size and is located along the western bank of the Pantano Wash between 22nd Street and Broadway Boulevard in Tucson, Arizona. The City of Tucson operated the Prudence Landfill between 1974 and 1977[1] and accepted primarily household solid waste[2] for disposal. The landfill meets the definition of a closed solid waste facility under A.R.S. 49-701 and is exempt from State of Arizona rules regulating solid waste facilities. However, methane gas monitoring at the Prudence Landfill was directed by the City of Tucson Mayor and Council in August of 1995 as part of a directive to the Solid Waste Management Department to manage and control methane gas from landfills within the City. The Mayor and Council placed an evaluation of methane gas hazards as the highest priority and also directed the COT-ES to subsequently evaluate and establish protocols for other environmental concerns, including groundwater quality conditions, at City landfills[3,4]. To be protective of nearby residences and other developments, COT-ES voluntarily monitors methane gas concentrations on a quarterly basis and operates a methane gas extraction system, constructed in 1995, to prevent methane gas from migrating from the Prudence Landfill property. The COT-ES also voluntarily collects groundwater and soil vapor samples to assess the level of environmental risk, if any, posed by the landfill.

## 2.0 Monitoring Activities

In December 2015, the COT-ES conducted a biennial (every two years) monitoring event at the following groundwater monitoring wells and soil vapor probes:

Groundwater Monitoring Wells

- R-124A
- R-125A
- WR-435A

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[1] URS, Historical Summary Report: Prudence Landfill/Gollob Park Area Tucson, Arizona, March 5, 2004
[2] Dames & Moore, Landfill Environmental Studies Program Phase I (LESPI), 1989
[3] Solid Waste Management Department: Memorandum to Mayor and Council, Closed Landfill Investigation Summary, February 18, 1998
[4] Mayor and Council Memorandum, Update on Landfill Methane Monitoring and Compliance, March 15, 1999

Soil Vapor Probes

- R-125A
- WR-434A

The location of these monitoring wells and vapor probes is shown on **Figure 2.** The COT-ES also conducts quarterly monitoring of perimeter landfill gas (LFG) probes PRUD-1 through PRUD-20. The Arizona Department of Environmental Quality (ADEQ), with the assistance of their contractor Amec Foster Wheeler, conducted a groundwater monitoring event and elevation survey in February and March of 2015 using a network of 85 monitoring wells located at the nearby Broadway-Pantano Water Quality Assurance Revolving Fund (WQARF) Landfill site. The WQARF site investigations include the Broadway North and Broadway South Landfills, but the water level measurements and contour map from the WQARF site also encompasses the Prudence Landfill site. When feasible, the ADEQ data and interpretations (i.e. groundwater contours) are referenced to provide a more comprehensive overview of the area and to increase the efficiency of reporting for the Prudence Landfill.

### *2.1 Groundwater Level Monitoring*

In December 2015, the COT-ES collected groundwater levels from three monitoring wells at Prudence Landfill during the biennial monitoring event. Groundwater elevations have been on a rising trend and have increased an average of 22 feet since 2005. The graph shown on **Figure 3** depicts the rise in groundwater levels at the landfill site. ADEQ performed a gauging event in February and March 2015 for the Broadway-Pantano WQARF area which included wells in the direct vicinity of Prudence Landfill. The ADEQ potentiometric groundwater contour map for February and March 2015, which is provided in **Appendix F**[5], indicates that groundwater flows toward the northwest from the Prudence Landfill with an approximate horizontal gradient of 0.0027 feet/foot. The February and March 2015 groundwater flow direction is consistent with historic groundwater flow data.

### *2.2 Groundwater Sampling Procedures and Results*

The COT-ES conducted the biennial sampling event from December 15 to December 16, 2015 at groundwater wells R-124A, R-125A, and WR-435A. The wells were sampled in order of increasing PCE concentration (non-detect to highest concentrations) based on analytical results from previous sampling events. Prior to sample collection, each well was purged a minimum of three well volumes using either a dedicated submersible pump or a decontaminated temporary pump.

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[5] Amec Foster Wheeler, Sitewide Groundwater Monitoring Report, December 2014 through March 2015, Broadway-Pantano WQARF Site, Tucson, Arizona, December 15, 2015

A multi-parameter YSI meter equipped with a flow-through cell was utilized to continuously monitor groundwater quality parameters including temperature, pH, specific conductance, dissolved oxygen and oxidation-reduction potential (ORP) during sample collection. Turbidity was measured using a Hanna Instrument.

Groundwater samples were collected after a minimum of three well volumes were purged from each well and field water quality parameters had stabilized. The stabilization parameters are provided on the field data sheets provided in **Appendix A.**

Purge water was directed through a granular-activated carbon (GAC) vessel, unless the well had a history of non-detect for VOCs. Purge water obtained from on-site wells with a history of non-detect levels was discharged to the ground surface. Purge water, regardless of treatment with GAC or direct discharge, was not allowed to enter any jurisdictional waterways. All non-dedicated sampling equipment was decontaminated prior to each use.

Immediately following purging of the wells, groundwater samples were collected from the spigot on the sampling equipment. The flow rate was reduced to minimize volatilization of VOCs during sampling. Groundwater samples were collected and analyzed for VOCs and inorganic compounds specified on analyte lists provided in **Appendix A.** Groundwater samples were labeled and placed in laboratory-supplied containers with an internal temperature of 4 ± 2 degrees Celsius and submitted to the Tucson Water Quality Laboratory for analysis.

Field quality assurance protocols followed during the COT-ES sampling event included:

- One trip blank sample was collected once each day or one sample for each cooler.
- Collection of one duplicate sample.
- Collection of one equipment blank sample for each day of use of a non-dedicated pump.

### *2.2.1 VOC Analytical Groundwater Results*

There were no VOC or inorganic compounds which exceeded their respective AWQS in the groundwater samples analyzed from wells R-124A, R-125A or WR-435A. Field data forms and laboratory analytical reports for this sampling event are provided in **Appendix A.**

Groundwater monitoring well R-124A, which is located downgradient of the Prudence Landfill, had detects for five VOCs including bromodichloromethane at 0.6 µg/l, chloroform at 2.7 µg/l, dichlorodifluoromethane (DCFA) at 2.3 µg/l, PCE at 1.6 µg/l and total trihalomethanes at 3.2 µg/l. A summary of the analytical results for these monitoring wells is provided on **Table 3.** VOCs were not detected at monitoring well R-125A, which is located upgradient of the Prudence Landfill. Monitoring well WR-435A, which is located downgradient of the Broadway South Landfill had a detect of DCFA at 0.7 µg/l and PCE at 1.8 µg/l. PCE concentrations appear to be generally stable at the site since 2009, as shown on **Figure 4.**

### *2.2.2 Inorganic Analytical Groundwater Results*

There were no inorganic compounds which exceeded their respective AWQS values as shown on **Table 4.** At monitoring well R-125A, concentrations of alkalinity, total dissolved solids, sulfate, sodium, magnesium, calcium and barium appear to be on an increasing trend, as shown on the graphs provided in **Appendix B.** Concentrations of calcium also appear to be increasing in well R-124A. Concentrations of total organic carbon increased in well WR-435A from 0.32 mg/l (2013) to 1.23 mg/l (2015). The remaining parameters are stable or decreasing.

### *2.2.3 Quality Assurance / Quality Control Groundwater Results*

Quality assurance/quality control (QA/QC) analyses for the 2015 sampling event included one duplicate sample analysis, one equipment blank sample analysis and two trip blank sample analyses. Analytical results for QA/QC samples are presented in the laboratory reports in **Appendix A** and duplicate comparisons are summarized in the table provided in **Appendix C**.

There were no analytes detected in any of the trip or equipment blank samples.

The laboratory percent recoveries were within laboratory quality assurance objectives for accuracy, except for the data qualifiers listed in the case narratives presented in **Appendix A.** There were no significant data qualifiers or issues presented in the case narratives. All data qualifiers were within acceptable quality and would not affect data results.

The sample duplicate for well R-124A was compared with the original sample analyses to evaluate the degree of laboratory and field precision. The relative percent differences (RPD) between the sample and its duplicate for all detected analytes were less than 30 percent, except for iron with an RPD of 170 percent. In reviewing the field sampling sheet in **Appendix A**, there was no indication of a cause for the large variability for the iron concentrations, such as colored purge water, high turbidity, surging pump and/or unstable parameters. There were also no items of significance noted in the laboratory report and/or chain of custody for this sample. The COT-ES is unable to identify a reason for this variability, but this compound does not have an AWQS and is not a site constituent of concern. Therefore, the COT-ES does not consider this to be a significant quality control issue. The remaining parameters are below the 30 percent RPD with the highest RPD at 18 percent.

## *2.3 Soil Vapor Monitoring Protocol and Results*

The COT-ES monitors VOCs in soil vapor to assess vadose zone conditions at the Prudence Landfill site. There are no regulatory standards for this data. Deep nested soil vapor probes were installed to measure possible impacts to groundwater from vapor phase VOCs migrating from the disposed waste. The nested soil vapor wells at R-125A and WR-434A were monitored for VOCs on December 16, 2015.

Prior to sampling, each probe was purged using a vacuum pump. The purge volume for each well was the equivalent of three casing volumes of air. Landfill gas concentrations were measured

using a Landtec GEM 2000 Gas Analyzer and Extraction Monitor to determine the initial and final readings of methane, carbon dioxide and oxygen. **Appendix D** contains field sampling forms and **Table 5** provides a field parameter summary of the final measurements for each probe. Soil vapor samples were collected in canisters and submitted to Airtech Environmental Laboratories in Phoenix, Arizona for VOC analyses by EPA Method Toxic Organics 15. **Appendix D** contains the laboratory reports for these landfill gas samples and **Table 4** provides a summary of select VOCs.

### *2.3.1 Soil Vapor Results*

During the 2015 sampling event, the highest soil vapor PCE concentration was observed in probe WR-434A at 250 feet below ground surface at a concentration of 1.1 µg/l. The highest TCE concentration was observed also in probe WR-434A at 250 feet below ground surface at a concentration of 0.234 µg/l. Tabulated summaries of soil vapor monitoring results are provided on **Table 4** and **Table 5** and **Figure 5** depicts the soil vapor PCE concentrations versus time for probes R-125A and WR-434A. The TCE concentrations have not been plotted since these trends closely follow the PCE trends.

The maximum soil vapor concentrations observed are low compared to the estimated Groundwater Protection Levels (GPLs) for the Prudence Landfill as established in 2008 by Hargis & Associates[6]. The table below compares the maximum detected soil vapor values obtained in 2015 to the Prudence landfill GPLs. The current PCE and TCE soil vapor concentrations are below the estimated GPLs and, therefore, there is a low probability of soil vapor VOC impacts to groundwater above AWQSs.

| Compound | 2016 Maximum Detected Concentrations (µg/l) | Prudence Landfill GPLs (µg/l) |
|---|---|---|
| PCE | 1.1 | 70 |
| TCE | 0.234 | 27 |
| Vinyl chloride | ND | 851 |
| Cis-1,2 DCE | 0.499 | 322 |

ND = Not Detected

The VOC soil vapor concentrations are relatively lower than the year 2013 data. Based on a review of field parameter stabilization readings, ambient air conditions ($CO_2$ at approximately 1 percent and $O_2$ at approximately 20 percent) were observed at the following probes: WR-434, 150 feet below ground surface, WR-434A, 350 feet below ground surface, R-125A, 50 feet below ground surface, R-125A, 145 feet below ground surface and R-125A, 250 feet below ground surface. Ambient air conditions in the final field readings indicate atmosphere air intrusion may have occurred into the VOC samples. Each of these probes did not have any

[6] EEC and Hargis & Associates, Inc. Soil Vapor Assessment at Los Reales, Prudence, Vincent Mullins, Irvington, Cottonwood, and Ryan Landfills, April 10, 2008

detects for the commonly detected landfill constituents PCE, TCE, cis-1,2-DCE, trichlorofluoromethane and DCFM, as shown on **Table 4**. The COT-ES will investigate the integrity of each probe by evaluating the probe connections above ground for potential ambient air access, measuring the total depth of each probe for potential collapse and re-purging each probe to observe if subsurface air conditions can be obtained. These probes will not be resampled for VOCs because previous soil vapor concentrations have been consistently low in comparison to the site specific GPLs (**Figure 5** and **Table 4**) and there are no regulatory standards for this data.

### *2.3.2 Shallow Perimeter Landfill Gas Monitoring*

In 2015, shallow landfill gas probes PRUD-1 through PRUD-20 were monitored on a quarterly basis by the COT-ES in January, April, July and October. During the October 2015 monitoring event, methane was detected at probe PRUD-16 at 25 feet below ground surface in the first methane reading at a concentration of 1.1 percent by volume. The second methane reading at this probe was 0 percent by volume and the third methane reading at probe PRUD-16 was 1.2 percent by volume. A summary of the shallow perimeter methane gas monitoring results is provided in **Appendix E**. The COT-ES initiated a weekly methane gas monitoring schedule at probe PRUD-16, at depths of 15 feet and 25 feet below ground surface, from October 16, 2015 to November 6, 2015. Concentrations of methane decreased to 0.7 percent on October 16, 2015 to non-detect (0 percent) for the subsequent monitoring events. The on-site gas extraction system operates daily except during the hours of 3 P.M. to 9 P.M. to prevent migration of methane to the neighboring properties. The COT-ES will continue to monitor these probes on a quarterly basis.

## 3.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are provided based on the environmental monitoring conducted in 2015:

- Since 2004, the COT-ES has monitored groundwater monitor wells R-124A and R-125A at the Prudence Landfill. There have been no VOCs detected above regulatory standards from 2004 to the present time.

- Monitoring well WR-435A, which is downgradient from both the Prudence Landfill and the Broadway South landfill, also has had no exceedances of the AWQS for all constituents, including PCE, from 2001 to the present time.

- An analysis of the trends of VOC and inorganic compound data indicates that there are no impacts above regulatory standards to the groundwater from the Prudence Landfill.

- The groundwater flow direction toward the northwest in the Prudence Landfill area is consistent with historical findings of the groundwater flow direction. Groundwater elevations have been on a rising trend and have increased an average of 22 feet since 2005.

- Soil vapor concentrations are significantly less than the calculated site specific GPLs.

- The COT-ES will reduce groundwater and deep soil vapor monitoring frequency from once every two years to once every five years. The groundwater and deep soil vapor concentrations are stable and less than regulatory standards. The next groundwater and deep soil vapor monitoring event is scheduled for 2020.

- Methane was detected in shallow probe PRUD-16 during the October 2015 monitoring event. After this finding, the COT-ES initiated a weekly monitoring schedule and methane concentrations quickly decreased. The COT-ES will continue quarterly landfill gas perimeter monitoring and adjust the landfill gas extraction system as needed based on the monitoring results from the shallow probes.

- The COT-ES inspects and maintains the Prudence Landfill to correct problems such as wildcat dumping, erosion of the final soil cover and vandalism of the wells. All groundwater and deep vapor monitoring wells at the landfill are inspected and repaired on an on-going basis to ensure they are secure and in proper working order.

# TABLES

# Table 1
# Well Information
# Prudence Landfill

| | Vapor Probe Information | | | | Groundwater Well Information | | | |
|---|---|---|---|---|---|---|---|---|
| **Well Name** | **Vapor Probe Depth (ft bgs)** | **Probes Diameter (inches)** | **Probe Material** | | **Well Depth (ft bgs)** | **Well Diameter (inches)** | **Screened Interval (ft bgs)** | **Casing Material** |
| **D-039A** | *No vapor probes installed.* | | | | 435 | 12 | 193-435 | Steel |
| **D-040A** | *No vapor probes installed.* | | | | 556 | 12 | 222-402 | Steel |
| | | | | | | 10 | 410-556 | Steel |
| **D-041A** | *No vapor probes installed.* | | | | 702 | 12 | 249-457 | Steel |
| | | | | | | 10 | 337-702 | Steel |
| **R-124A** | 50* | 0.5 | SCH 40 PVC | | 410 | 5 | 370-410 | SCH 80 PVC |
| | 145* | 0.5 | SCH 40 PVC | | | | | |
| | 246* | 0.5 | SCH 40 PVC | | | | | |
| | 354.55* | 0.5 | SCH 40 PVC | | | | | |
| **R-125A** | 50 | 0.5 | SCH 40 PVC | | 395 | 5 | 355-395 | SCH 80 PVC |
| | 140 | 0.5 | SCH 40 PVC | | | | | |
| | 250 | 0.5 | SCH 40 PVC | | | | | |
| | 335 | 0.5 | SCH 40 PVC | | | | | |
| **WR-434A** | 50 | 0.5 | SCH 40 PVC | | | *No groundwater well installed.* | | |
| | 150 | 0.5 | SCH 40 PVC | | | | | |
| | 250 | 0.5 | SCH 40 PVC | | | | | |
| | 350 | 0.5 | SCH 40 PVC | | | | | |
| **WR-435A** | *No vapor probes installed.* | | | | 420 | 5 | 330-420 | SCH 80 PVC |

ft bgs = feet below ground surface.
* Probes were abandoned February 2014.

TABLE 2
GROUNDWATER MONITOR WELLS
CONCENTRATION OF SELECTED VOCs (ug/L)
PRUDENCE LANDFILL

| Well Name | Notes | Date | *cis*-1,2-DCE | DCFA | MC | PCE | TCE | VC |
|---|---|---|---|---|---|---|---|---|
| D-039A | A | 10/30/08 | <1.0 | <5.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-039A | A | 11/12/07 | <1.0 | <5.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-039A | A | 04/23/07 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-039A | A | 11/13/06 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-039A | | 07/25/00 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 |
| D-039A | * | 07/25/00 | <0.5 | 0.8 | <0.5 | <0.5 | <0.5 | <0.5 |
| D-039A | | 06/24/99 | <0.5 | <0.5 | <1.0 | <0.5 | <0.5 | <0.5 |
| D-039A | * | 06/24/99 | <0.5 | <0.5 | <1.0 | <0.5 | <0.5 | <0.5 |
| | | | | | | | | |
| D-040A | A | 10/30/08 | <1.0 | <5.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-040A | A | 11/12/07 | <1.0 | <5.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-040A | A | 04/23/07 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-040A | A | 11/13/06 | <1.0 | <1.0 | <5.0 | <1.0 | <1.0 | <1.0 |
| D-040A | | 06/23/99 | <0.5 | <0.5 | <1.0 | <0.5 | <0.5 | <0.5 |
| | | | | | | | | |
| D-041A | | 05/25/06 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| D-041A | * | 05/25/06 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| D-041A | | 10/15/01 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| D-041A | | 06/22/99 | <0.5 | <0.5 | <1.0 | <0.5 | <0.5 | <0.5 |
| | | | | | | | | |
| R-124A | * | 12/15/15 | <0.5 | 2.4 | <0.5 | 1.7 | <0.5 | <0.5 |
| R-124A | | 12/15/15 | <0.5 | 2.3 | <0.5 | 1.6 | <0.5 | <0.5 |
| R-124A | | 11/25/13 | <0.5 | 2 | <0.5 | 1.5 | <0.5 | <0.5 |
| R-124A | * | 11/25/13 | <0.5 | 2 | <0.5 | 1.5 | <0.5 | <0.5 |
| R-124A | | 09/20/11 | <0.5 | 2.1 | <0.5 | 1.2 | <0.5 | <0.5 |
| R-124A | | 09/20/11 | <0.5 | 2 | <0.5 | 1.2 | <0.5 | <0.5 |
| R-124A | | 11/17/10 | <0.5 | 2.6 | <0.5 | 1.9 | <0.5 | <0.5 |
| R-124A | | 11/16/09 | <0.5 | 1.7 | <0.5 | 2 | <0.5 | <0.5 |
| R-124A | * | 11/16/09 | <0.5 | 2 | <0.5 | 2 | <0.5 | <0.5 |
| R-124A | | 11/12/08 | <0.5 | 1.1 | <0.5 | 0.9 | <0.5 | <0.5 |
| R-124A | * | 11/12/08 | <0.5 | 1.1 | <0.5 | 1 | <0.5 | <0.5 |
| R-124A | | 11/19/07 | <0.5 | 0.7 | <0.5 | 0.6 | <0.5 | <0.5 |
| R-124A | | 11/19/07 | <0.5 | 0.8 | <0.5 | 0.7 | <0.5 | <0.5 |
| R-124A | | 12/20/06 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-124A | | 12/20/06 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-124A | | 06/15/06 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-124A | | 12/19/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-124A | | 09/21/05 | <0.5 | 0.6 | <0.5 | 0.6 | <0.5 | <0.5 |
| R-124A | * | 09/21/05 | <0.5 | 0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-124A | | 06/06/05 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-124A | | 03/28/05 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-124A | * | 03/28/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-124A | D | 08/06/04 | <0.5 | <2.0 | <3.0 | <0.5 | <0.5 | <0.5 |
| | | | | | | | | |

TABLE 2
GROUNDWATER MONITOR WELLS
CONCENTRATION OF SELECTED VOCs (ug/L)
PRUDENCE LANDFILL

| Well Name | Notes | Date | *cis*-1,2-DCE | DCFA | MC | PCE | TCE | VC |
|---|---|---|---|---|---|---|---|---|
| R-125A | | 12/15/15 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 11/25/13 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 09/20/11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 11/17/10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 11/17/10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 11/16/09 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 11/12/08 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 11/19/07 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-125A | | 12/20/06 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 06/15/06 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-125A | * | 06/15/06 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 |
| R-125A | | 12/19/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | * | 12/19/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 09/21/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 06/06/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | * | 06/06/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | | 03/28/05 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| R-125A | D | 08/06/04 | <0.5 | <2.0 | <3.0 | <0.5 | <0.5 | <0.5 |
| | | | | | | | | |
| | | | | | | | | |
| WR-435A | | 12/16/15 | <0.5 | 0.7 | <0.5 | 1.8 | <0.5 | <0.5 |
| WR-435A | | 11/26/13 | <0.5 | 0.5 | <0.5 | 1.7 | <0.5 | <0.5 |
| WR-435A | A | 9/23/2011 | <1.0 | <4.0 | <4.0 | 1.3 | <1.0 | <1.0 |
| WR-435A | | 9/22/2011 | <0.5 | <0.5 | <0.5 | 0.9 | <0.5 | <0.5 |
| WR-435A | | 11/22/10 | <0.5 | <0.5 | <0.5 | 0.8 | <0.5 | <0.5 |
| WR-435A | A | 10/30/08 | <1.0 | <5.0 | <5.0 | 1.9 | <1.0 | <1.0 |
| WR-435A | A* | 10/30/08 | <1.0 | <5.0 | <5.0 | 2.3 | <1.0 | <1.0 |
| WR-435A | A | 04/07/08 | <1.0 | <5.0 | <5.0 | 1.4 | <1.0 | <1.0 |
| WR-435A | A* | 04/07/08 | <1.0 | <5.0 | <5.0 | 1.4 | <1.0 | <1.0 |
| WR-435A | A | 11/12/07 | <1.0 | <5.0 | <5.0 | 1.1 | <1.0 | <1.0 |
| WR-435A | A | 04/25/07 | <1.0 | 2.4 | <5.0 | 1.6 | <1.0 | <1.0 |
| WR-435A | A | 11/13/06 | <1.0 | 2.5 | <1.0 | 1.5 | <1.0 | <1.0 |
| WR-435A | A | 04/05/06 | <1.0 | 1.5 | <5.0 | <1.0 | <1.0 | <1.0 |
| WR-435A | A | 11/17/05 | <0.5 | 3 | <3.0 | 2 | <0.5 | <0.5 |
| WR-435A | A | 05/17/05 | <0.5 | <2.0 | <3.0 | 1.4 | <0.5 | <0.5 |
| WR-435A | A | 11/18/04 | <0.5 | 2.3 | <3.0 | 2.2 | <0.5 | <0.5 |
| WR-435A | * | 11/18/04 | <0.5 | 2.4 | <3.0 | 2.2 | <0.5 | <0.5 |
| WR-435A | A | 05/13/04 | <0.5 | 3.7 | <3.0 | 2.0 | <0.5 | <0.5 |
| WR-435A | A | 12/01/03 | <0.5 | 3.3 | <3.0 | 2.4 | <0.5 | <0.5 |
| WR-435A | | 03/18/03 | <0.5 | 1.7 | <1.0 | 2.4 | <0.5 | <0.5 |
| WR-435A | | 08/08/02 | <0.5 | 1.9 | <1.0 | 3.6 | <0.5 | <0.5 |

TABLE 2
GROUNDWATER MONITOR WELLS
CONCENTRATION OF SELECTED VOCs (ug/L)
PRUDENCE LANDFILL

| Well Name | Notes | Date | *cis*-1,2-DCE | DCFA | MC | PCE | TCE | VC |
|---|---|---|---|---|---|---|---|---|
| WR-435A | | 05/07/02 | <0.5 | 1.5 | <1.0 | 2 | <0.5 | <0.5 |
| WR-435A | | 02/13/02 | <0.5 | 1 | <1.0 | 0.9 | <0.5 | <0.5 |
| WR-435A | | 11/07/01 | <0.5 | 1.5 | <1.0 | 2.2 | <0.5 | <0.5 |
| WR-435A | * | 11/07/01 | <0.5 | 0.8 | <1.0 | 0.8 | <0.5 | <0.5 |
| WR-435A | | 09/18/01 | <0.5 | 0.8 | <0.5 | 0.6 | <0.5 | <0.5 |
| WR-435A | * | 09/18/01 | <0.5 | 0.8 | <0.5 | 0.5 | <0.5 | <0.5 |

* = Duplicate Sample
[D] = Sample taken during well development
[A] = Sample taken by ADEQ for Broadway-Pantano WQARF site
[B] = Sample taken by grab method, bailer.
All Analysis performed by the Tucson Water Quality Laboratory

Parameters:
cis-1,2-DCE = cis-1,2-dichloroethene
DCFA = dichlorodifluoromethane
MC = methylene chloride
PCE = tetrachloroethene
TCE = trichloroethene
VC = vinyl chloride

TABLE 3
PRUDENCE LANDFILL
GROUNDWATER MONITOR WELLS
CONCENTRATION OF SELECTED INORGANIC COMPOUNDS (mg/L)

| Well Name | Notes | Date | Barium | Calcium | Sodium | Nitrate | Nitrite | Bicarbonate Alkalinity | Fluoride | Sulfate | Chloride | Total Phosphate as P | Potassium | Hardness (CaCO3) | Total Dissolved Solids | Total Suspended Solids | Total Organic Carbon | Iron | Arsenic | Lead | Copper | Magnesium | Manganese | Zinc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D-039A | | 6/24/1999 | 0.18 | 58 | 28 | 4.7 | <0.1 | 153 | 0.19 | 47 | 7.3 | 0.014 | 1.8 | 162 | 295 | 17.1 | 0.43 | 34 | <0.002 | 0.007 | 0.067 | 5.6 | 0.33 | 0.45 |
| D-039A | * | 6/241999 | 0.2 | 56 | 28 | 4.8 | <0.1 | 150 | 0.18 | 46 | 7.4 | 0.034 | 1.7 | 167 | 288 | 16.2 | 0.37 | 15 | 0.003 | 0.011 | 0.1 | 5.5 | 0.61 | 0.51 |
| D-039A | | 7/25/2000 | 0.16 | 60 | 29 | 4.4 | <0.1 | 168 | 0.25 | 48 | 7.7 | 0.01 | 1.8 | 176 | 294 | 3.3 | .32 | 1.3 | <0.0015 | 0.015 | <0.02 | 5.9 | 0.047 | 0.19 |
| D-039A | * | 7/25/2000 | 0.16 | 61 | 30 | 4.4 | <0.1 | 168 | 0.17 | 48 | 7.6 | 0.01 | 1.8 | 174 | 292 | 3.1 | .31 | 2 | <0.0015 | 0.026 | <0.02 | 6 | 0.054 | 0.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| D-040A | | 6/23/1999 | 0.15 | 59 | 22 | 5.8 | <0.1 | 158 | 0.14 | 43 | 3.2 | 0.024 | 1.7 | 171 | 353 | 5.6 | 0.31 | 0.51 | <0.002 | 0.004 | 0.049 | 5.8 | 0.02 | 0.38 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| D-041A | | 6/22/1999 | 0.17 | 64 | 24 | 4.6 | <0.1 | 186 | 0.13 | 36 | 5.3 | <0.01 | 1.7 | 185 | 384 | 2 | 0.4 | 0.46 | <0.002 | 0.003 | <0.02 | 6.2 | 0.031 | 0.36 |
| D-041A | | 10/15/2001 | 0.18 | 70 | 25 | 5 | <0.1 | 194 | <0.1 | 35 | 9.2 | 0.054 | 1.7 | 202 | 342 | 1.9 | 0.53 | 0.31 | <0.002 | 0.011 | <0.02 | 6.6 | 0.027 | 0.18 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| R-124A | | 3/28/2005 | 0.25 | 94 | 31 | 2.6 | <0.1 | 275 | <0.1 | 25 | 5.3 | 0.057 | 2.2 | 273 | 377 | 6.9 | 0.38 | 0.43 | <0.002 | .008 | 0.1 | 9.2 | <0.02 | 0.094 |
| R-124A | * | 3/28/2005 | 0.23 | 91 | 30 | 2.7 | <0.1 | 272 | <0.1 | 25 | 5.1 | 0.048 | 2.1 | 263 | 370 | 4.3 | 0.34 | 0.17 | <0.002 | 0.0026 | 0.035 | 8.8 | <0.02 | 0.064 |
| R-124A | | 6/6/2005 | 0.24 | 92 | 31 | 2.7 | <0.1 | 272 | <0.1 | 24 | 5.4 | 0.026 | 2 | 268 | 375 | 1.3 | 0.47 | 0.078 | <0.002 | 0.0027 | 0.067 | 8.9 | <0.02 | 0.054 |
| R-124A | | 9/21/2005 | 0.26 | 95 | 31 | 2.9 | <0.1 | 287 | 0.11 | 24 | 5.5 | 0.039 | 2.1 | 276 | 398 | 10.1 | 0.62 | 0.42 | <0.002 | <0.002 | <0.02 | 9.3 | <0.02 | <0.02 |
| R-124A | * | 9/21/2005 | 0.25 | 94 | 31 | 2.9 | <0.1 | 287 | 0.12 | 25 | 5.5 | 0.039 | 2.1 | 274 | 395 | 11.2 | 0.59 | 0.4 | <0.002 | <0.002 | <0.02 | 9.3 | <0.02 | <0.02 |
| R-124A | | 12/19/2005 | 0.28 | 95 | 31 | 3 | <0.1 | 263 | <0.1 | 24 | 5.3 | 0.074 | 2.3 | 277 | 381 | 63.3 | 0.38 | 1.6 | <0.002 | 0.0033 | 0.075 | 9.5 | 0.031 | 0.049 |
| R-124A | | 12/20/2006 | 0.28 | 91 | 34 | 3.1 | <0.1 | 268 | <0.1 | 25 | 6.8 | 0.11 | 2.1 | 265 | 391 | 29.2 | 0.72 | 1.1 | <0.002 | <0.002 | <0.02 | 9.3 | <0.02 | 0.021 |
| R-124A | | 12/20/2006 | 0.28 | 95 | 34 | 3.2 | <0.1 | 262 | <0.1 | 25 | 6.8 | 0.11 | 2.1 | 276 | 392 | 26.6 | 0.65 | 1 | <0.002 | <0.002 | <0.02 | 9.7 | <0.02 | <0.02 |
| R-124A | | 11/16/2009 | 0.24 | 107 | 33 | 5.1 | <0.1 | 216 | 0.12 | 46 | 66 | 0.015 | 2.2 | 310 | 453 | <1 | 0.92 | 0.037 | <0.002 | <0.002 | <0.02 | 10 | <0.02 | <0.02 |
| R-124A | | 11/16/2009 | 0.24 | 110 | 34 | 5.1 | <0.1 | 219 | 0.12 | 47 | 66 | 0.024 | 2.2 | 320 | 458 | <1 | 0.94 | 0.044 | <0.002 | <0.002 | <0.02 | 11 | <0.02 | <0.02 |
| R-124A | | 11/17/2010 | 0.22 | 111 | 33 | 4.7 | <0.1 | 209 | <0.1 | 45 | 72 | NA | 2.2 | NA | 517 | NA | 1.07 | 0.056 | <0.002 | <0.002 | NA | 11 | <0.02 | NA |
| R-124A | | 9/20/2011 | 0.22 | 105 | 32 | 3.9 | <0.1 | 227 | <0.1 | 43 | 52 | NA | 2 | NA | 454 | NA | 0.65 | <.2 | <0.002 | <0.002 | NA | 9.9 | <0.02 | NA |
| R-124A | | 9/20/2011 | 0.22 | 105 | 32 | 3.9 | <0.1 | 232 | 0.11 | 42 | 51 | NA | 2.1 | NA | 458 | NA | 0.68 | <.2 | <0.002 | <0.002 | NA | 10 | <0.02 | NA |
| R-124A | | 11/25/2013 | 0.24 | 114 | 34 | 3 | <0.1 | 244 | 0.13 | 41 | 51 | NA | 2.2 | NA | 450 | NA | 0.89 | 0.19 | <0.001 | <0.001 | NA | 11 | <0.02 | NA |
| R-124A | * | 11/25/2013 | 0.23 | 111 | 34 | 3 | <0.1 | 243 | 0.13 | 41 | 51 | NA | 2.2 | NA | 448 | NA | 0.82 | 0.035 | <0.001 | <0.001 | NA | 11 | <0.02 | NA |
| R-124A | | 12/15/2015 | 0.242 | 110 | 34.8 | 3.6 | <0.1 | 306 | 0.143 | 39.1 | 26.8 | NA | 2.19 | NA | 442 | NA | 0.57 | 0.342 | <0.001 | 0.0012 | NA | 11 | <0.02 | NA |
| R-124A | * | 12/15/2015 | 0.24 | 110 | 35.3 | 3.6 | <0.1 | 300 | 0.144 | 39.1 | 26.7 | NA | 2.31 | NA | 441 | NA | 0.56 | 0.028 | <0.001 | <0.001 | NA | 11 | <0.02 | NA |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| R-125A | | 3/28/2005 | 0.2 | 70 | 26 | 1.8 | <0.1 | 208 | <0.1 | 27 | 3.3 | 0.082 | 2 | 206 | 303 | 39 | 0.26 | 3.1 | <0.002 | 0.0034 | 0.042 | 7.3 | 0.048 | 0.054 |
| R-125A | | 6/6/2005 | 0.19 | 71 | 27 | 1.7 | <0.1 | 210 | <0.1 | 26 | 3.6 | 0.045 | 2 | 207 | 307 | 15.3 | 0.4 | 1.1 | <0.002 | 0.0046 | 0.12 | 7.2 | <0.02 | 0.086 |
| R-125A | * | 6/6/2005 | 0.19 | 71 | 27 | 1.7 | <0.1 | 208 | <0.1 | 26 | 3.6 | 0.028 | 2 | 208 | 304 | 10.1 | 0.84 | 0.98 | <0.002 | 0.0034 | 0.078 | 7.2 | <0.02 | 0.058 |
| R-125A | | 9/21/2005 | 0.21 | 72 | 27 | 1.5 | <0.1 | 228 | 0.21 | 26 | 3.4 | 0.057 | 2 | 211 | 326 | 30.8 | 0.67 | 2.8 | <0.002 | <0.002 | <0.02 | 7.4 | 0.033 | <0.02 |
| R-125A | | 12/19/2005 | 0.19 | 68 | 26 | 1.6 | <0.1 | 208 | <0.1 | 26 | 3.3 | 0.34 | 1.9 | 200 | 304 | 10.8 | <0.3 | 1 | <0.002 | 0.0023 | 0.058 | 7 | <0.02 | 0.042 |
| R-125A | | 12/19/2005 | 0.19 | 70 | 26 | 1.6 | <0.1 | 200 | <0.1 | 26 | 3.2 | 0.29 | 1.9 | 205 | 305 | 9.4 | 0.36 | 1.2 | <0.002 | 0.0022 | 0.063 | 7.2 | <0.02 | 0.041 |
| R-125A | | 12/20/2006 | 0.22 | 73 | 26 | 1.6 | <0.1 | 216 | 0.1 | 25 | 3.5 | 0.062 | 2.4 | 214 | 314 | 36.2 | 0.48 | 2.2 | <0.002 | <0.002 | 0.045 | 7.8 | 0.035 | 0.039 |
| R-125A | | 11/16/2009 | 0.24 | 89 | 30 | 4 | <0.1 | 244 | 0.13 | 40 | 5.5 | 0.029 | 2 | 261 | 379 | 4.8 | 0.42 | 0.48 | <0.002 | <0.002 | <0.02 | 9.2 | <0.02 | 0.039 |
| R-125A | | 11/17/2010 | 0.24 | 91 | 30 | 3.1 | <0.1 | 248 | <0.1 | 36 | 5 | NA | 2 | NA | 388 | NA | 0.47 | 0.064 | <0.002 | <0.002 | NA | 9.2 | <0.02 | NA |
| R-125A | | 11/17/2010 | 0.23 | 87 | 29 | 3.1 | <0.1 | 246 | <0.1 | 36 | 5.1 | NA | 2 | NA | 391 | NA | 0.47 | 0.029 | <0.002 | <0.002 | NA | 8.9 | <0.02 | NA |
| R-125A | | 9/20/2011 | 0.23 | 87 | 29 | 2.4 | <0.1 | 254 | 0.1 | 35 | 5.2 | NA | 1.9 | NA | 380 | NA | 0.48 | 0.12 | <0.002 | <0.002 | NA | 8.6 | <0.02 | NA |
| R-125A | | 11/25/2013 | 0.26 | 102 | 32 | 1.3 | <0.1 | 292 | 0.14 | 42 | 6.6 | NA | 2.1 | NA | 409 | NA | 0.77 | 0.12 | <0.001 | <0.001 | NA | 10 | <0.02 | NA |
| R-125A | | 12/15/2015 | 0.298 | 115 | 35.1 | 2.82 | <0.1 | 346 | 0.135 | 46.1 | 6.25 | NA | 2.29 | NA | 452 | NA | 0.7 | 0.116 | <0.001 | 0.0014 | NA | 12.1 | <0.02 | NA |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| WR-435A | | 9/18/2001 | NA | NA | NA | 25 | <0.1 | 217 | 0.12 | 30 | 4.5 | NA | 1.9 | NA | 323 | NA | 0.56 | NA | NA | NA | NA | NA | NA | NA |
| WR-435A | * | 9/18/2001 | NA | NA | NA | 25 | <0.1 | 212 | 0.12 | 30 | 4.5 | NA | 1.9 | NA | 325 | NA | 0.42 | NA | NA | NA | NA | NA | NA | NA |
| WR-435A | | 8/8/2002 | <1 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 210 | NA | NA | NA | NA | <0.005 | <0.005 | NA | NA | NA | NA |
| WR-435A | | 3/18/2003 | NA | NA | NA | NA | NA | 220 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| WR-435A | | 11/22/2010 | 0.15 | 60 | 24 | 3.6 | <0.1 | 186 | 0.15 | 29 | 5.9 | NA | 1.5 | NA | 287 | NA | 0.26 | <0.02 | <0.002 | <0.002 | NA | 5.8 | <0.02 | NA |
| WR-435A | | 9/22/2011 | 0.17 | 66 | 27 | 3.6 | <0.1 | 182 | 0.16 | 30 | 7.8 | NA | 1.8 | NA | 291 | NA | 0.69 | 0.73 | <0.002 | <0.002 | NA | 6.6 | <0.02 | NA |
| WR-435A | | 11/26/2013 | 0.17 | 68 | 27 | 3.5 | <0.1 | 175 | 0.21 | 32 | 11 | NA | 1.8 | NA | 298 | NA | 0.32 | 0.094 | <0.002 | <0.001 | NA | 6.7 | <0.02 | NA |
| WR-435A | | 12/16/2015 | 0.177 | 69.5 | 28.2 | 2.98 | <0.1 | 210 | 0.194 | 30.8 | 9.48 | NA | 1.85 | NA | 303 | NA | 1.23 | 0.097 | <0.002 | <0.001 | NA | 6.82 | <0.02 | NA |
| **AWQS** | | | **2** | | | **10** | **1** | | **4** | | | | | | | | | | **0.05** | **0.05** | | | | |

* = Duplicate Sample
NA = not analyzed
All concentrations are in mg/L
All Analysis performed by the Tucson Water Quality Laboratory
Inorganics are monitored every three years.

**TABLE 4**
**Vapor Probe Results - Selected VOCs**
**Prudence Landfill**

| Well | Date | Depth | PCE | TCE | cis-1,2-DCE | VC | TCFM | DCFM |
|---|---|---|---|---|---|---|---|---|
| WR-434A-50' | 12/31/2002 | 50' | 0.08 | 0.0034 | ND | ND | 0.0019 | NA |
| WR-434A-50' | 3/12/2003 | 50' | 0.067 | 0.0022 | ND | 0.0022 | ND | NA |
| WR-434A-50' | 6/5/2003 | 50' | 0.073 | 0.0025 | ND | ND | ND | NA |
| WR-434A-50' | 9/10/2003 | 50' | 0.21 | ND | ND | ND | ND | 0.086 |
| WR-434A-50' | 12/17/2003 | 50' | 0.19 | 0.010 | ND | ND | ND | 0.08 |
| WR-434A-50' | 3/17/2004 | 50' | 0.051 | 0.0072 | ND | ND | ND | 0.036 |
| WR-434A-50' | 6/8/2004 | 50' | 0.45 | 0.034 | ND | ND | ND | 0.3 |
| WR-434A-50' | 8/18/2004 | 50' | 0.11 | ND | ND | ND | ND | 0.096 |
| WR-434A-50' | 9/14/2004 | 50' | 0.13 | ND | ND | 0.025 | ND | 0.23 |
| WR-434A-50' | 12/17/2004 | 50' | 0.23 | 0.0083 | ND | ND | ND | 0.1 |
| WR-434A-50' | 3/17/2005 | 50' | 0.55 | 0.039 | ND | ND | ND | 0.042 |
| WR-434A-50' | 6/23/2005 | 50' | 0.21 | 0.0066 | ND | ND | ND | 0.024 |
| WR-434A-50' | 9/22/2005 | 50' | 0.23 | 0.0094 | 0.0072 | ND | ND | 0.048 |
| WR-434A-50' | 12/21/2005 | 50' | 0.3 | 0.11 | ND | ND | 0.0074 | 0.15 |
| WR-434A-50' | 6/16/2006 | 50' | 2 | 0.28 | 0.0072 | ND | ND | 0.16 |
| WR-434A-50' | 10/4/2006 | 50' | 0.22 | 0.015 | ND | ND | 0.0032 | ND |
| WR-434A-50' | 12/21/2006 | 50' | 0.0035 | ND | ND | ND | ND | 0.0033 |
| WR-434A-50' | 3/7/2007 | 50' | 0.61 | 0.048 | ND | ND | 0.008 | ND |
| WR-434A-50' | 11/20/2007 | 50' | 0.47 | 0.021 | ND | ND | 0.0063 | 0.14 |
| WR-434A-50' | 11/13/2008 | 50' | 0.84 | 0.034 | ND | ND | 0.01 | 0.23 |
| WR-434A-50' | 11/17/2009 | 50' | 0.012 | ND | ND | ND | ND | 0.017 |
| WR-434A-50' | 11/18/2010 | 50' | 0.7 | 0.025 | ND | ND | 0.0079 | 0.18 |
| WR-434A-50' | 9/29/2011 | 50' | 0.108 | ND | ND | ND | ND | 0.0218 |
| WR-434A-50' | 12/2/2013 | 50' | 0.235 | 0.009 | ND | ND | ND | 0.064 |
| WR-434A-50' | 12/16/2015 | 50' | 0.266 | 0.0107 | ND | ND | 0.0058 | 0.114 |
| | | | | | | | | |
| WR-434A-150' | 12/31/2002 | 150' | 1.2 | 0.38 | 2.9 | ND | ND | NA |
| WR-434A-150' | 3/12/2003 | 150' | 0.88 | 0.28 | 2.2 | 0.066 | ND | NA |
| WR-434A-150' | 6/5/2003 | 150' | 1.0 | 0.33 | 2.3 | 0.041 | ND | NA |
| WR-434A-150' | 9/10/2003 | 150' | 0.97 | 0.24 | 2.0 | 0.029 | ND | 0.19 |
| WR-434A-150' | 12/17/2003 | 150' | 1.4 | 0.37 | 3.9 | ND | ND | 0.31 |
| WR-434A-150' | 3/17/2004 | 150' | 1.1 | 0.26 | 2.4 | 0.047 | ND | 0.3 |
| WR-434A-150' | 6/8/2004 | 150' | 1.2 | 0.38 | 3.5 | ND | ND | 0.33 |
| WR-434A-150' | 8/18/2004 | 150' | 0.97 | 0.24 | 2.0 | 0.081 | ND | 0.25 |
| WR-434A-150' | 9/14/2004 | 150' | 0.83 | 0.22 | 1.8 | 0.065 | ND | 0.25 |
| WR-434A-150' | 12/17/2004 | 150' | 1.7 | 0.39 | 3.6 | ND | ND | 0.4 |
| WR-434A-150' | 3/17/2005 | 150' | 1.7 | 0.38 | 3.2 | ND | ND | 0.46 |
| WR-434A-150' | 6/23/2005 | 150' | 1.3 | 0.26 | 2.4 | ND | ND | 0.28 |
| WR-434A-150' | 9/22/2005 | 150' | 1.0 | 0.21 | 1.5 | ND | ND | 0.26 |
| WR-434A-150' | 12/21/2005 | 150' | 0.6 | 0.12 | 0.76 | ND | ND | 0.18 |
| WR-434A-150' | 6/16/2006 | 150' | 1.0 | 0.66 | 0.72 | ND | ND | 0.19 |
| WR-434A-150' | 10/4/2006 | 150' | 1.0 | 0.16 | 0.64 | ND | ND | ND |
| WR-434A-150' | 12/21/2006 | 150' | 1.1 | 0.1 | 0.17 | ND | ND | 0.27 |
| WR-434A-150' | 3/7/2007 | 150' | 1.0 | 0.083 | 0.1 | ND | ND | ND |
| WR-434A-150' | 11/20/2007 | 150' | 0.8 | 0.057 | 0.022 | ND | ND | 0.28 |
| WR-434A-150' | 11/13/2008 | 150' | 0.8 | 0.03 | 0.01 | ND | ND | 0.18 |
| WR-434A-150' | 11/17/2009 | 150' | 0.4 | 0.016 | 0.0044 | ND | ND | 0.12 |
| WR-434A-150' | 11/18/2010 | 150' | 0.047 | 0.002 | 0.0019 | ND | ND | 0.0086 |
| WR-434A-150' | 9/29/2011 | 150' | 0.549 | 0.0188 | ND | ND | ND | 0.0594 |

**TABLE 4**
**Vapor Probe Results - Selected VOCs**
**Prudence Landfill**

| Well | Date | Depth | PCE | TCE | cis-1,2-DCE | VC | TCFM | DCFM |
|---|---|---|---|---|---|---|---|---|
| WR-434A-150' | 12/2/2013 | 150' | 0.277 | 0.013 | 0.006 | ND | ND | 0.038 |
| WR-434A-150' | 12/16/2015 | 150' | ND | ND | ND | ND | ND | ND |
| | | | | | | | | |
| WR-434A-250' | 12/31/2002 | 250' | 11 | 1.8 | 0.78 | 0.03 | 0.25 | NA |
| WR-434A-250' | 3/12/2003 | 250' | 9.1 | 1.2 | 0.56 | ND | 0.23 | NA |
| WR-434A-250' | 6/5/2003 | 250' | 8.2 | 1.3 | 0.56 | ND | 0.1 | NA |
| WR-434A-250' | 9/10/2003 | 250' | 9.0 | 1.9 | 0.92 | 0.034 | 0.14 | 4.0 |
| WR-434A-250' | 12/17/2003 | 250' | 4.1 | 0.83 | 0.52 | 0.031 | ND | 0.22 |
| WR-434A-250' | 3/17/2004 | 250' | 17 | 2.5 | 1.4 | 0.034 | 0.26 | 4.4 |
| WR-434A-250' | 6/8/2004 | 250' | 21 | 3.3 | 1.1 | ND | 0.55 | 8.0 |
| WR-434A-250' | 8/18/2004 | 250' | 5.0 | 0.61 | 0.24 | 0.029 | 0.074 | 1.3 |
| WR-434A-250' | 9/14/2004 | 250' | 2 | 0.33 | 0.26 | ND | ND | 0.25 |
| WR-434A-250' | 12/17/2004 | 250' | 17 | 2.7 | 1.8 | ND | ND | 4.0 |
| WR-434A-250' | 3/17/2005 | 250' | 21 | 3.5 | 2.5 | ND | 0.26 | 6.0 |
| WR-434A-250' | 6/23/2005 | 250' | 12 | 1.9 | 1.4 | ND | ND | 3.1 |
| WR-434A-250' | 9/22/2005 | 250' | 25 | 3.4 | 2.8 | ND | 0.24 | 4.9 |
| WR-434A-250' | 12/21/2005 | 250' | 12 | 1.4 | 1.2 | 0.029 | 0.17 | 2.5 |
| WR-434A-250' | 6/16/2006 | 250' | 16 | 5.3 | 3.9 | ND | 0.35 | 7 |
| WR-434A-250' | 10/4/2006 | 250' | 16 | 3.3 | 3.1 | ND | 0.24 | 4.4 |
| WR-434A-250' | 12/21/2006 | 250' | 9.7 | 1.6 | 0.8 | ND | ND | 1.4 |
| WR-434A-250' | 3/7/2007 | 250' | 9.7 | 3.3 | 3 | ND | 0.34 | 4.2 |
| WR-434A-250' | 11/20/2007 | 250' | 9.9 | 1.9 | 1.9 | ND | ND | 2.8 |
| WR-434A-250' | 11/13/2008 | 250' | 13 | 1.6 | 1.8 | ND | 0.11 | 2.6 |
| WR-434A-250' | 11/17/2009 | 250' | 8.1 | 1.4 | 2.3 | ND | 0.092 | 2.2 |
| WR-434A-250' | 11/18/2010 | 250' | 7 | 1.5 | 2.8 | ND | 0.11 | 2.4 |
| WR-434A-250' | 9/29/2011 | 250' | 5.42 | 1.56 | 3.96 | ND | 0.0843 | 2.18 |
| WR-434A-250' | 12/2/2013 | 250' | 6.27 | 1.03 | 2.938 | ND | 0.09 | 1.83 |
| WR-434A-250' | 12/16/2015 | 250' | 1.1 | 0.234 | 0.499 | ND | 0.025 | 0.562 |
| | | | | | | | | |
| WR-434A-350' | 12/31/2002 | 350' | 12 | 1.2 | 0.34 | 0.17 | 0.93 | NA |
| WR-434A-350' | 3/12/2003 | 350' | 9.0 | 0.42 | ND | 0.19 | 1.1 | NA |
| WR-434A-350' | 6/5/2003 | 350' | 12 | 1.2 | 0.31 | 0.086 | 0.73 | NA |
| WR-434A-350' | 9/10/2003 | 350' | 13 | 1.4 | 0.48 | 0.10 | 0.47 | 10 |
| WR-434A-350' | 12/17/2003 | 350' | 11 | 1.3 | 0.52 | 0.17 | 0.97 | 18 |
| WR-434A-350' | 3/17/2004 | 350' | 13 | 2.3 | 1.0 | 0.073 | 0.74 | 10 |
| WR-434A-350' | 6/8/2004 | 350' | 8.3 | 0.42 | ND | ND | 1.3 | 20 |
| WR-434A-350' | 8/18/2004 | 350' | 1.8 | 0.16 | 0.052 | ND | 0.063 | 1.2 |
| WR-434A-350' | 9/14/2004 | 350' | 12 | 0.88 | 0.28 | 0.12 | 0.46 | 8 |
| WR-434A-350' | 12/17/2004 | 350' | 17 | 0.88 | 0.048 | ND | 1.1 | 18 |
| WR-434A-350' | 3/17/2005 | 350' | 18 | 0.83 | ND | ND | 1.5 | 35 |
| WR-434A-350' | 6/23/2005 | 350' | 19 | 0.83 | ND | ND | 1.5 | 28 |
| WR-434A-350' | 9/22/2005 | 350' | 29 | 0.88 | 0.044 | ND | 1.0 | 20 |
| WR-434A-350' | 12/21/2005 | 350' | 10 | 1.5 | 1.0 | 0.055 | 0.52 | 7.5 |
| WR-434A-350' | 6/16/2006 | 350' | 29 | 3.5 | 0.5 | ND | 1.60 | 33 |
| WR-434A-350' | 10/4/2006 | 350' | 17 | 1.4 | 0.1 | ND | 1.30 | 19 |
| WR-434A-350' | 12/21/2006 | 350' | 14 | 0.66 | ND | ND | 0.91 | ND |
| WR-434A-350' | 3/7/2007 | 350' | 21 | 1.1 | ND | ND | 1.70 | 28 |
| WR-434A-350' | 11/20/2007 | 350' | 13 | 0.74 | ND | ND | 1.10 | 20 |
| WR-434A-350' | 11/13/2008 | 350' | 11 | 0.63 | ND | ND | 0.90 | 22 |

**TABLE 4**
**Vapor Probe Results - Selected VOCs**
**Prudence Landfill**

| Well | Date | Depth | PCE | TCE | cis-1,2-DCE | VC | TCFM | DCFM |
|---|---|---|---|---|---|---|---|---|
| WR-434A-350' | 11/17/2009 | 350' | 11 | 0.74 | 0.032 | ND | 0.82 | 18 |
| WR-434A-350' | 11/18/2010 | 350' | 0.12 | 0.005 | ND | ND | 0.0024 | 0.009 |
| WR-434A-350' | 3/31/2011 | 350' | 0.302 | 0.0097 | ND | ND | ND | 0.0183 |
| WR-434A-350' | 9/29/2011 | 350' | 10.2 | 0.75 | ND | ND | 0.843 | 14.9 |
| WR-434A-350' | 12/2/2013 | 350' | 11.11 | 1.144 | 0.054 | ND | 1.078 | 21.11 |
| WR-434A-350' | 12/16/2015 | 350' | ND | ND | ND | ND | ND | ND |
| | | | | | | | | |
| R-125A-50' | 9/13/2004 | 50' | 0.39 | ND | ND | ND | 0.13 | 2.5 |
| R-125A-50' | 3/23/2005 | 50' | 0.5 | ND | ND | ND | 0.16 | 3.1 |
| R-125A-50' | 6/23/2005 | 50' | 0.19 | ND | ND | ND | ND | 1.3 |
| R-125A-50' | 9/22/2005 | 50' | 0.34 | ND | ND | ND | 0.11 | 2.2 |
| R-125A-50' | 12/21/2005 | 50' | 0.21 | ND | 0.072 | ND | ND | 0.86 |
| R-125A-50' | 6/16/2006 | 50' | 0.19 | ND | ND | ND | ND | 1.2 |
| R-125A-50' | 12/21/2006 | 50' | 0.083 | ND | ND | ND | ND | 0.8 |
| R-125A-50' | 11/20/2007 | 50' | 0.08 | 0.0093 | ND | 0.0062 | 0.019 | 1 |
| R-125A-50' | 11/13/2008 | 50' | 0.038 | ND | ND | ND | ND | 0.42 |
| R-125A-50' | 11/17/2009 | 50' | ND | ND | ND | ND | ND | 0.16 |
| R-125A-50' | 11/18/2010 | 50' | 0.018 | ND | ND | 0.015 | ND | 0.16 |
| R-125A-50' | 9/29/2011 | 50' | 0.0183 | ND | ND | ND | ND | 0.119 |
| R-125A-50' | 12/2/2013 | 50' | ND | ND | ND | ND | ND | 0.132 |
| R-125A-50' | 12/16/2015 | 50' | ND | ND | ND | ND | ND | ND |
| | | | | | | | | |
| R-125A-145' | 9/13/2004 | 145' | 0.61 | ND | ND | 0.029 | 0.57 | 4.9 |
| R-125A-145' | 3/23/2005 | 145' | 1.0 | 0.061 | ND | ND | 0.91 | 9.1 |
| R-125A-145' | 6/23/2005 | 145' | 1.0 | ND | ND | ND | 0.74 | 8.0 |
| R-125A-145' | 9/22/2005 | 145' | 0.69 | 0.061 | ND | ND | 0.63 | 11 |
| R-125A-145' | 12/21/2005 | 145' | 0.069 | 0.16 | 0.11 | ND | 0.51 | 3.7 |
| R-125A-145' | 6/16/2006 | 145' | 0.83 | ND | ND | ND | 0.68 | 6 |
| R-125A-145' | 12/21/2006 | 145' | 0.28 | ND | ND | ND | 0.21 | 2.9 |
| R-125A-145' | 11/20/2007 | 145' | 0.67 | 0.064 | 0.027 | 0.014 | 0.62 | 5.9 |
| R-125A-145' | 11/13/2008 | 145' | 0.44 | 0.042 | 0.02 | 0.0097 | 0.35 | 4.7 |
| R-125A-145' | 11/17/2009 | 145' | 0.59 | 0.028 | 0.016 | 0.0068 | 0.39 | 3.7 |
| R-125A-145' | 11/18/2010 | 145' | 0.52 | 0.029 | 0.019 | 0.0064 | 0.39 | 4.2 |
| R-125A-145' | 9/29/2011 | 145' | 0.224 | ND | ND | ND | 0.18 | 2.52 |
| R-125A-145' | 12/2/2013 | 145' | 0.66 | 0.017 | 0.012 | ND | 0.369 | 4.326 |
| R-125A-145' | 12/16/2015 | 145' | ND | ND | ND | ND | ND | ND |
| | | | | | | | | |
| R-125A-250' | 9/13/2004 | 250' | ND | ND | ND | 0.034 | 0.41 | 3.6 |
| R-125A-250' | 3/23/2005 | 250' | ND | ND | ND | 0.14 | 0.50 | 7.5 |
| R-125A-250' | 6/23/2005 | 250' | ND | ND | ND | ND | 0.80 | 10 |
| R-125A-250' | 9/22/2005 | 250' | 0.12 | ND | ND | ND | 0.97 | 16 |
| R-125A-250' | 12/21/2005 | 250' | 0.14 | ND | ND | ND | 0.57 | 13 |
| R-125A-250' | 6/16/2006 | 250' | 6.3 | 3.8 | 0.6 | ND | 0.74 | 9.6 |
| R-125A-250' | 12/21/2006 | 250' | ND | ND | ND | ND | 0.34 | 6 |
| R-125A-250' | 11/20/2007 | 250' | 0.048 | ND | ND | ND | 0.3 | 3.9 |
| R-125A-250' | 11/13/2008 | 250' | 0.057 | ND | ND | 0.0047 | 0.45 | 5.4 |
| R-125A-250' | 11/17/2009 | 250' | 0.13 | ND | ND | ND | 0.51 | 7.3 |
| R-125A-250' | 11/18/2010 | 250' | 0.065 | ND | ND | ND | 0.28 | 3.1 |
| R-125A-250' | 9/29/2011 | 250' | 0.176 | ND | ND | ND | 0.899 | 10.4 |

**TABLE 4**
**Vapor Probe Results - Selected VOCs**
**Prudence Landfill**

| Well | Date | Depth | PCE | TCE | cis-1,2-DCE | VC | TCFM | DCFM |
|---|---|---|---|---|---|---|---|---|
| R-125A-250' | 12/2/2013 | 250' | 0.303 | ND | 0.005 | 0.003 | 1.036 | 14.29 |
| R-125A-250' | 12/16/2015 | 250' | ND | ND | ND | ND | ND | ND |
| | | | | | | | | |
| R-125A-335' | 9/13/2004 | 335' | ND | ND | ND | 0.055 | 0.2 | 2.8 |
| R-125A-335' | 3/23/2005 | 335' | ND | ND | ND | 0.031 | 0.49 | 10 |
| R-125A-335' | 6/23/2005 | 335' | ND | ND | ND | ND | 0.8 | 11 |
| R-125A-335' | 9/22/2005 | 335' | 0.12 | ND | ND | ND | 0.91 | 15 |
| R-125A-335' | 12/21/2005 | 335' | ND | ND | ND | ND | 0.5 | 5 |
| R-125A-335' | 6/16/2006 | 335' | 0.17 | ND | ND | ND | 0.39 | 3.9 |
| R-125A-335' | 12/21/2006 | 335' | ND | ND | ND | ND | 0.097 | 1.8 |
| R-125A-335' | 11/20/2007 | 335' | 0.046 | ND | ND | 0.0065 | 0.29 | 4 |
| R-125A-335' | 11/13/2008 | 335' | 0.053 | ND | ND | 0.0055 | 0.35 | 4 |
| R-125A-335' | 11/17/2009 | 335' | 0.13 | ND | ND | ND | 0.47 | 6.7 |
| R-125A-335' | 11/18/2010 | 335' | 0.082 | ND | ND | 0.0051 | 0.42 | 4.7 |
| R-125A-335' | 9/29/2011 | 335' | 0.176 | ND | ND | ND | 0.843 | 9.9 |
| R-125A-335' | 12/2/2013 | 335' | 0.272 | ND | ND | 0.008 | 1.121 | 12.84 |
| R-125A-335' | 12/16/2015 | 335' | ND | ND | ND | ND | 0.0302 | 0.453 |
| | | | | | | | | |
| R-124A-57' | 9/13/2004 | 57' | 1.4 | 0.15 | 0.92 | ND | 0.057 | 2.2 |
| R-124A-57' | 3/17/2005 | 57' | 1.9 | 0.31 | 1.8 | 0.036 | ND | 2.0 |
| R-124A-57' | 6/23/2005 | 57' | 0.57 | 0.23 | 1.5 | 0.047 | ND | 0.65 |
| R-124A-57' | 9/22/2005 | 57' | 1.4 | 0.19 | 1.1 | 0.036 | ND | 2.0 |
| R-124A-57' | 12/21/2005 | 57' | 0.21 | ND | 0.048 | ND | ND | 0.7 |
| R-124A-57' | 6/16/2006 | 57' | 1.2 | 0.2 | 0.84 | 0.031 | ND | 0.2 |
| R-124A-57' | 12/21/2006 | 57' | 1.3 | 0.32 | 1.3 | 0.055 | ND | 1.9 |
| R-124A-57' | 11/20/2007 | 57' | 2.1 | 0.39 | 0.88 | ND | 0.095 | 2.6 |
| R-124A-57' | 11/13/2008 | 57' | 0.68 | 0.43 | 0.84 | ND | ND | 1.2 |
| R-124A-57' | 11/17/2009 | 57' | 0.12 | ND | ND | ND | 0.0053 | 0.1 |
| R-124A-57' | 11/18/2010 | 57' | 0.05 | ND | 0.24 | ND | ND | 0.18 |
| R-124A-57' | 9/29/2011 | 57' | 0.0305 | ND | ND | ND | 0.124 | 0.0089 |
| R-124A-57' | 12/2/2013 | 57' | ND | ND | ND | ND | 0.177 | 0.0130 |
| | | | | | | | | |
| R-124A-152' | 9/13/2004 | 152' | 5.1 | 0.77 | 1.6 | 0.055 | 0.11 | 2.1 |
| R-124A-152' | 3/17/2005 | 152' | 6.8 | 1.1 | 2.9 | 0.049 | 0.17 | 3.2 |
| R-124A-152' | 6/23/2005 | 152' | 6.9 | 1.2 | 4 | ND | ND | 2.9 |
| R-124A-152' | 9/22/2005 | 152' | 0.041 | ND | ND | ND | 0.043 | ND |
| R-124A-152' | 12/21/2005 | 152' | 0.021 | ND | ND | ND | 0.016 | 0.012 |
| R-124A-152' | 6/16/2006 | 152' | 0.017 | ND | ND | ND | 0.022 | 0.022 |
| R-124A-152' | 12/21/2006 | 152' | 0.68 | 0.029 | 0.013 | ND | 0.01 | 0.06 |
| R-124A-152' | 11/20/2007 | 152' | 0.066 | ND | ND | ND | 0.005 | 0.005 |
| R-124A-152' | 11/13/2008 | 152' | 0.021 | ND | ND | ND | 0.0039 | 0.012 |
| R-124A-152' | 11/17/2009 | 152' | ND | ND | ND | ND | ND | ND |
| R-124A-152' | 11/18/2010 | 152' | ND | ND | ND | ND | 0.015 | 0.0027 |
| R-124A-152' | 9/29/2011 | 152' | ND | 0.0081 | ND | ND | ND | ND |
| R-124A-152' | 12/2/2013 | 152' | ND | ND | ND | ND | 0.168 | 0.013 |
| | | | | | | | | |
| R-124A-250' | 9/13/2004 | 250' | 1.7 | 0.19 | 1.1 | ND | 0.063 | 2.8 |
| R-124A-250' | 3/17/2005 | 250' | 1.9 | 0.32 | 1.8 | 0.036 | ND | 2.1 |
| R-124A-250' | 6/23/2005 | 250' | 0.61 | 0.23 | 1.5 | 0.049 | ND | 0.65 |

**TABLE 4**
**Vapor Probe Results - Selected VOCs**
**Prudence Landfill**

| Well | Date | Depth | PCE | TCE | cis-1,2-DCE | VC | TCFM | DCFM |
|---|---|---|---|---|---|---|---|---|
| R-124A-250' | 9/22/2005 | 250' | 2.6 | 0.27 | 1.5 | 0.047 | 0.12 | 3.6 |
| R-124A-250' | 12/21/2005 | 250' | 0.1 | 0.94 | ND | ND | ND | 0.36 |
| R-124A-250' | 6/16/2006 | 250' | 1.1 | 0.18 | 0.8 | ND | ND | 1.3 |
| R-124A-250' | 12/21/2006 | 250' | 1.1 | 0.28 | 0.92 | 0.036 | ND | ND |
| R-124A-250' | 11/20/2007 | 250' | 2.9 | 0.45 | 1.1 | ND | 0.15 | 3.9 |
| R-124A-250' | 11/13/2008 | 250' | 0.48 | 0.27 | 0.47 | ND | ND | 0.71 |
| R-124A-250' | 11/17/2009 | 250' | 0.007 | ND | ND | ND | 0.0072 | ND |
| R-124A-250' | 11/18/2010 | 250' | 0.0039 | ND | ND | ND | 0.037 | 0.0031 |
| R-124A-250' | 9/29/2011 | 250' | 0.0217 | ND | ND | ND | 0.112 | 0.0054 |
| R-124A-250' | 12/2/2013 | 250' | ND | ND | ND | ND | 0.167 | 0.013 |
| | | | | | | | | |
| R-124A-355' | 9/13/2004 | 355' | 1.7 | 0.17 | 0.96 | ND | 0.074 | 2.3 |
| R-124A-355' | 3/17/2005 | 355' | 1.9 | 0.33 | 1.8 | 0.034 | ND | 2.1 |
| R-124A-355' | 6/23/2005 | 355' | 0.63 | 0.24 | 1.6 | 0.052 | ND | 0.75 |
| R-124A-355' | 9/22/2005 | 355' | 0.042 | ND | 0.019 | ND | ND | 0.014 |
| R-124A-355' | 12/21/2005 | 355' | 0.14 | ND | 0.015 | ND | ND | 0.4 |
| R-124A-355' | 6/16/2006 | 355' | 1.9 | 0.29 | 1.3 | 0.039 | 0.047 | 0.91 |
| R-124A-355' | 12/21/2006 | 355' | 0.52 | 0.13 | 0.48 | 0.02 | ND | 0.7 |
| R-124A-355' | 11/20/2007 | 355' | 4.4 | 0.79 | 1.9 | ND | 0.23 | 5.9 |
| R-124A-355' | 11/13/2008 | 355' | 0.67 | 0.4 | 0.75 | ND | ND | 1.1 |
| R-124A-355' | 11/17/2009 | 355' | 0.0052 | ND | ND | ND | 0.0045 | 0.0023 |
| R-124A-355' | 11/18/2010 | 355' | 0.0041 | ND | ND | ND | 0.041 | 0.003 |
| R-124A-355' | 9/29/2011 | 355' | 0.0163 | ND | ND | ND | 0.0517 | 0.005 |
| R-124A-355' | 12/2/2013 | 355' | 0.007 | ND | ND | ND | 0.187 | 0.014 |

ND = not detected at laboratory practical quantification level
NA = not analyzed
PCE = tetrachloroethene
TCE = trichloroethene
cis-1,2-DCE = cis-1,2-dichloroethene
TCFM = trichlorofluoromethane
VC = Vinyl Chloride
DCFM = dichlorofluoromethane
All samples analyzed using Method TO-15
All concentrations reported in ug/L

TABLE 5
SOIL-VAPOR MONITOR WELLS
FIELD MEASUREMENTS OF METHANE, CARBON DIOXIDE, AND OXYGEN
PRUDENCE LANDFILL

| Well Name | Date | Depth (ft) | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) |
|---|---|---|---|---|---|
| WR-434A | 12/16/2015 | 50 | 0.0 | 14.6 | 4.2 |
| | | 150 | 0.0 | 0.1 | 19.9 |
| | | 250 | 1.1 | 19.1 | 1.2 |
| | | 350 | 0.0 | 0.1 | 20.2 |
| | | | | | |
| | 12/2/2013 | 50 | 0.0 | 3.9 | 16.4 |
| | | 150 | 0.0 | 8.1 | 11.6 |
| | | 250 | 1.1 | 5.3 | 14.8 |
| | | 350 | 0.7 | 0.5 | 16.1 |
| | | | | | |
| | 9/29/2011 | 50 | 0.0 | 2.2 | 18.5 |
| | | 150 | 0.0 | 6.2 | 14.6 |
| | | 250 | 0.3 | 3.4 | 17.2 |
| | | 350 | 0.3 | 0.5 | 17.9 |
| | | | | | |
| | 3/31/2011 | 350 | 2.0 | 2.7 | 0.0 |
| | | | | | |
| | 11/18/2010 | 50 | 0.0 | 17.6 | 13.3 |
| | | 150 | 0.0 | 0.1 | 20.2 |
| | | 250 | 1.3 | 13.1 | 6.9 |
| | | 350 | 1.4 | 1.8 | 5.9 |
| | | | | | |
| | 11/17/2009 | 50 | 0.0 | 2.7 | 11.4 |
| | | 150 | 0.0 | 21.3 | 0.3 |
| | | 250 | 2.4 | 21.2 | 0.0 |
| | | 350 | 2.2 | 3.5 | 0.0 |
| | | | | | |
| | 11/13/2008 | 50 | 0.0 | 15.5 | 5.2 |
| | | 150 | 0.0 | 21.7 | 0.0 |
| | | 250 | 3.1 | 20.8 | 0.0 |
| | | 350 | 2.2 | 3.0 | 0.0 |
| | | | | | |
| | 11/20/2007 | 50 | 0.7 | 11.1 | 5.8 |
| | | 150 | 1.6 | 22.0 | 0.0 |
| | | 250 | 0.0 | 19.9 | 0.0 |
| | | 350 | 0.1 | 2.5 | 0.0 |
| | | | | | |
| | 3/7/2007 | 50 | 0.0 | 14.4 | 3.9 |
| | | 150 | 0.0 | 22.5 | 0.0 |
| | | 250 | 3.3 | 20.6 | 0.1 |
| | | 350 | 2.1 | 2.7 | 0.0 |
| | | | | | |
| | 12/21/2006 | 50 | 0.0 | 0.1 | 21.1 |
| | | 150 | 0.0 | 22.6 | 0.0 |
| | | 250 | 3.0 | 18.3 | 2.7 |
| | | 350 | 2.3 | 3.3 | 0.4 |
| | | | | | |
| | 10/4/2006 | 50 | 0.1 | 13.2 | 5.0 |
| | | 150 | 0.1 | 22.1 | 0.3 |
| | | 250 | 3.5 | 20.4 | 0.3 |
| | | 350 | 2.4 | 2.9 | 0.4 |
| | | | | | |
| | 6/18/2006 | 50 | 0.0 | 14.2 | 16.4 |
| | | 150 | 0.0 | 22.5 | 0.2 |
| | | 250 | 3.1 | 19.6 | 0.3 |
| | | 350 | 2.0 | 2.2 | 0.3 |
| | | | | | |

TABLE 5
SOIL-VAPOR MONITOR WELLS
FIELD MEASUREMENTS OF METHANE, CARBON DIOXIDE, AND OXYGEN
PRUDENCE LANDFILL

| Well Name | Date | Depth (ft) | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) |
|---|---|---|---|---|---|
| WR-434A | 12/31/2005 | 50 | 0.0 | 17.8 | 3.3 |
| (con't) | | 150 | 0.9 | 20.4 | 0.2 |
| | | 250 | 0.1 | 17.7 | 2.9 |
| | | 350 | 2.5 | 4.7 | 0.1 |
| | | | | | |
| | 12/21/2005 | 50 | 0.0 | 12.4 | 9.1 |
| | | 150 | 0.0 | 21.9 | 0.1 |
| | | 250 | 3.3 | 18.8 | 1.5 |
| | | 350 | 2.9 | 11.7 | 0.7 |
| | | | | | |
| | 9/22/2005 | 50 | 0.0 | 14.4 | 6.3 |
| | | 150 | 0.2 | 22.9 | 0.4 |
| | | 250 | 4.0 | 20.9 | 0.3 |
| | | 350 | 2.8 | 3.0 | 0.4 |
| | | | | | |
| | 6/23/2005 | 50 | 0.0 | 12.4 | 8.4 |
| | | 150 | 0.3 | 22.0 | 0.0 |
| | | 250 | 3.9 | 20.0 | 0.1 |
| | | 350 | 2.5 | 2.9 | 0.0 |
| | | | | | |
| | 3/17/2005 | 50 | 0.0 | 13.4 | 8.0 |
| | | 150 | 0.4 | 22.6 | 0.5 |
| | | 250 | 3.8 | 19.9 | 0.4 |
| | | 350 | 2.0 | 2.1 | 0.5 |
| | | | | | |
| | 12/17/2004 | 50 | 0.0 | 13.0 | 9.2 |
| | | 150 | 0.5 | 22.3 | 0.0 |
| | | 250 | 4.0 | 20.0 | 0.0 |
| | | 350 | 2.3 | 3.1 | 0.0 |
| | | | | | |
| | 9/14/2004 | 50 | 0.0 | 16.0 | 7.2 |
| | | 150 | 0.2 | 23.0 | 0.0 |
| | | 250 | 0.0 | 15.0 | 6.7 |
| | | 350 | 2.6 | 12.0 | 0.0 |
| | | | | | |
| | 6/8/2004 | 50 | 0.0 | 17.0 | 4.7 |
| | | 150 | 0.8 | 24.0 | 0.0 |
| | | 250 | 4.1 | 14.0 | 0.0 |
| | | 350 | 2.1 | 1.5 | 0.0 |
| | | | | | |
| | 3/17/2004 | 50 | 0.0 | 17.0 | 4.1 |
| | | 150 | 0.5 | 23.0 | 0.0 |
| | | 250 | 4.2 | 20.0 | 0.0 |
| | | 350 | 3.6 | 14.0 | 0.0 |
| | | | | | |
| | 12/17/2003 | 50 | 0.1 | 16.1 | 5.3 |
| | | 150 | 0.8 | 23.1 | 0.0 |
| | | 250 | 0.1 | 16.8 | 3.5 |
| | | 350 | 1.8 | 8.9 | 0.9 |
| | | | | | |
| | 9/10/2003 | 50 | 0.0 | 17.0 | 3.0 |
| | | 150 | 1.4 | 23.0 | 0.6 |
| | | 250 | 2.1 | 18.0 | 1.5 |
| | | 350 | 2.5 | 11.0 | 0.7 |
| | | | | | |

TABLE 5
SOIL-VAPOR MONITOR WELLS
FIELD MEASUREMENTS OF METHANE, CARBON DIOXIDE, AND OXYGEN
PRUDENCE LANDFILL

| Well Name | Date | Depth (ft) | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) |
|---|---|---|---|---|---|
| WR-434A | 6/5/2003 | 50 | 0.0 | 16.8 | 2.0 |
| (con't) | | 150 | 0.8 | 19.9 | 0.4 |
| | | 250 | 0.0 | 16.5 | 4.2 |
| | | 350 | 2.3 | 7.2 | 0.5 |
| | | | | | |
| | 3/12/2003 | 50 | 0.0 | 12.0 | 2.5 |
| | | 150 | 1.2 | 19.0 | 0.7 |
| | | 250 | 0.9 | 14.0 | 4.2 |
| | | 350 | 2.7 | 6.2 | 0.1 |
| | | | | | |
| | 9/3/2002 | 50 | 0.0 | 17.7 | 2.4 |
| | | 150 | 1.1 | 20.7 | 0.3 |
| | | 250 | 3.6 | 15.5 | 1.4 |
| | | 350 | 1.8 | 3.7 | 0.2 |
| | | | | | |
| | 6/17/2002 | 50 | 0.0 | 18.5 | 1.9 |
| | | 150 | 1.0 | 18.5 | 0.3 |
| | | 250 | 3.0 | 14.8 | 2.0 |
| | | 350 | 1.3 | 6.3 | 0.6 |
| | | | | | |
| | 3/5/2002 | 50 | 0.0 | 20.1 | 1.0 |
| | | 150 | 0.9 | 18.2 | 0.0 |
| | | 250 | 2.3 | 15.8 | 0.7 |
| | | 350 | 0.3 | 5.6 | 3.4 |
| | | | | | |
| | 12/10/2001 | 50 | 0.0 | 19.6 | 0.1 |
| | | 150 | 1.1 | 23.2 | 0.0 |
| | | 250 | 3.9 | 14.2 | 0.0 |
| | | 350 | 0.2 | 1.7 | 5.2 |
| | | | | | |
| | 11/26/2001 | 50 | 0.0 | 20.1 | 0.1 |
| | | 150 | 1.0 | 23.3 | 0.0 |
| | | 250 | 4.4 | 17.7 | 0.0 |
| | | 350 | 0.4 | 0.9 | 9.5 |
| | | | | | |
| | 11/19/2001 | 50 | 0.0 | 20.3 | 0.2 |
| | | 150 | 1.2 | 23.2 | 0.0 |
| | | 250 | 1.3 | 6.0 | 13.5 |
| | | 350 | 1.0 | 2.1 | 12.5 |
| | | | | | |
| | 11/8/2001 | 50 | 0.0 | 20.0 | 0.2 |
| | | 150 | 1.1 | 23.1 | 0.1 |
| | | 250 | 4.5 | 18.0 | 0.0 |
| | | 350 | 0.9 | 0.8 | 12.9 |
| | | | | | |
| | 11/1/2001 | 50 | 0.0 | 19.5 | 0.2 |
| | | 150 | 1.2 | 22.8 | 0.2 |
| | | 250 | 4.2 | 15.9 | 0.1 |
| | | 350 | 0.1 | 0.0 | 18.0 |
| | | | | | |

TABLE 5
SOIL-VAPOR MONITOR WELLS
FIELD MEASUREMENTS OF METHANE, CARBON DIOXIDE, AND OXYGEN
PRUDENCE LANDFILL

| Well Name | Date | Depth (ft) | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) |
|---|---|---|---|---|---|
| R-124A | 12/2/2013 | 57 | 0.0 | 5.5 | 13.8 |
| | | 152 | 0.0 | 0.7 | 18.6 |
| | | 250 | 0.6 | 5.1 | 14.7 |
| | | 355 | 1.7 | 3.7 | 16.8 |
| | | | | | |
| | 9/29/2011 | 57 | 0.0 | 6.1 | 14.0 |
| | | 152 | 0.0 | 0.1 | 19.8 |
| | | 250 | 0.0 | 4.3 | 15.8 |
| | | 355 | 0.0 | 2.1 | 18.0 |
| | | | | | |
| | 11/18/2010 | 57 | 2.4 | 11.5 | 9.6 |
| | | 152 | 0.0 | 0.2 | 19.5 |
| | | 250 | 0.0 | 1.9 | 17.1 |
| | | 355 | 0.0 | 2.2 | 16.6 |
| | | | | | |
| | 11/17/2009 | 57 | 0.0 | 8.2 | 9.9 |
| | | 152 | 0.0 | 0.1 | 19.5 |
| | | 250 | 0.0 | 2.0 | 17.3 |
| | | 355 | 0.0 | 1.2 | 18.3 |
| | | | | | |
| | 11/13/2008 | 57 | 3.7 | 21.5 | 0.2 |
| | | 152 | 0.0 | 0.8 | 19.8 |
| | | 250 | 2.5 | 18.3 | 4.2 |
| | | 355 | 3.5 | 21.7 | 0.0 |
| | | | | | |
| | 11/20/2007 | 57 | 5.4 | 20.6 | 0.0 |
| | | 152 | 0.4 | 0.5 | 19.1 |
| | | 250 | 4.7 | 21.1 | 0.0 |
| | | 355 | 4.6 | 21.4 | 0.1 |
| | | | | | |
| | 12/21/2006 | 57 | 7.7 | 23.6 | 0.1 |
| | | 152 | 0.0 | 2.1 | 18.0 |
| | | 250 | 7.8 | 24.1 | 0.0 |
| | | 355 | 7.8 | 23.6 | 0.5 |
| | | | | | |
| | 6/16/2006 | 57 | 7.9 | 23.1 | 0.2 |
| | | 152 | 0.0 | 0.7 | 19.2 |
| | | 250 | 7.8 | 23.1 | 0.1 |
| | | 355 | 7.6 | 23.0 | 0.1 |
| | | | | | |
| | 12/21/2005 | 57 | 5.0 | 20.7 | 0.6 |
| | | 152 | 0.0 | 0.5 | 20.3 |
| | | 250 | 2.1 | 11.8 | 7.7 |
| | | 355 | 1.3 | 8.4 | 11.1 |
| | | | | | |
| | 9/22/2005 | 57 | 8.8 | 22.8 | 0.3 |
| | | 152 | 0.0 | 1.5 | 18.8 |
| | | 250 | 3.3 | 22.1 | 0.4 |
| | | 355 | 0.0 | 0.3 | 20.1 |
| | | | | | |
| | 6/23/2005 | 57 | 11.9 | 24.8 | 0.4 |
| | | 152 | 5.9 | 20.0 | 0.4 |
| | | 250 | 11.7 | 24.4 | 0.1 |
| | | 355 | 11.7 | 24.4 | 0.3 |
| | | | | | |

TABLE 5
SOIL-VAPOR MONITOR WELLS
FIELD MEASUREMENTS OF METHANE, CARBON DIOXIDE, AND OXYGEN
PRUDENCE LANDFILL

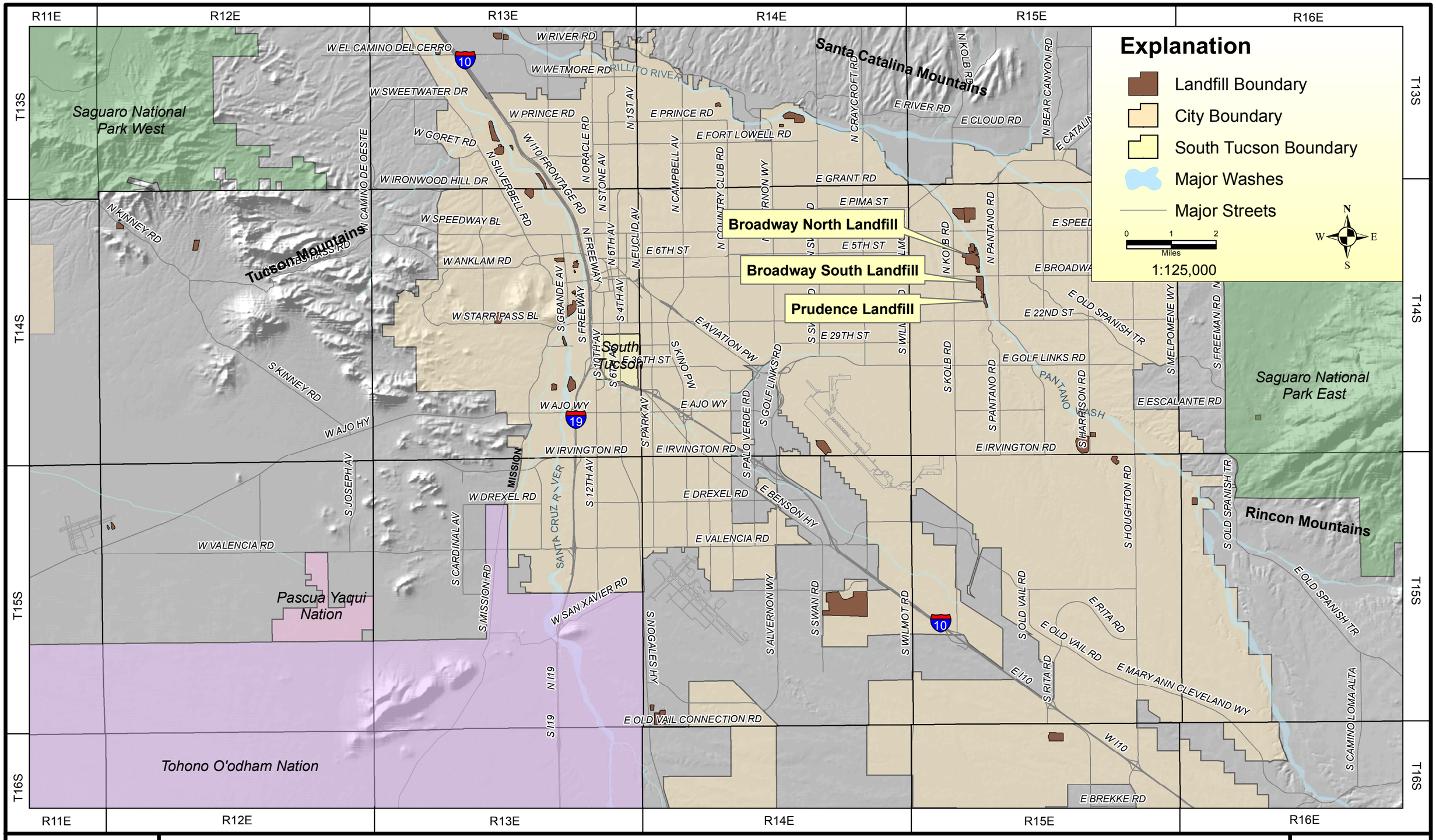
| Well Name | Date | Depth (ft) | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) |
|---|---|---|---|---|---|
| R-124A | 3/17/2005 | 57 | 7.8 | 23.0 | 0.4 |
| (con't) | | 152 | 5.1 | 20.1 | 0.4 |
| | | 250 | 7.2 | 22.7 | 0.4 |
| | | 355 | 7.2 | 22.7 | 0.4 |
| | | | | | |
| R-125A | 12/16/2015 | 50 | 5.8 | 22.2 | 0.1 |
| | | 145 | 0.0 | 0.1 | 20.8 |
| | | 250 | 0.0 | 0.0 | 20.6 |
| | | 335 | 0.0 | 0.3 | 19.3 |
| | | | | | |
| | 12/2/2013 | 50 | 1.4 | 5.7 | 13.0 |
| | | 145 | 0.6 | 4.9 | 10.0 |
| | | 250 | 0.0 | 2.3 | 11.8 |
| | | 335 | 0.0 | 0.0 | 18.9 |
| | | | | | |
| | 9/29/2011 | 50 | 0.8 | 7.3 | 12.6 |
| | | 145 | 0.2 | 6.6 | 10.9 |
| | | 250 | 0.0 | 1.4 | 13.8 |
| | | 335 | 0.0 | 0.0 | 19.1 |
| | | | | | |
| | 11/18/2010 | 50 | 2.5 | 12.2 | 8.0 |
| | | 145 | 0.2 | 7.8 | 9.2 |
| | | 250 | 0.0 | 0.1 | 19.9 |
| | | 335 | 0.0 | 0.1 | 19.5 |
| | | | | | |
| | 11/17/2009 | 50 | 4.8 | 21.3 | 0.0 |
| | | 145 | 0.3 | 14.2 | 0.0 |
| | | 250 | 0.0 | 3.7 | 2.6 |
| | | 335 | 0.0 | 3.8 | 1.9 |
| | | | | | |
| | 11/13/2008 | 50 | 4.2 | 19.9 | 0.0 |
| | | 145 | 0.0 | 13.7 | 0.0 |
| | | 250 | 0.0 | 1.6 | 9.6 |
| | | 335 | 0.0 | 1.4 | 12.3 |
| | | | | | |
| | 11/20/2007 | 50 | 4.1 | 20.1 | 0.2 |
| | | 145 | 0.6 | 13.9 | 0.1 |
| | | 250 | 0.5 | 1.1 | 11.1 |
| | | 335 | 0.4 | 0.8 | 12.1 |
| | | | | | |
| | 12/21/2006 | 50 | 7.9 | 22.8 | 0.0 |
| | | 145 | 0.3 | 14.5 | 0.0 |
| | | 250 | 0.0 | 2.1 | 4.8 |
| | | 335 | 0.0 | 1.8 | 5.3 |
| | | | | | |
| | 6/16/2006 | 50 | 4.4 | 19.2 | 0.0 |
| | | 145 | 0.5 | 7.7 | 0.0 |
| | | 250 | 0.1 | 1.4 | 6.9 |
| | | 335 | 0.0 | 0.7 | 9.4 |
| | | | | | |
| | 12/21/2005 | 55 | 3.3 | 19.8 | 0.3 |
| | | 145 | 0.6 | 13.2 | 0.2 |
| | | 255 | 0.0 | 2.8 | 3.2 |
| | | 335 | 0.0 | 1.3 | 2.5 |
| | | | | | |

TABLE 5
SOIL-VAPOR MONITOR WELLS
FIELD MEASUREMENTS OF METHANE, CARBON DIOXIDE, AND OXYGEN
PRUDENCE LANDFILL

| Well Name | Date | Depth (ft) | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) |
|---|---|---|---|---|---|
| R-125A | 9/22/2005 | 55 | 0.7 | 18.1 | 0.4 |
| (con't) | | 145 | 0.7 | 18.2 | 0.4 |
| | | 255 | 0.0 | 2.4 | 3.0 |
| | | 335 | 0.0 | 1.5 | 4.9 |
| | | | | | |
| | 6/23/2005 | 55 | 0.9 | 17.9 | 0.6 |
| | | 145 | 0.7 | 12.7 | 0.5 |
| | | 255 | 0.0 | 2.0 | 4.0 |
| | | 335 | 0.0 | 1.8 | 4.1 |
| | | | | | |
| | 3/23/2005 | 55 | 0.1 | 17.8 | 0.1 |
| | | 145 | 0.7 | 11.3 | 0.0 |
| | | 255 | 0.1 | 1.1 | 8.0 |
| | | 335 | 0.0 | 0.7 | 8.7 |

All measurements collected by COT-ES with Landtec Gas Analyzer

# FIGURES




CITY OF TUCSON
ENVIRONMENTAL SERVICES

# Figure 1
# Prudence Landfill Location Map
# Tucson, Arizona

| | |
|---|---|
| Drawn By: | LE |
| Checked: | AB |
| Approved: | TR |
| Date: | 5/10/2016 |
| File: | See Below |

J:\\GIS\Prudence\2015\LocationMap.mxd


## Explanation

- Nested Deep Soil Vapor Well
- Groundwater & Nested Vapor Probe Well
- Groundwater Monitor
- LFG Monitoring Probes
- LFG Extraction Wells
- LFG Extraction Line
- Major Wash
- Landfill Boundary

N

0 250 500 Feet

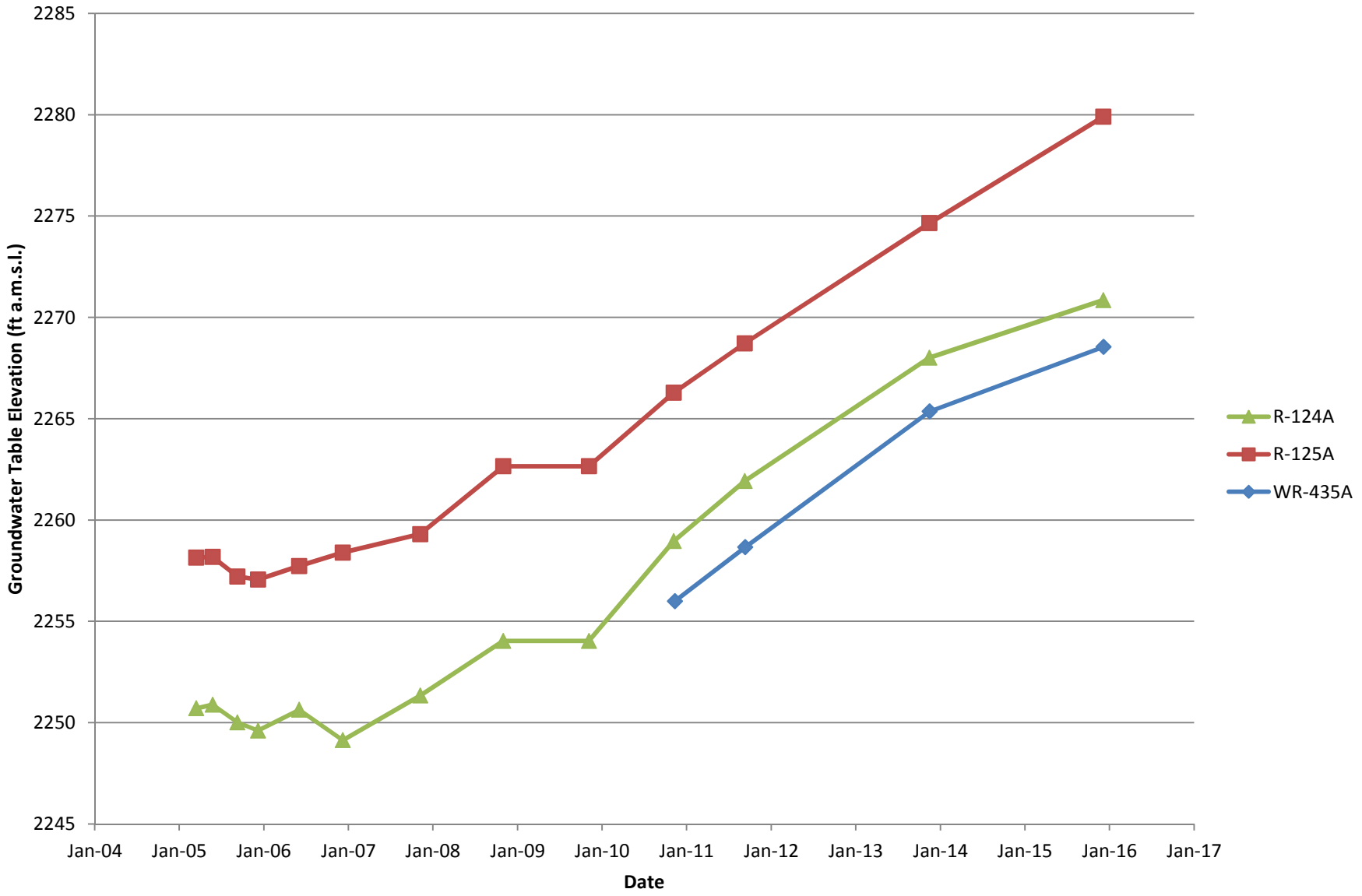
CITY OF TUCSON
ENVIRONMENTAL SERVICES

# Figure 2
# Site Map
# Prudence Landfill

| | |
|---|---|
| Drawn By: | LE |
| Checked: | AB |
| Approved: | TR |
| Date: | 5/10/2016 |
| File: | See Below |

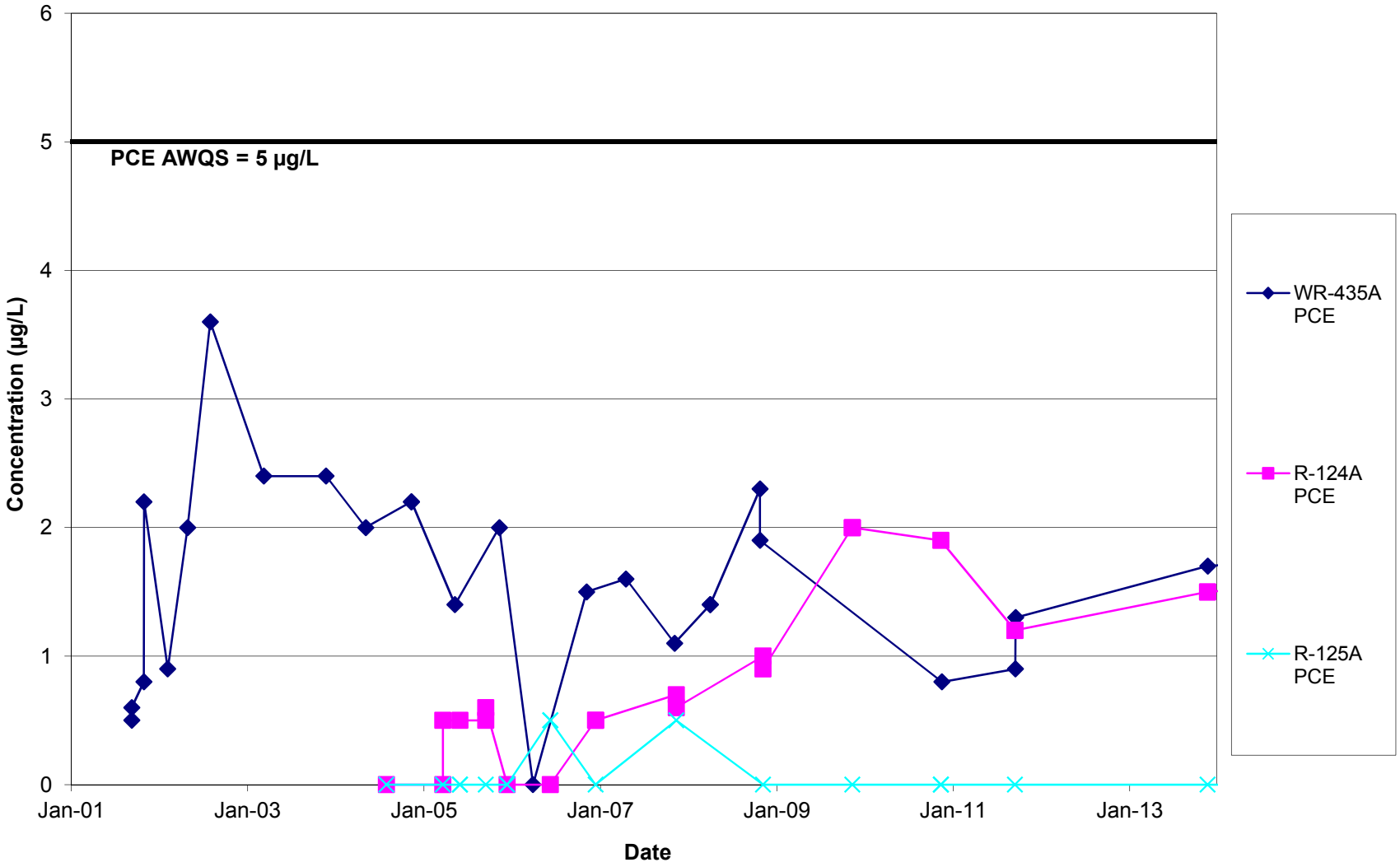
J:\GIS\Prudence\2015\SiteMap.mxd

Figure 3
Groundwater Elevation Trends
Prudence Landfill, Tucson Az



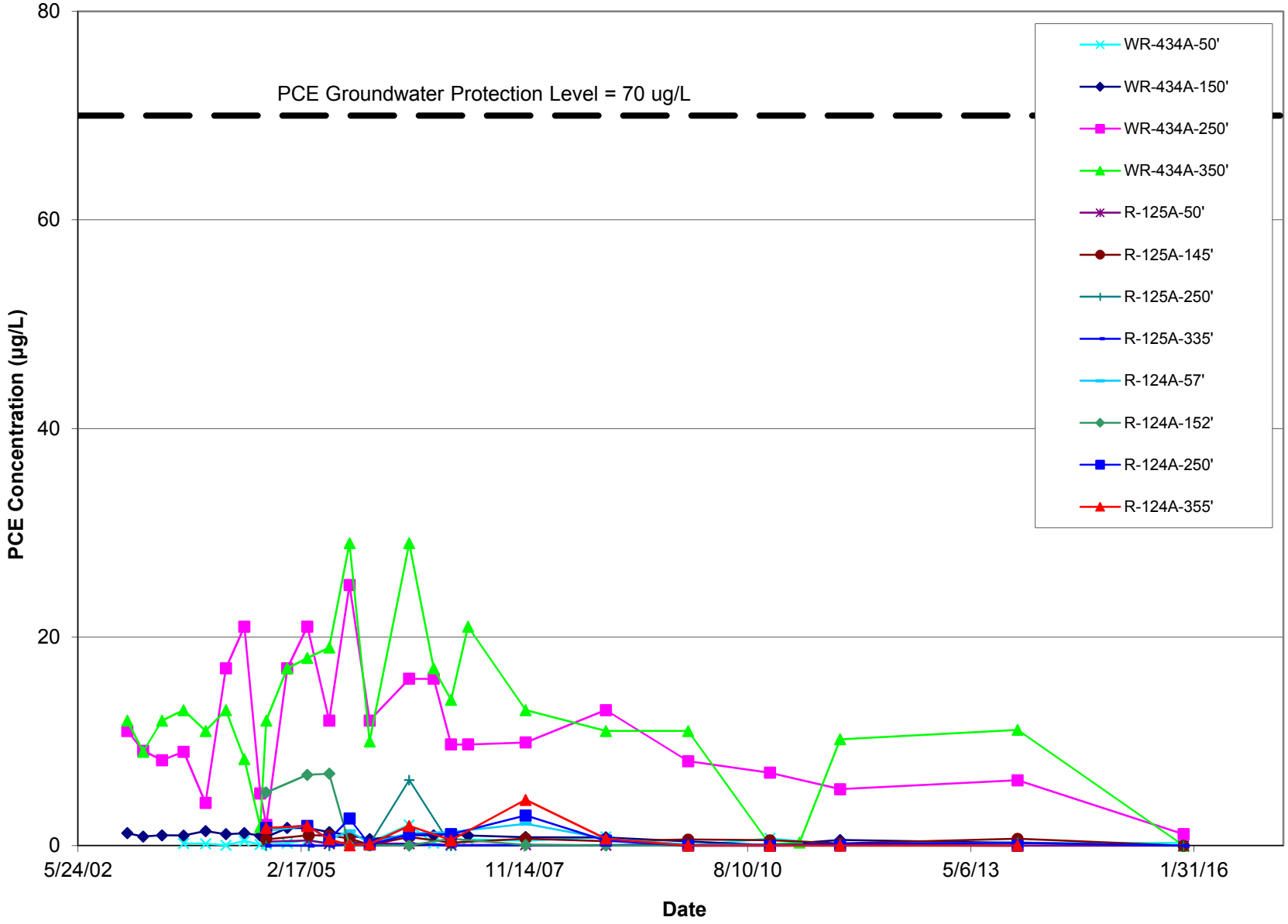

S:\EMCOMMON\Prudence\Well & System Info\Water Levels\Hydrograph.xlsx

**Figure 4**
**PCE Concentrations for Selected Groundwater Monitor Wells***
**Prudence Landfill, Tucson Az**




*All other wells are non-detect for PCE.

**Figure 5**
**PCE Concentrations in Soil Vapor Monitoring Wells**
**Prudence Landfill, Tucson Az**



# APPENDIX A

## Groundwater Analyte List, Field Sampling Sheets, and Laboratory Analytical Reports

| | |
|---|---|
| Project Name: | **Prudence Landfill** |
| Sample Points: | R-124A, R-125A, WR-435A |
| Samples Collected By: | Environmental Services |
| Sampling Frequency: | Biennial (2015, 2017, 2019) |

| | |
|---|---|
| Contact Person: | Arturo Burgos |
| Telephone: | 791-3175 |

| | |
|---|---|
| Reporting Frequency: | Biennial |
| Report Due: | VOCs 10 days, full report 30 days |
| Send Report To: | Lori Ehman |

| Required Field Parameters | Methods | Lab |
|---|---|---|
| Conductivity | YSI | Field Staff |
| ORP | YSI | Field Staff |
| Temp | YSI | Field Staff |
| pH | YSI | Field Staff |
| Turbidity | Hanna | Field Staff |

| Parameter | Methods | Lab |
|---|---|---|
| Alkalinity | SM 2320 B | TWQL |
| Ammonia | EPA 350.1 | MWH |
| Arsenic | EPA 200.8 | TWQL |
| Barium | EPA 200.7 | TWQL |
| Calcium | EPA 200.7 | TWQL |
| Iron | EPA 200.7 | TWQL |
| Lead | EPA 200.8 | TWQL |
| Magnesium | EPA 200.7 | TWQL |
| Manganese | EPA 200.7 | TWQL |
| Potassium | EPA 200.7 | TWQL |
| Sodium | EPA 200.7 | TWQL |
| Anions* | EPA 300.0 | TWQL |
| TOC | SM 5310 D | TWQL |
| TDS | SM 2540 C | TWQL |
| VOCs | EPA 8260 (HCL) | TWQL |

Matrix: Groundwater; Site: Wellhead; ADEQ Type: NONE

*Anions: Nitrate, Nitrite, Sulfate, Fluoride, and Chloride

Correction Factor: -1.14

# CITY OF TUCSON
Environmental Services
Sampling Data Form

HP: 5
TD: 410
D (diameter): 5
d factor: 3.87

**Well Name:** R-124A | **Project:** Prudence Landfill

Date: Dec 15, 2015 | Field Personnel: KV/JM

Weather: Sunny/Cold

**Static Water Level:** 349.23 | Time: 9:15:00 | Totalizer: End 248.4

Sounder ID: SOL 3 | Start 0

Sample Method: Pump | Total (gal) 248.4

**Well Volumes (gallons):** | Discharge Rate(GPM): 9.55

1 62 | 1.5 93 | 2 124 | 2.5 155 | 3 186 | 3.5 217 | 4 248 | 4.5 279 | 5 310

Pump Time: Start 9:32:00 | Meters and Type: X YS#1 ___ YSI#2 ___ YSI QS

End 9:58:00

Total (min) 26 | Calibration Date: December 15, 2015

Parameters (Stable within) *+/-0.1* *+/-3%* *+/-3%* *+/-10%* *+/-20 mv*

| Gallons | Time (hrs) | pH | SpC (uS/cm) | Temp (C) | DO (mg/L) | ORP | PWL (feet) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 62 | 0935 | 7.19 | 738 | 22.93 | 5.91 | 124.7 | 349.30 | 21.7 |
| 93 | 0937 | 7.18 | 738 | 24.22 | 5.64 | 123.3 | 349.30 | 33.9 |
| 124 | 0939 | 7.20 | 742 | 24.41 | 5.66 | 120.4 | 349.30 | 9.29 |
| 155 | 0942 | 7.24 | 744 | 24.34 | 5.70 | 116.7 | 349.30 | 2.91 |
| 186 | 0945 | 7.23 | 743 | 24.60 | 5.63 | 116.0 | 349.30 | 1.34 |
| 217 | | | | | | | | |
| 248 | | | | | | | | |
| 279 | | | | | | | | |
| 310 | | | | | | | | |

## Sampling:

Samples Collected By: Kayla Virgone | Sample Time: 9:48:00 | Dup Sample Time: 9:52:00 | Time Ended: 9:56:00

Transferred To: TWQL | Relinquished by: Kayla Virgone | Relinquish Date: December 15, 2015

Reason for Sampling: Monthly ___ Quarterly ___ Semi-Annual ___ Annual ___

GAC Treatment ___ Investigation ___ X Duplicate

Comments: 2 year sampling.

Correction Factor: -1.07

# CITY OF TUCSON
Environmental Services
Sampling Data Form

HP: 5
TD: 395
D (diameter): 5
d factor: 3.97

**Well Name:** R-125A
**Project:** Prudence Landfill
Date: Dec 15, 2015
Field Personnel: KV/JM
Weather: Sunny/Cold
**Static Water Level:** 332.70 Time 10:15:00
Totalizer: End 240.05
Sounder ID: SOL 3 Start 0
Sample Method: Pump Total (gal) 240.05
**Well Volumes (gallons):** Discharge Rate(GPM): 8.89

1 64 1.5 95 2 127 2.5 159 3 191 3.5 222 4 254 4.5 286 5 318

Pump Time: Start 10:22:00 Meters and Type: X YS#1 ___ YSI#2 ___ YSI QS
End 10:49:00
Total (min) 27 Calibration Date: December 15, 2015

| Parameters (Stable within) | +/-0.1 | +/-3% | +/-3% | +/-10% | +/-20 mv |
|---|---|---|---|---|---|

| Gallons | Time (hrs) | pH | SpC (uS/cm) | Temp (C) | DO (mg/L) | ORP | PWL (feet) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 64 | 1028 | 7.10 | 753 | 23.55 | 6.47 | 138.7 | 340.49 | 6.88 |
| 95 | 1033 | 7.06 | 754 | 24.57 | 6.40 | 137.9 | 340.75 | 8.82 |
| 127 | 1037 | 7.06 | 754 | 24.55 | 6.49 | 138.2 | 340.75 | 4.14 |
| 159 | 1041 | 7.05 | 753 | 24.83 | 6.42 | 138.5 | 340.80 | 3.05 |
| 191 | 1044 | 7.06 | 752 | 24.68 | 6.37 | 138.8 | 340.80 | 1.42 |
| 222 | | | | | | | | |
| 254 | | | | | | | | |
| 286 | | | | | | | | |
| 318 | | | | | | | | |

**Sampling:**

Samples Collected By: Kayla Virgone Sample Time: 10:46:00 Dup Sample Time: N:/A Time Ended: 10:49:00
Transferred To: TWQL Relinquished by: Kayla Virgone Relinquish Date: December 15, 2015
Reason for Sampling: Monthly ___ Quarterly ___ Semi-Annual ___ Annual ___
GAC Treatment ___ Investigation ___ Duplicate ___

Comments: 2 year sampling.

Correction Factor: -0.56

# CITY OF TUCSON
Environmental Services
Sampling Data Form

HP: VERDAD
TD: 420
D (diameter): 5
d factor: 4.36

**Well Name:** WR-435A
**Project:** Prudence Landfill
Date: Dec 16, 2015
Field Personnel: JM/VERDAD
Weather: SUNNY/COLD
**Static Water Level:** 351.55 Time 8:55:00
Totalizer: End 212
Sounder ID: SOL 3 Start 0
Sample Method: Verdad Total (gal) 212
**Well Volumes (gallons):** Discharge Rate(GPM): 5.05

1 70 1.5 105 2 140 2.5 175 3 209 3.5 244 4 279 4.5 314 5 349

Pump Time: Start 10:02:00 Meters and Type: X YS#1 X YSI#2 ___ YSI QS
End 10:44:00
Total (min) 42 Calibration Date: December 16, 2015

| Parameters (Stable within) | *+/-0.1* | *+/-3%* | *+/-3%* | *+/-10%* | *+/-20 mv* |
|---|---|---|---|---|---|

| Gallons | Time (hrs) | pH | SpC (uS/cm) | Temp (C) | DO (mg/L) | ORP | PWL (feet) | Turbidity (NTU) |
|---|---|---|---|---|---|---|---|---|
| 70 | 1015 | 7.74 | 510 | 25.22 | 5.86 | 123.7 | - | 10.22 |
| 105 | 1021 | 7.72 | 510 | 25.55 | 5.87 | 121.5 | - | 8.53 |
| 140 | 1027 | 7.72 | 511 | 25.42 | 5.92 | 120.7 | - | 5.41 |
| 175 | 1033 | 7.71 | 510 | 25.43 | 5.93 | 119.9 | - | 4.55 |
| 209 | 1039 | 7.71 | 509 | 25.59 | 5.93 | 118.5 | - | 2.11 |
| 244 | | | | | | | | |
| 279 | | | | | | | | |
| 314 | | | | | | | | |
| 349 | | | | | | | | |

**Sampling:**

Samples Collected By: Javier Montante Sample Time: 10:41:00 Dup Sample Time: n:/a Time Ended: 10:43:00
Transferred To: TWQL Relinquished by: Javier Montante Relinquish Date: December 16, 2015
Reason for Sampling: ___ Monthly ___ Quarterly ___ Semi-Annual X Annual
___ GAC Treatment ___ Investigation ___ Duplicate

Comments: Verdad set pump @ 400FT using 2HP pump.

4401 S. Tucson Estates Parkway
Tucson, Arizona 85735
520.791.2544 Phone
520.791.5260 Fax

05 January 2016

Arturo Burgos

Environmental Services

-

Tucson, AZ 85735

RE: Prudence Landfill

Enclosed are the results for Work Order L151420, received by the laboratory on 12/16/2015 12:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michael E. Dew
Lab Manager

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| WR-435A | L151420-01 | Aqueous | 12/16/2015 10:41 | 12/16/2015 12:00 |
| EQ Blank | L151420-02 | Aqueous | 12/16/2015 08:58 | 12/16/2015 12:00 |
| Trip Blank | L151420-03 | Aqueous | 12/16/2015 08:58 | 12/16/2015 12:00 |

All QC results were within QC limits with the following exceptions:

Ammonia nitrogen analysis by EPA Method 350.1 was flagged with the "N1" qualifier. The matrix spike recovery was outside the QC recovery limits of 90% - 110% with a recovery of 71%. Associated matrix spike sample was not from this sample set.

Please see page 33 for Notes and Definitions.

Tucson Water Quality Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Michael E. Dew, Lab Manager

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

**WR-435A** **Sampled:**

**L151420-01 (Aqueous)** 12/16/2015 10:41

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Eurofins Eaton Analytical (AZ0778)** | | | | | | | | | |
| **Subcontracted Analyses: Wet Chemistry** | | | | | | | | | |
| AMMONIA AS N | ND | 0.05 | mg/L | 1 | '[none]' | | 12/29/2015 | EPA 350.1 | N1 |
| **Tucson Water Quality Laboratory** | | | | | | | | | |
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

**WR-435A**

**L151420-01 (Aqueous)**

**Sampled:** 12/16/2015 10:41

**Tucson Water Quality Laboratory**

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMODICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **DICHLORODIFLUOROMETHANE** | **0.0007** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

**WR-435A**

**L151420-01 (Aqueous)**

**Sampled:** 12/16/2015 10:41

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| M/P-XYLENES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| NAPHTHALENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| STYRENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **TETRACHLOROETHENE** | **0.0018** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOTAL TRIHALOMETHANES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | | *95 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | | *101 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: TOLUENE-D8 (SURR.)* | | *99 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| **Total Metals by ICP** | | | | | | | | | |

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

**WR-435A** **Sampled:**

**L151420-01 (Aqueous)** 12/16/2015 10:41

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Total Metals by ICP** | | | | | | | | | |
| **BARIUM** | **0.177** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **CALCIUM** | **69.5** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **IRON** | **0.0966** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **MAGNESIUM** | **6.82** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| MANGANESE | ND | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **POTASSIUM** | **1.85** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **SODIUM** | **28.2** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **Total Metals by ICPMS** | | | | | | | | | |
| ARSENIC | ND | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| LEAD | ND | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| **Wet Chemistry** | | | | | | | | | |
| **ALKALINITY, BICARBONATE** | **210** | 20.0 | mg/L as CaCO3 | 1 | BL51708 | 12/17/2015 | 12/17/2015 | SM 2320B | |
| **ALKALINITY, TOTAL** | **210** | 20.0 | mg/L as CaCO3 | 1 | BL51708 | 12/17/2015 | 12/17/2015 | SM 2320B | |
| **BROMIDE** | **0.139** | 0.100 | mg/L | 1 | BL51701 | 12/16/2015 | 12/16/2015 | EPA 300.0 | |
| **CHLORIDE** | **9.48** | 3.00 | mg/L | 1 | BL51701 | 12/16/2015 | 12/16/2015 | EPA 300.0 | |
| **FLUORIDE** | **0.194** | 0.100 | mg/L | 1 | BL51701 | 12/16/2015 | 12/16/2015 | EPA 300.0 | |
| **NITRATE AS N** | **2.98** | 0.250 | mg/L | 1 | BL51701 | 12/16/2015 | 12/16/2015 | EPA 300.0 | |
| NITRITE AS N | ND | 0.100 | mg/L | 1 | BL51701 | 12/16/2015 | 12/16/2015 | EPA 300.0 | |
| ORTHO PHOSPHATE AS P | ND | 0.200 | mg/L | 1 | BL51701 | 12/16/2015 | 12/16/2015 | EPA 300.0 | |
| **SULFATE** | **30.8** | 5.00 | mg/L | 1 | BL51701 | 12/16/2015 | 12/16/2015 | EPA 300.0 | |
| **TOTAL DISSOLVED SOLIDS** | **303** | 10.0 | mg/L | 1 | BL51707 | 12/16/2015 | 12/16/2015 | SM 2540C | |
| **TOTAL ORGANIC CARBON** | **1.23** | 0.25 | mg/L | 1 | BL51802 | 12/18/2015 | 12/18/2015 | SM 5310 | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## EQ Blank

**L151420-02 (Aqueous)**

**Sampled:** 12/16/2015 8:58

### Tucson Water Quality Laboratory

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## EQ Blank

**L151420-02 (Aqueous)**

**Sampled:** 12/16/2015 8:58

### Tucson Water Quality Laboratory

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| BENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMODICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLORODIFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| M/P-XYLENES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## EQ Blank

**L151420-02 (Aqueous)**

**Sampled:** 12/16/2015 8:58

### Tucson Water Quality Laboratory

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| NAPHTHALENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| STYRENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TETRACHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOTAL TRIHALOMETHANES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | | *95 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | | *102 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: TOLUENE-D8 (SURR.)* | | *99 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Trip Blank

**L151420-03 (Aqueous)**

**Sampled:** 12/16/2015 8:58

### Tucson Water Quality Laboratory

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Trip Blank

**L151420-03 (Aqueous)**

**Sampled:** 12/16/2015 8:58

### Tucson Water Quality Laboratory

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| BENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMODICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLORODIFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| M/P-XYLENES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Trip Blank

**L151420-03 (Aqueous)**

**Sampled:** 12/16/2015 8:58

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| NAPHTHALENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| STYRENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TETRACHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOTAL TRIHALOMETHANES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | | *96 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | | *99 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: TOLUENE-D8 (SURR.)* | | *100 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51805-BLK1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| BENZENE | ND | 0.0005 | mg/L | | | | | | | |
| BROMOBENZENE | ND | 0.0005 | mg/L | | | | | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51805-BLK1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| BROMODICHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| BROMOFORM | ND | 0.0005 | mg/L | | | | | | | |
| BROMOMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROFORM | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | | | | | | | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| DICHLORODIFLUOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | | | | | | | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | | | | | | | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| M/P-XYLENES | ND | 0.0005 | mg/L | | | | | | | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | | | | | | | |
| NAPHTHALENE | ND | 0.0005 | mg/L | | | | | | | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | | | | | | | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51805-BLK1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | ND | 0.0005 | mg/L | | | | | | | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| TETRACHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| TOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| TOTAL TRIHALOMETHANES | ND | 0.0005 | mg/L | | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | | | | | | | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | | | | | | | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | | | | | | | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *4.95* | | ug/L | *5.00* | | *99* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *5.04* | | ug/L | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *5.01* | | ug/L | *5.00* | | *100* | *70-130* | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51805-MS1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | 5.13 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,1,1-TRICHLOROETHANE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | | | |
| 1,1,2,2-TETRACHLOROETHANE | 5.00 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| 1,1,2-TRICHLOROETHANE | 5.02 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| 1,1-DICHLOROETHANE | 5.45 | | ug/L | 5.00 | ND | 109 | 70-130 | | | |
| 1,1-DICHLOROETHENE | 5.98 | | ug/L | 5.00 | ND | 120 | 70-130 | | | |
| 1,1-DICHLOROPROPENE | 5.77 | | ug/L | 5.00 | ND | 115 | 70-130 | | | |
| 1,2,3-TRICHLOROBENZENE | 5.20 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 1,2,3-TRICHLOROPROPANE | 4.54 | | ug/L | 5.00 | ND | 91 | 70-130 | | | |
| 1,2,4-TRICHLOROBENZENE | 5.22 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 1,2,4-TRIMETHYLBENZENE | 5.30 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 4.37 | | ug/L | 5.00 | ND | 87 | 70-130 | | | |
| 1,2-DICHLOROBENZENE | 5.16 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,2-DICHLOROETHANE | 5.17 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,2-DICHLOROPROPANE | 5.01 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| 1,3,5-TRIMETHYLBENZENE | 5.15 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,3-DICHLOROBENZENE | 5.19 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 1,3-DICHLOROPROPANE | 4.87 | | ug/L | 5.00 | ND | 97 | 70-130 | | | |
| 1,4-DICHLOROBENZENE | 5.20 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 2,2-DICHLOROPROPANE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | | | |
| 2-CHLOROTOLUENE | 5.30 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| 4-CHLOROTOLUENE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | | | |
| 4-ISOPROPYLTOLUENE | 5.37 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| BENZENE | 5.32 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| BROMOBENZENE | 5.16 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51805-MS1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | 5.10 | | ug/L | 5.00 | ND | 102 | 70-130 | | | |
| BROMODICHLOROMETHANE | 5.75 | | ug/L | 5.00 | 0.550 | 104 | 70-130 | | | |
| BROMOFORM | 4.68 | | ug/L | 5.00 | ND | 94 | 70-130 | | | |
| BROMOMETHANE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| CARBON TETRACHLORIDE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | | | |
| CHLOROBENZENE | 5.20 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| CHLOROETHANE | 5.67 | | ug/L | 5.00 | ND | 113 | 70-130 | | | |
| CHLOROFORM | 7.81 | | ug/L | 5.00 | 2.69 | 102 | 70-130 | | | |
| CHLOROMETHANE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| CIS-1,2-DICHLOROETHENE | 5.22 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| CIS-1,3-DICHLOROPROPENE | 4.71 | | ug/L | 5.00 | ND | 94 | 70-130 | | | |
| DIBROMOCHLOROMETHANE | 5.30 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| DIBROMOMETHANE | 4.99 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| DICHLORODIFLUOROMETHANE | 7.19 | | ug/L | 5.00 | 2.27 | 98 | 70-130 | | | |
| DICHLOROMETHANE | 5.46 | | ug/L | 5.00 | ND | 109 | 70-130 | | | |
| ETHYLBENZENE | 5.38 | | ug/L | 5.00 | ND | 108 | 70-130 | | | |
| ETHYLENE DIBROMIDE | 5.04 | | ug/L | 5.00 | ND | 101 | 70-130 | | | |
| HEXACHLOROBUTADIENE | 5.32 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| ISOPROPYLBENZENE | 5.33 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| M/P-XYLENES | 10.5 | | ug/L | 10.0 | ND | 105 | 70-130 | | | |
| METHYL-TERT-BUTYL ETHER | 5.00 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| NAPHTHALENE | 5.61 | | ug/L | 5.00 | ND | 112 | 70-130 | | | |
| N-BUTYLBENZENE | 5.57 | | ug/L | 5.00 | ND | 111 | 70-130 | | | |
| N-PROPYLBENZENE | 5.29 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| ORTHO-XYLENE | 5.15 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| SEC-BUTYLBENZENE | 5.46 | | ug/L | 5.00 | ND | 109 | 70-130 | | | |

**Tucson Water Quality Lab**
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**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51805-MS1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | 4.75 | | ug/L | 5.00 | ND | 95 | 70-130 | | | |
| TERT-BUTYLBENZENE | 5.28 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| TETRACHLOROETHENE | 7.03 | | ug/L | 5.00 | 1.65 | 108 | 70-130 | | | |
| TOLUENE | 5.33 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| TRANS-1,2-DICHLOROETHENE | 5.97 | | ug/L | 5.00 | ND | 119 | 70-130 | | | |
| TRANS-1,3-DICHLOROPROPENE | 4.95 | | ug/L | 5.00 | ND | 99 | 70-130 | | | |
| TRICHLOROETHENE | 5.36 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| TRICHLOROFLUOROMETHANE | 6.01 | | ug/L | 5.00 | 0.270 | 115 | 70-130 | | | |
| VINYL CHLORIDE | 5.34 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *5.03* | | ug/L | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *4.87* | | ug/L | *5.00* | | *97* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *5.09* | | ug/L | *5.00* | | *102* | *70-130* | | | |

**Tucson Water Quality Lab**
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|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BL51805-MSD1)** | **Source: L151419-01** | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | 4.92 | | ug/L | 5.00 | ND | 98 | 70-130 | 4 | 20 | |
| 1,1,1-TRICHLOROETHANE | 5.23 | | ug/L | 5.00 | ND | 105 | 70-130 | 0.6 | 20 | |
| 1,1,2,2-TETRACHLOROETHANE | 4.87 | | ug/L | 5.00 | ND | 97 | 70-130 | 3 | 20 | |
| 1,1,2-TRICHLOROETHANE | 4.92 | | ug/L | 5.00 | ND | 98 | 70-130 | 2 | 20 | |
| 1,1-DICHLOROETHANE | 5.28 | | ug/L | 5.00 | ND | 106 | 70-130 | 3 | 20 | |
| 1,1-DICHLOROETHENE | 6.02 | | ug/L | 5.00 | ND | 120 | 70-130 | 0.7 | 20 | |
| 1,1-DICHLOROPROPENE | 5.39 | | ug/L | 5.00 | ND | 108 | 70-130 | 7 | 20 | |
| 1,2,3-TRICHLOROBENZENE | 5.02 | | ug/L | 5.00 | ND | 100 | 70-130 | 4 | 20 | |
| 1,2,3-TRICHLOROPROPANE | 4.89 | | ug/L | 5.00 | ND | 98 | 70-130 | 7 | 20 | |
| 1,2,4-TRICHLOROBENZENE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | 3 | 20 | |
| 1,2,4-TRIMETHYLBENZENE | 5.07 | | ug/L | 5.00 | ND | 101 | 70-130 | 4 | 20 | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 4.42 | | ug/L | 5.00 | ND | 88 | 70-130 | 1 | 20 | |
| 1,2-DICHLOROBENZENE | 5.04 | | ug/L | 5.00 | ND | 101 | 70-130 | 2 | 20 | |
| 1,2-DICHLOROETHANE | 5.16 | | ug/L | 5.00 | ND | 103 | 70-130 | 0.2 | 20 | |
| 1,2-DICHLOROPROPANE | 5.12 | | ug/L | 5.00 | ND | 102 | 70-130 | 2 | 20 | |
| 1,3,5-TRIMETHYLBENZENE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | 1 | 20 | |
| 1,3-DICHLOROBENZENE | 5.10 | | ug/L | 5.00 | ND | 102 | 70-130 | 2 | 20 | |
| 1,3-DICHLOROPROPANE | 4.93 | | ug/L | 5.00 | ND | 99 | 70-130 | 1 | 20 | |
| 1,4-DICHLOROBENZENE | 5.12 | | ug/L | 5.00 | ND | 102 | 70-130 | 2 | 20 | |
| 2,2-DICHLOROPROPANE | 5.09 | | ug/L | 5.00 | ND | 102 | 70-130 | 3 | 20 | |
| 2-CHLOROTOLUENE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | 3 | 20 | |
| 4-CHLOROTOLUENE | 4.94 | | ug/L | 5.00 | ND | 99 | 70-130 | 3 | 20 | |
| 4-ISOPROPYLTOLUENE | 5.19 | | ug/L | 5.00 | ND | 104 | 70-130 | 3 | 20 | |
| BENZENE | 5.25 | | ug/L | 5.00 | ND | 105 | 70-130 | 1 | 20 | |
| BROMOBENZENE | 4.96 | | ug/L | 5.00 | ND | 99 | 70-130 | 4 | 20 | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BL51805-MSD1)** | **Source: L151419-01** | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | 5.01 | | ug/L | 5.00 | ND | 100 | 70-130 | 2 | 20 | |
| BROMODICHLOROMETHANE | 5.83 | | ug/L | 5.00 | 0.550 | 106 | 70-130 | 2 | 20 | |
| BROMOFORM | 4.55 | | ug/L | 5.00 | ND | 91 | 70-130 | 3 | 20 | |
| BROMOMETHANE | 5.18 | | ug/L | 5.00 | ND | 104 | 70-130 | 0.8 | 20 | |
| CARBON TETRACHLORIDE | 5.18 | | ug/L | 5.00 | ND | 104 | 70-130 | 2 | 20 | |
| CHLOROBENZENE | 5.06 | | ug/L | 5.00 | ND | 101 | 70-130 | 3 | 20 | |
| CHLOROETHANE | 5.60 | | ug/L | 5.00 | ND | 112 | 70-130 | 1 | 20 | |
| CHLOROFORM | 7.83 | | ug/L | 5.00 | 2.69 | 103 | 70-130 | 0.4 | 20 | |
| CHLOROMETHANE | 5.03 | | ug/L | 5.00 | ND | 101 | 70-130 | 2 | 20 | |
| CIS-1,2-DICHLOROETHENE | 5.05 | | ug/L | 5.00 | ND | 101 | 70-130 | 3 | 20 | |
| CIS-1,3-DICHLOROPROPENE | 4.76 | | ug/L | 5.00 | ND | 95 | 70-130 | 1 | 20 | |
| DIBROMOCHLOROMETHANE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | 4 | 20 | |
| DIBROMOMETHANE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | 3 | 20 | |
| DICHLORODIFLUOROMETHANE | 7.04 | | ug/L | 5.00 | 2.27 | 95 | 70-130 | 3 | 20 | |
| DICHLOROMETHANE | 5.22 | | ug/L | 5.00 | ND | 104 | 70-130 | 4 | 20 | |
| ETHYLBENZENE | 5.18 | | ug/L | 5.00 | ND | 104 | 70-130 | 4 | 20 | |
| ETHYLENE DIBROMIDE | 5.03 | | ug/L | 5.00 | ND | 101 | 70-130 | 0.2 | 20 | |
| HEXACHLOROBUTADIENE | 5.00 | | ug/L | 5.00 | ND | 100 | 70-130 | 6 | 20 | |
| ISOPROPYLBENZENE | 5.15 | | ug/L | 5.00 | ND | 103 | 70-130 | 3 | 20 | |
| M/P-XYLENES | 10.1 | | ug/L | 10.0 | ND | 101 | 70-130 | 4 | 20 | |
| METHYL-TERT-BUTYL ETHER | 4.93 | | ug/L | 5.00 | ND | 99 | 70-130 | 1 | 20 | |
| NAPHTHALENE | 5.62 | | ug/L | 5.00 | ND | 112 | 70-130 | 0.2 | 20 | |
| N-BUTYLBENZENE | 5.36 | | ug/L | 5.00 | ND | 107 | 70-130 | 4 | 20 | |
| N-PROPYLBENZENE | 5.06 | | ug/L | 5.00 | ND | 101 | 70-130 | 4 | 20 | |
| ORTHO-XYLENE | 4.96 | | ug/L | 5.00 | ND | 99 | 70-130 | 4 | 20 | |
| SEC-BUTYLBENZENE | 5.24 | | ug/L | 5.00 | ND | 105 | 70-130 | 4 | 20 | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BL51805-MSD1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | 4.37 | | ug/L | 5.00 | ND | 87 | 70-130 | 8 | 20 | |
| TERT-BUTYLBENZENE | 4.94 | | ug/L | 5.00 | ND | 99 | 70-130 | 7 | 20 | |
| TETRACHLOROETHENE | 7.04 | | ug/L | 5.00 | 1.65 | 108 | 70-130 | 0.2 | 20 | |
| TOLUENE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | 1 | 20 | |
| TRANS-1,2-DICHLOROETHENE | 5.71 | | ug/L | 5.00 | ND | 114 | 70-130 | 4 | 20 | |
| TRANS-1,3-DICHLOROPROPENE | 4.92 | | ug/L | 5.00 | ND | 98 | 70-130 | 0.6 | 20 | |
| TRICHLOROETHENE | 5.29 | | ug/L | 5.00 | ND | 106 | 70-130 | 1 | 20 | |
| TRICHLOROFLUOROMETHANE | 6.06 | | ug/L | 5.00 | 0.270 | 116 | 70-130 | 0.9 | 20 | |
| VINYL CHLORIDE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | 2 | 20 | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *4.87* | | ug/L | *5.00* | | *97* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *4.93* | | ug/L | *5.00* | | *99* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *5.05* | | ug/L | *5.00* | | *101* | *70-130* | | | |

**Tucson Water Quality Lab**
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| Environmental Services | Project: Prudence Landfill | |
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| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reference (BL51805-SRM1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| 1,1,1-TRICHLOROETHANE | 4.87 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| 1,1,2,2-TETRACHLOROETHANE | 4.86 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| 1,1,2-TRICHLOROETHANE | 4.99 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| 1,1-DICHLOROETHANE | 5.05 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| 1,1-DICHLOROETHENE | 5.55 | | ug/L | 5.00 | | 111 | 70-130 | | | |
| 1,1-DICHLOROPROPENE | 5.08 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 1,2,3-TRICHLOROBENZENE | 5.01 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| 1,2,3-TRICHLOROPROPANE | 4.63 | | ug/L | 5.00 | | 93 | 70-130 | | | |
| 1,2,4-TRICHLOROBENZENE | 5.13 | | ug/L | 5.00 | | 103 | 70-130 | | | |
| 1,2,4-TRIMETHYLBENZENE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 4.07 | | ug/L | 5.00 | | 81 | 70-130 | | | |
| 1,2-DICHLOROBENZENE | 5.09 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 1,2-DICHLOROETHANE | 5.08 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 1,2-DICHLOROPROPANE | 4.89 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| 1,3,5-TRIMETHYLBENZENE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| 1,3-DICHLOROBENZENE | 5.01 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| 1,3-DICHLOROPROPANE | 4.82 | | ug/L | 5.00 | | 96 | 70-130 | | | |
| 1,4-DICHLOROBENZENE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| 2,2-DICHLOROPROPANE | 4.77 | | ug/L | 5.00 | | 95 | 70-130 | | | |
| 2-CHLOROTOLUENE | 5.08 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 4-CHLOROTOLUENE | 4.88 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| 4-ISOPROPYLTOLUENE | 5.07 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| BENZENE | 5.01 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| BROMOBENZENE | 4.96 | | ug/L | 5.00 | | 99 | 70-130 | | | |

**Tucson Water Quality Lab**
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**Tucson, AZ 85735**
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| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reference (BL51805-SRM1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | 5.02 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| BROMODICHLOROMETHANE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| BROMOFORM | 4.59 | | ug/L | 5.00 | | 92 | 70-130 | | | |
| BROMOMETHANE | 5.18 | | ug/L | 5.00 | | 104 | 70-130 | | | |
| CARBON TETRACHLORIDE | 4.97 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| CHLOROBENZENE | 4.92 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| CHLOROETHANE | 5.38 | | ug/L | 5.00 | | 108 | 70-130 | | | |
| CHLOROFORM | 4.85 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| CHLOROMETHANE | 4.79 | | ug/L | 5.00 | | 96 | 70-130 | | | |
| CIS-1,2-DICHLOROETHENE | 4.88 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| CIS-1,3-DICHLOROPROPENE | 4.64 | | ug/L | 5.00 | | 93 | 70-130 | | | |
| DIBROMOCHLOROMETHANE | 4.91 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| DIBROMOMETHANE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| DICHLORODIFLUOROMETHANE | 4.58 | | ug/L | 5.00 | | 92 | 70-130 | | | |
| DICHLOROMETHANE | 5.06 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| ETHYLBENZENE | 5.02 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| ETHYLENE DIBROMIDE | 4.90 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| HEXACHLOROBUTADIENE | 5.18 | | ug/L | 5.00 | | 104 | 70-130 | | | |
| ISOPROPYLBENZENE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| M/P-XYLENES | 9.88 | | ug/L | 10.0 | | 99 | 70-130 | | | |
| METHYL-TERT-BUTYL ETHER | 4.94 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| NAPHTHALENE | 5.40 | | ug/L | 5.00 | | 108 | 70-130 | | | |
| N-BUTYLBENZENE | 5.21 | | ug/L | 5.00 | | 104 | 70-130 | | | |
| N-PROPYLBENZENE | 4.89 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| ORTHO-XYLENE | 4.88 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| SEC-BUTYLBENZENE | 5.06 | | ug/L | 5.00 | | 101 | 70-130 | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reference (BL51805-SRM1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | 4.98 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| TERT-BUTYLBENZENE | 4.85 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| TETRACHLOROETHENE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| TOLUENE | 4.97 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| TRANS-1,2-DICHLOROETHENE | 5.48 | | ug/L | 5.00 | | 110 | 70-130 | | | |
| TRANS-1,3-DICHLOROPROPENE | 4.80 | | ug/L | 5.00 | | 96 | 70-130 | | | |
| TRICHLOROETHENE | 4.95 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| TRICHLOROFLUOROMETHANE | 5.55 | | ug/L | 5.00 | | 111 | 70-130 | | | |
| VINYL CHLORIDE | 4.85 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *4.93* | | ug/L | *5.00* | | *99* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *5.05* | | ug/L | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *4.97* | | ug/L | *5.00* | | *99* | *70-130* | | | |

## Total Metals by ICP - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|

**Tucson Water Quality Lab**
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| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Total Metals by ICP - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL53002-BLK1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | ND | 0.0200 | mg/L | | | | | | | |
| CALCIUM | ND | 2.00 | mg/L | | | | | | | |
| IRON | ND | 0.0200 | mg/L | | | | | | | |
| MAGNESIUM | ND | 0.500 | mg/L | | | | | | | |
| MANGANESE | ND | 0.0200 | mg/L | | | | | | | |
| POTASSIUM | ND | 0.500 | mg/L | | | | | | | |
| SODIUM | ND | 2.00 | mg/L | | | | | | | |
| **LCS (BL53002-BS1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | 0.203 | 0.0200 | mg/L | 0.200 | | 101 | 85-115 | | | |
| CALCIUM | 20.2 | 2.00 | mg/L | 20.0 | | 101 | 85-115 | | | |
| IRON | 0.995 | 0.0200 | mg/L | 1.00 | | 99.5 | 85-115 | | | |
| MAGNESIUM | 5.07 | 0.500 | mg/L | 5.00 | | 101 | 85-115 | | | |
| MANGANESE | 0.204 | 0.0200 | mg/L | 0.200 | | 102 | 85-115 | | | |
| POTASSIUM | 2.05 | 0.500 | mg/L | 2.00 | | 102 | 85-115 | | | |
| SODIUM | 20.9 | 2.00 | mg/L | 20.0 | | 104 | 85-115 | | | |

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|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Total Metals by ICP - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL53002-MS1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | 0.448 | 0.0200 | mg/L | 0.200 | 0.242 | 103 | 70-130 | | | |
| CALCIUM | 131 | 2.00 | mg/L | 20.0 | 110 | 106 | 70-130 | | | |
| IRON | 1.30 | 0.0200 | mg/L | 1.00 | 0.342 | 96.1 | 70-130 | | | |
| MAGNESIUM | 15.8 | 0.500 | mg/L | 5.00 | 11.0 | 97.6 | 70-130 | | | |
| MANGANESE | 0.201 | 0.0200 | mg/L | 0.200 | 0.00260 | 99.3 | 70-130 | | | |
| POTASSIUM | 4.21 | 0.500 | mg/L | 2.00 | 2.19 | 101 | 70-130 | | | |
| SODIUM | 55.2 | 2.00 | mg/L | 20.0 | 34.8 | 102 | 70-130 | | | |
| **Matrix Spike Dup (BL53002-MSD1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | 0.449 | 0.0200 | mg/L | 0.200 | 0.242 | 104 | 70-130 | 0.191 | 10 | |
| CALCIUM | 132 | 2.00 | mg/L | 20.0 | 110 | 110 | 70-130 | 0.560 | 10 | |
| IRON | 1.30 | 0.0200 | mg/L | 1.00 | 0.342 | 96.1 | 70-130 | 0.0389 | 10 | |
| MAGNESIUM | 15.9 | 0.500 | mg/L | 5.00 | 11.0 | 99.5 | 70-130 | 0.591 | 10 | |
| MANGANESE | 0.202 | 0.0200 | mg/L | 0.200 | 0.00260 | 99.5 | 70-130 | 0.180 | 10 | |
| POTASSIUM | 4.23 | 0.500 | mg/L | 2.00 | 2.19 | 102 | 70-130 | 0.468 | 10 | |
| SODIUM | 55.5 | 2.00 | mg/L | 20.0 | 34.8 | 104 | 70-130 | 0.496 | 10 | |

## Total Metals by ICPMS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Total Metals by ICPMS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL53005-BLK1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | ND | 0.00100 | mg/L | | | | | | | |
| LEAD | ND | 0.00100 | mg/L | | | | | | | |
| **LCS (BL53005-BS1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | 0.0105 | 0.00100 | mg/L | 0.0100 | | 105 | 85-115 | | | |
| LEAD | 0.00925 | 0.00100 | mg/L | 0.0100 | | 92.5 | 85-115 | | | |
| **Matrix Spike (BL53005-MS1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | 0.0110 | 0.00100 | mg/L | 0.0100 | 0.000726 | 103 | 70-130 | | | |
| LEAD | 0.0103 | 0.00100 | mg/L | 0.0100 | 0.00120 | 91.0 | 70-130 | | | |
| **Matrix Spike Dup (BL53005-MSD1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | 0.0111 | 0.00100 | mg/L | 0.0100 | 0.000726 | 104 | 70-130 | 0.570 | 10 | |
| LEAD | 0.0104 | 0.00100 | mg/L | 0.0100 | 0.00120 | 92.0 | 70-130 | 0.918 | 10 | |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|

**Tucson Water Quality Lab**
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**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51701-MS1)** | **Source: L151461-01** | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51701 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| BROMIDE | 0.9 | 0.104 | mg/L | 0.833 | ND | 104 | 80-120 | | | |
| CHLORIDE | 125 | 3.12 | mg/L | 41.7 | 79.3 | 110 | 80-120 | | | |
| FLUORIDE | 1.2 | 0.104 | mg/L | 0.833 | 0.4 | 97.7 | 80-120 | | | |
| NITRATE AS N | 5.2 | 0.260 | mg/L | 4.17 | 0.9 | 102 | 80-120 | | | |
| NITRITE AS N | 1.4 | 0.104 | mg/L | 1.56 | ND | 87.2 | 80-120 | | | |
| ORTHO PHOSPHATE AS P | 0.8 | 0.208 | mg/L | 0.833 | ND | 95.8 | 80-120 | | | |
| SULFATE | 217 | 5.21 | mg/L | 41.7 | 171 | 111 | 80-120 | | | |
| **Matrix Spike Dup (BL51701-MSD1)** | **Source: L151461-01** | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51701 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| BROMIDE | 0.9 | 0.104 | mg/L | 0.833 | ND | 104 | 80-120 | 0.240 | 10 | |
| CHLORIDE | 125 | 3.12 | mg/L | 41.7 | 79.3 | 110 | 80-120 | 0.100 | 10 | |
| FLUORIDE | 1.2 | 0.104 | mg/L | 0.833 | 0.4 | 98.3 | 80-120 | 0.432 | 10 | |
| NITRATE AS N | 5.2 | 0.260 | mg/L | 4.17 | 0.9 | 102 | 80-120 | 0.108 | 10 | |
| NITRITE AS N | 1.4 | 0.104 | mg/L | 1.56 | ND | 87.2 | 80-120 | 0.0382 | 10 | |
| ORTHO PHOSPHATE AS P | 0.8 | 0.208 | mg/L | 0.833 | ND | 97.7 | 80-120 | 1.99 | 10 | |
| SULFATE | 217 | 5.21 | mg/L | 41.7 | 171 | 111 | 80-120 | 0.124 | 10 | |
| **Duplicate (BL51707-DUP1)** | **Source: L151419-01** | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51707 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| TOTAL DISSOLVED SOLIDS | 443 | 10.0 | mg/L | | 442 | | | 0.226 | 5 | |

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| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (BL51708-DUP1)** | **Source: L151461-01** | | | Prepared & Analyzed: 12/17/2015 | | | | | | |
| **Batch BL51708 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| ALKALINITY, TOTAL | 111 | 20.0 | mg/L as CaCO3 | | 110 | | | 0.298 | 10 | |
| **Matrix Spike (BL51708-MS2)** | **Source: L151461-01** | | | Prepared & Analyzed: 12/17/2015 | | | | | | |
| **Batch BL51708 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| ALKALINITY, TOTAL | 174 | 20.0 | mg/L as CaCO3 | 59.0 | 110 | 108 | 80-120 | | | |
| **Blank (BL51802-BLK1)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **Blank (BL51802-BLK2)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **Blank (BL51802-BLK3)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |

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|---|---|---|
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| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51802-BLK4)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **Blank (BL51802-BLK5)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **LCS (BL51802-BS1)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 4.70 | | mg/L | 5.00 | | 94 | 90-110 | | | |
| **LCS (BL51802-BS2)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 9.51 | | mg/L | 10.0 | | 95 | 90-110 | | | |
| **LCS (BL51802-BS3)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 4.70 | | mg/L | 5.00 | | 94 | 90-110 | | | |

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| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BL51802-BS4)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 9.58 | | mg/L | 10.0 | | 96 | 90-110 | | | |
| **LCS (BL51802-BS5)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 4.75 | | mg/L | 5.00 | | 95 | 90-110 | | | |
| **MRL Check (BL51802-MRL1)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 0.231 | | mg/L | 0.250 | | 92 | 50-150 | | | |
| **Matrix Spike (BL51802-MS1)** | **Source: L151444-03** | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 1.34 | | mg/L | 0.900 | 0.461 | 97 | 83-114 | | | |
| **Matrix Spike (BL51802-MS2)** | **Source: L151457-01** | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 1.34 | | mg/L | 0.900 | 0.443 | 99 | 83-114 | | | |

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| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 09:51 |

## Certified Analyses included in this Report

| Analyte | Certifications |
|---|---|

| Code | Description | Number | Expires |
|---|---|---|---|

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|---|---|---|
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| - | Project Number: P01065 | **Reported:** |
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## Notes and Definitions

| | |
|---|---|
| N1 | Associated Matrix spike recovery outside acceptance limits. Associated spiked sample not from this sample set. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

## Items for Project Manager Review

| LabNumber | Analysis | Analyte | Exception |
|---|---|---|---|
| | | | Data included from: \ \\166.89.20.134\ElementServerFolders\TransferIn\L151420 TRANSFER 01 04 2016 1232 |

# TUCSON WATER CHAIN OF CUSTODY

LOGIN ID: L1514120

CLIENT: ES

PROJECT NAME/FREQUENCY:
Prudence Landfill
~~Annual~~ BIENNIAL
CBeginning 12/10/15

PROJECT #: P01065

SAMPLING DATE:
12-16-2015

SAMPLED BY:
print full name
JAVIER MONTAÑO
signature
J Montaño

| SAMPLE # | TIME | LOCATION | SITE | NUMBER OF CONTAINERS | PRESERVATIVE | (Na2S2O3) | | | ( Unpreserved) | (HNO3) | | | | | | (H2SO4) | (NaS2O3/H2SO4) | ( Unpreserved) | (NaS2O3/H2SO4) | (H2SO4) | (HCl) | (Ascorbic Acid) | (Na2S2O3) | | | (Unpreserved) | | | | | | | | (H2SO4) | | (NaOH) | (NaOH/Zinc Acetate) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Ba | Fe - Mn | Ca - Mg - K - Na | As - Pb | | | | | Anions - Alkalinity - TDS | | TOC | 8260 | | | | | | | | | | | | | Ammonia | | | | |
| | | | | | | | | | | ICP | ICP | ICP | ICP | ICP | ICPMS | GF | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | |
| -01 | 1041 | WR-43SA | WELL | 10 | | | | | | X | X | | X | | X | | | X | | X | X | | | | | | | | | | | X | | | | TB- 03 |
| -02 | 0858 | EQUIP. BLANK VERIFIED | | 4 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | TB- ↓ |
| -03 | 0858 | Trip Blank | TWQL | 2 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | Lot # 10 01 15 |
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COMMENTS:

SPECIAL TURNAROUND TIME:

| | SIGNATURE | DATE/TIME | | SIGNATURE | DATE/TIME |
|---|---|---|---|---|---|
| RELINQUISHED BY: | J Montaño | 12/16/15 1155 | RECEIVED BY: | | 12/16/15 1200 |
| RELINQUISHED BY: | | 12/17/15 1500 | RECEIVED BY: | UPS# 1ZYR80260195779745 | 12/17/15 1500 |
| RELINQUISHED BY: | | | RECEIVED BY: | | |
| RELINQUISHED BY: | | | RECEIVED BY: | | |

RECEIVING TEMPERATURE= 1.8 °C

4401 S. Tucson Estates Parkway
Tucson, Arizona 85735
520.791.2544 Phone
520.791.5260 Fax

05 January 2016

Arturo Burgos

Environmental Services

-

Tucson, AZ 85735

RE: Prudence Landfill

Enclosed are the results for Work Order L151419, received by the laboratory on 12/15/2015 12:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michael E. Dew
Lab Manager

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| R-124A | L151419-01 | Aqueous | 12/15/2015 09:48 | 12/15/2015 12:10 |
| R-124A | L151419-02 | Aqueous | 12/15/2015 09:52 | 12/15/2015 12:10 |
| R-125A | L151419-03 | Aqueous | 12/15/2015 10:46 | 12/15/2015 12:10 |
| Trip Blank | L151419-04 | Aqueous | 12/15/2015 09:48 | 12/15/2015 12:10 |

All QC results were within QC limits with the following exceptions:

Ammonia nitrogen analysis by EPA Method 350.1 for sample log number L151419-02 (R-124A) was flagged with the "M2" qualifier. The matrix spike recovery was outside the QC recovery limits of 90% - 110% with a recovery of 71%.

Please see page 38 for Notes and Definitions.

Tucson Water Quality Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Michael E. Dew, Lab Manager

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A**

**L151419-01 (Aqueous)**

**Sampled:** 12/15/2015 9:48

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Eurofins Eaton Analytical (AZ0778)** | | | | | | | | | |
| **Subcontracted Analyses: Wet Chemistry** | | | | | | | | | |
| AMMONIA AS N | ND | 0.05 | mg/L | 1 | '[none]' | | 12/29/2015 | EPA 350.1 | |
| **Tucson Water Quality Laboratory** | | | | | | | | | |
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A**

**L151419-01 (Aqueous)**

**Sampled:** 12/15/2015 9:48

**Tucson Water Quality Laboratory**

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **BROMODICHLOROMETHANE** | **0.0006** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **CHLOROFORM** | **0.0027** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **DICHLORODIFLUOROMETHANE** | **0.0023** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A**

**L151419-01 (Aqueous)**

**Sampled:** 12/15/2015 9:48

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| M/P-XYLENES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| NAPHTHALENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| STYRENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **TETRACHLOROETHENE** | **0.0016** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **TOTAL TRIHALOMETHANES** | **0.0032** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | | *98 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | | *96 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: TOLUENE-D8 (SURR.)* | | *98 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| **Total Metals by ICP** | | | | | | | | | |

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A**

**L151419-01 (Aqueous)**

**Sampled:** 12/15/2015 9:48

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Total Metals by ICP** | | | | | | | | | |
| **BARIUM** | **0.242** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **CALCIUM** | **110** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **IRON** | **0.342** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **MAGNESIUM** | **11.0** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| MANGANESE | ND | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **POTASSIUM** | **2.19** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **SODIUM** | **34.8** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **Total Metals by ICPMS** | | | | | | | | | |
| ARSENIC | ND | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| **LEAD** | **0.00120** | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| **Wet Chemistry** | | | | | | | | | |
| **ALKALINITY, BICARBONATE** | **306** | 20.0 | mg/L as CaCO3 | 1 | BL51706 | 12/15/2015 | 12/15/2015 | SM 2320B | |
| **ALKALINITY, TOTAL** | **306** | 20.0 | mg/L as CaCO3 | 1 | BL51706 | 12/15/2015 | 12/15/2015 | SM 2320B | |
| **BROMIDE** | **0.102** | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **CHLORIDE** | **26.8** | 3.00 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **FLUORIDE** | **0.143** | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **NITRATE AS N** | **3.60** | 0.250 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| NITRITE AS N | ND | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| ORTHO PHOSPHATE AS P | ND | 0.200 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **SULFATE** | **39.1** | 5.00 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **TOTAL DISSOLVED SOLIDS** | **442** | 10.0 | mg/L | 1 | BL51707 | 12/16/2015 | 12/16/2015 | SM 2540C | |
| **TOTAL ORGANIC CARBON** | **0.57** | 0.25 | mg/L | 1 | BL51802 | 12/18/2015 | 12/18/2015 | SM 5310 | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A** **Sampled:**

**L151419-02 (Aqueous)** 12/15/2015 9:52

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Eurofins Eaton Analytical (AZ0778)** | | | | | | | | | |
| **Subcontracted Analyses: Wet Chemistry** | | | | | | | | | |
| AMMONIA AS N | ND | 0.05 | mg/L | 1 | '[none]' | | 12/29/2015 | EPA 350.1 | M2 |
| **Tucson Water Quality Laboratory** | | | | | | | | | |
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A**

**L151419-02 (Aqueous)**

**Sampled:** 12/15/2015 9:52

**Tucson Water Quality Laboratory**

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **BROMODICHLOROMETHANE** | **0.0006** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **CHLOROFORM** | **0.0028** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **DICHLORODIFLUOROMETHANE** | **0.0024** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A**

**L151419-02 (Aqueous)**

**Sampled:** 12/15/2015 9:52

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| M/P-XYLENES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| NAPHTHALENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| STYRENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **TETRACHLOROETHENE** | **0.0017** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| **TOTAL TRIHALOMETHANES** | **0.0034** | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | | *95 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | | *98 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: TOLUENE-D8 (SURR.)* | | *99 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| **Total Metals by ICP** | | | | | | | | | |

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-124A**

**L151419-02 (Aqueous)**

**Sampled:** 12/15/2015 9:52

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Total Metals by ICP** | | | | | | | | | |
| **BARIUM** | **0.240** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **CALCIUM** | **110** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **IRON** | **0.0280** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **MAGNESIUM** | **11.0** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| MANGANESE | ND | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **POTASSIUM** | **2.31** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **SODIUM** | **35.3** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **Total Metals by ICPMS** | | | | | | | | | |
| ARSENIC | ND | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| LEAD | ND | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| **Wet Chemistry** | | | | | | | | | |
| **ALKALINITY, BICARBONATE** | **300** | 20.0 | mg/L as CaCO3 | 1 | BL51706 | 12/15/2015 | 12/15/2015 | SM 2320B | |
| **ALKALINITY, TOTAL** | **300** | 20.0 | mg/L as CaCO3 | 1 | BL51706 | 12/15/2015 | 12/15/2015 | SM 2320B | |
| **BROMIDE** | **0.111** | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **CHLORIDE** | **26.7** | 3.00 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **FLUORIDE** | **0.144** | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **NITRATE AS N** | **3.60** | 0.250 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| NITRITE AS N | ND | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| ORTHO PHOSPHATE AS P | ND | 0.200 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **SULFATE** | **39.1** | 5.00 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **TOTAL DISSOLVED SOLIDS** | **441** | 10.0 | mg/L | 1 | BL51707 | 12/16/2015 | 12/16/2015 | SM 2540C | |
| **TOTAL ORGANIC CARBON** | **0.56** | 0.25 | mg/L | 1 | BL51802 | 12/18/2015 | 12/18/2015 | SM 5310 | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
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| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-125A**

**L151419-03 (Aqueous)**

**Sampled:** 12/15/2015 10:46

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Eurofins Eaton Analytical (AZ0778)** | | | | | | | | | |
| **Subcontracted Analyses: Wet Chemistry** | | | | | | | | | |
| AMMONIA AS N | ND | 0.05 | mg/L | 1 | '[none]' | | 12/29/2015 | EPA 350.1 | |
| **Tucson Water Quality Laboratory** | | | | | | | | | |
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-125A**

**L151419-03 (Aqueous)**

**Sampled:** 12/15/2015 10:46

**Tucson Water Quality Laboratory**

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMODICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLORODIFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-125A**

**L151419-03 (Aqueous)**

**Sampled:** 12/15/2015 10:46

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| M/P-XYLENES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| NAPHTHALENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| STYRENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TETRACHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOTAL TRIHALOMETHANES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | | *98 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | | *103 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: TOLUENE-D8 (SURR.)* | | *101 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| **Total Metals by ICP** | | | | | | | | | |

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

**R-125A**

**L151419-03 (Aqueous)**

**Sampled:** 12/15/2015 10:46

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Total Metals by ICP** | | | | | | | | | |
| **BARIUM** | **0.298** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **CALCIUM** | **115** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **IRON** | **0.116** | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **MAGNESIUM** | **12.1** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| MANGANESE | ND | 0.0200 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **POTASSIUM** | **2.29** | 0.500 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **SODIUM** | **35.1** | 2.00 | mg/L | 1 | BL53002 | 12/23/2015 | 12/30/2015 | EPA 200.7 | |
| **Total Metals by ICPMS** | | | | | | | | | |
| ARSENIC | ND | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| **LEAD** | **0.00137** | 0.00100 | mg/L | 1 | BL53005 | 12/23/2015 | 12/30/2015 | EPA 200.8 | |
| **Wet Chemistry** | | | | | | | | | |
| **ALKALINITY, BICARBONATE** | **346** | 20.0 | mg/L as CaCO3 | 1 | BL51706 | 12/15/2015 | 12/15/2015 | SM 2320B | |
| **ALKALINITY, TOTAL** | **346** | 20.0 | mg/L as CaCO3 | 1 | BL51706 | 12/15/2015 | 12/15/2015 | SM 2320B | |
| BROMIDE | ND | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **CHLORIDE** | **6.25** | 3.00 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **FLUORIDE** | **0.135** | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **NITRATE AS N** | **2.82** | 0.250 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| NITRITE AS N | ND | 0.100 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| ORTHO PHOSPHATE AS P | ND | 0.200 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **SULFATE** | **46.1** | 5.00 | mg/L | 1 | BL51603 | 12/15/2015 | 12/15/2015 | EPA 300.0 | |
| **TOTAL DISSOLVED SOLIDS** | **452** | 10.0 | mg/L | 1 | BL51707 | 12/16/2015 | 12/16/2015 | SM 2540C | |
| **TOTAL ORGANIC CARBON** | **0.70** | 0.25 | mg/L | 1 | BL51802 | 12/18/2015 | 12/18/2015 | SM 5310 | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Trip Blank

**L151419-04 (Aqueous)**

**Sampled:** 12/15/2015 9:48

### Tucson Water Quality Laboratory

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Trip Blank

**L151419-04 (Aqueous)**

**Sampled:** 12/15/2015 9:48

### Tucson Water Quality Laboratory

**Volatile Organic Compounds by GC/MS**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| BENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMODICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| BROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROFORM | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLORODIFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| M/P-XYLENES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Trip Blank

**L151419-04 (Aqueous)**

**Sampled:** 12/15/2015 9:48

**Tucson Water Quality Laboratory**

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS** | | | | | | | | | |
| NAPHTHALENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| STYRENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TETRACHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOLUENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TOTAL TRIHALOMETHANES | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | 1 | BL51805 | 12/16/2015 | 12/16/2015 | EPA 8260B | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | | *94 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | | *100 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |
| *Surrogate: TOLUENE-D8 (SURR.)* | | *98 %* | | *70-130* | *BL51805* | *12/16/2015* | *12/16/2015* | *EPA 8260B* | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51805-BLK1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1,1-TRICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1,2,2-TETRACHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1,2-TRICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1-DICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1-DICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,1-DICHLOROPROPENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,3-TRICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,3-TRICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,4-TRICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2,4-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DICHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,3,5-TRIMETHYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,3-DICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 1,3-DICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 1,4-DICHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| 2,2-DICHLOROPROPANE | ND | 0.0005 | mg/L | | | | | | | |
| 2-CHLOROTOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| 4-CHLOROTOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| 4-ISOPROPYLTOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| BENZENE | ND | 0.0005 | mg/L | | | | | | | |
| BROMOBENZENE | ND | 0.0005 | mg/L | | | | | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51805-BLK1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| BROMODICHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| BROMOFORM | ND | 0.0005 | mg/L | | | | | | | |
| BROMOMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| CARBON TETRACHLORIDE | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROETHANE | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROFORM | ND | 0.0005 | mg/L | | | | | | | |
| CHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| CIS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| CIS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | | | | | | | |
| DIBROMOCHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| DIBROMOMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| DICHLORODIFLUOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| DICHLOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| ETHYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| ETHYLENE DIBROMIDE | ND | 0.0005 | mg/L | | | | | | | |
| HEXACHLOROBUTADIENE | ND | 0.0005 | mg/L | | | | | | | |
| ISOPROPYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| M/P-XYLENES | ND | 0.0005 | mg/L | | | | | | | |
| METHYL-TERT-BUTYL ETHER | ND | 0.0005 | mg/L | | | | | | | |
| NAPHTHALENE | ND | 0.0005 | mg/L | | | | | | | |
| N-BUTYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| N-PROPYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| ORTHO-XYLENE | ND | 0.0005 | mg/L | | | | | | | |
| SEC-BUTYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51805-BLK1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | ND | 0.0005 | mg/L | | | | | | | |
| TERT-BUTYLBENZENE | ND | 0.0005 | mg/L | | | | | | | |
| TETRACHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| TOLUENE | ND | 0.0005 | mg/L | | | | | | | |
| TOTAL TRIHALOMETHANES | ND | 0.0005 | mg/L | | | | | | | |
| TRANS-1,2-DICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| TRANS-1,3-DICHLOROPROPENE | ND | 0.0005 | mg/L | | | | | | | |
| TRICHLOROETHENE | ND | 0.0005 | mg/L | | | | | | | |
| TRICHLOROFLUOROMETHANE | ND | 0.0005 | mg/L | | | | | | | |
| VINYL CHLORIDE | ND | 0.0005 | mg/L | | | | | | | |
| XYLENES (TOTAL) | ND | 0.0005 | mg/L | | | | | | | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *4.95* | | ug/L | *5.00* | | *99* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *5.04* | | ug/L | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *5.01* | | ug/L | *5.00* | | *100* | *70-130* | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51805-MS1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | 5.13 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,1,1-TRICHLOROETHANE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | | | |
| 1,1,2,2-TETRACHLOROETHANE | 5.00 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| 1,1,2-TRICHLOROETHANE | 5.02 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| 1,1-DICHLOROETHANE | 5.45 | | ug/L | 5.00 | ND | 109 | 70-130 | | | |
| 1,1-DICHLOROETHENE | 5.98 | | ug/L | 5.00 | ND | 120 | 70-130 | | | |
| 1,1-DICHLOROPROPENE | 5.77 | | ug/L | 5.00 | ND | 115 | 70-130 | | | |
| 1,2,3-TRICHLOROBENZENE | 5.20 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 1,2,3-TRICHLOROPROPANE | 4.54 | | ug/L | 5.00 | ND | 91 | 70-130 | | | |
| 1,2,4-TRICHLOROBENZENE | 5.22 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 1,2,4-TRIMETHYLBENZENE | 5.30 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 4.37 | | ug/L | 5.00 | ND | 87 | 70-130 | | | |
| 1,2-DICHLOROBENZENE | 5.16 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,2-DICHLOROETHANE | 5.17 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,2-DICHLOROPROPANE | 5.01 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| 1,3,5-TRIMETHYLBENZENE | 5.15 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| 1,3-DICHLOROBENZENE | 5.19 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 1,3-DICHLOROPROPANE | 4.87 | | ug/L | 5.00 | ND | 97 | 70-130 | | | |
| 1,4-DICHLOROBENZENE | 5.20 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| 2,2-DICHLOROPROPANE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | | | |
| 2-CHLOROTOLUENE | 5.30 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| 4-CHLOROTOLUENE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | | | |
| 4-ISOPROPYLTOLUENE | 5.37 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| BENZENE | 5.32 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| BROMOBENZENE | 5.16 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51805-MS1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | 5.10 | | ug/L | 5.00 | ND | 102 | 70-130 | | | |
| BROMODICHLOROMETHANE | 5.75 | | ug/L | 5.00 | 0.550 | 104 | 70-130 | | | |
| BROMOFORM | 4.68 | | ug/L | 5.00 | ND | 94 | 70-130 | | | |
| BROMOMETHANE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| CARBON TETRACHLORIDE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | | | |
| CHLOROBENZENE | 5.20 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| CHLOROETHANE | 5.67 | | ug/L | 5.00 | ND | 113 | 70-130 | | | |
| CHLOROFORM | 7.81 | | ug/L | 5.00 | 2.69 | 102 | 70-130 | | | |
| CHLOROMETHANE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| CIS-1,2-DICHLOROETHENE | 5.22 | | ug/L | 5.00 | ND | 104 | 70-130 | | | |
| CIS-1,3-DICHLOROPROPENE | 4.71 | | ug/L | 5.00 | ND | 94 | 70-130 | | | |
| DIBROMOCHLOROMETHANE | 5.30 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| DIBROMOMETHANE | 4.99 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| DICHLORODIFLUOROMETHANE | 7.19 | | ug/L | 5.00 | 2.27 | 98 | 70-130 | | | |
| DICHLOROMETHANE | 5.46 | | ug/L | 5.00 | ND | 109 | 70-130 | | | |
| ETHYLBENZENE | 5.38 | | ug/L | 5.00 | ND | 108 | 70-130 | | | |
| ETHYLENE DIBROMIDE | 5.04 | | ug/L | 5.00 | ND | 101 | 70-130 | | | |
| HEXACHLOROBUTADIENE | 5.32 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| ISOPROPYLBENZENE | 5.33 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| M/P-XYLENES | 10.5 | | ug/L | 10.0 | ND | 105 | 70-130 | | | |
| METHYL-TERT-BUTYL ETHER | 5.00 | | ug/L | 5.00 | ND | 100 | 70-130 | | | |
| NAPHTHALENE | 5.61 | | ug/L | 5.00 | ND | 112 | 70-130 | | | |
| N-BUTYLBENZENE | 5.57 | | ug/L | 5.00 | ND | 111 | 70-130 | | | |
| N-PROPYLBENZENE | 5.29 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| ORTHO-XYLENE | 5.15 | | ug/L | 5.00 | ND | 103 | 70-130 | | | |
| SEC-BUTYLBENZENE | 5.46 | | ug/L | 5.00 | ND | 109 | 70-130 | | | |

**Tucson Water Quality Lab**
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**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51805-MS1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | 4.75 | | ug/L | 5.00 | ND | 95 | 70-130 | | | |
| TERT-BUTYLBENZENE | 5.28 | | ug/L | 5.00 | ND | 106 | 70-130 | | | |
| TETRACHLOROETHENE | 7.03 | | ug/L | 5.00 | 1.65 | 108 | 70-130 | | | |
| TOLUENE | 5.33 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| TRANS-1,2-DICHLOROETHENE | 5.97 | | ug/L | 5.00 | ND | 119 | 70-130 | | | |
| TRANS-1,3-DICHLOROPROPENE | 4.95 | | ug/L | 5.00 | ND | 99 | 70-130 | | | |
| TRICHLOROETHENE | 5.36 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| TRICHLOROFLUOROMETHANE | 6.01 | | ug/L | 5.00 | 0.270 | 115 | 70-130 | | | |
| VINYL CHLORIDE | 5.34 | | ug/L | 5.00 | ND | 107 | 70-130 | | | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *5.03* | | ug/L | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *4.87* | | ug/L | *5.00* | | *97* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *5.09* | | ug/L | *5.00* | | *102* | *70-130* | | | |

**Tucson Water Quality Lab**
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|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
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| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BL51805-MSD1)** | | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | 4.92 | | ug/L | 5.00 | ND | 98 | 70-130 | 4 | 20 | |
| 1,1,1-TRICHLOROETHANE | 5.23 | | ug/L | 5.00 | ND | 105 | 70-130 | 0.6 | 20 | |
| 1,1,2,2-TETRACHLOROETHANE | 4.87 | | ug/L | 5.00 | ND | 97 | 70-130 | 3 | 20 | |
| 1,1,2-TRICHLOROETHANE | 4.92 | | ug/L | 5.00 | ND | 98 | 70-130 | 2 | 20 | |
| 1,1-DICHLOROETHANE | 5.28 | | ug/L | 5.00 | ND | 106 | 70-130 | 3 | 20 | |
| 1,1-DICHLOROETHENE | 6.02 | | ug/L | 5.00 | ND | 120 | 70-130 | 0.7 | 20 | |
| 1,1-DICHLOROPROPENE | 5.39 | | ug/L | 5.00 | ND | 108 | 70-130 | 7 | 20 | |
| 1,2,3-TRICHLOROBENZENE | 5.02 | | ug/L | 5.00 | ND | 100 | 70-130 | 4 | 20 | |
| 1,2,3-TRICHLOROPROPANE | 4.89 | | ug/L | 5.00 | ND | 98 | 70-130 | 7 | 20 | |
| 1,2,4-TRICHLOROBENZENE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | 3 | 20 | |
| 1,2,4-TRIMETHYLBENZENE | 5.07 | | ug/L | 5.00 | ND | 101 | 70-130 | 4 | 20 | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 4.42 | | ug/L | 5.00 | ND | 88 | 70-130 | 1 | 20 | |
| 1,2-DICHLOROBENZENE | 5.04 | | ug/L | 5.00 | ND | 101 | 70-130 | 2 | 20 | |
| 1,2-DICHLOROETHANE | 5.16 | | ug/L | 5.00 | ND | 103 | 70-130 | 0.2 | 20 | |
| 1,2-DICHLOROPROPANE | 5.12 | | ug/L | 5.00 | ND | 102 | 70-130 | 2 | 20 | |
| 1,3,5-TRIMETHYLBENZENE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | 1 | 20 | |
| 1,3-DICHLOROBENZENE | 5.10 | | ug/L | 5.00 | ND | 102 | 70-130 | 2 | 20 | |
| 1,3-DICHLOROPROPANE | 4.93 | | ug/L | 5.00 | ND | 99 | 70-130 | 1 | 20 | |
| 1,4-DICHLOROBENZENE | 5.12 | | ug/L | 5.00 | ND | 102 | 70-130 | 2 | 20 | |
| 2,2-DICHLOROPROPANE | 5.09 | | ug/L | 5.00 | ND | 102 | 70-130 | 3 | 20 | |
| 2-CHLOROTOLUENE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | 3 | 20 | |
| 4-CHLOROTOLUENE | 4.94 | | ug/L | 5.00 | ND | 99 | 70-130 | 3 | 20 | |
| 4-ISOPROPYLTOLUENE | 5.19 | | ug/L | 5.00 | ND | 104 | 70-130 | 3 | 20 | |
| BENZENE | 5.25 | | ug/L | 5.00 | ND | 105 | 70-130 | 1 | 20 | |
| BROMOBENZENE | 4.96 | | ug/L | 5.00 | ND | 99 | 70-130 | 4 | 20 | |

**Tucson Water Quality Lab**
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**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BL51805-MSD1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | 5.01 | | ug/L | 5.00 | ND | 100 | 70-130 | 2 | 20 | |
| BROMODICHLOROMETHANE | 5.83 | | ug/L | 5.00 | 0.550 | 106 | 70-130 | 2 | 20 | |
| BROMOFORM | 4.55 | | ug/L | 5.00 | ND | 91 | 70-130 | 3 | 20 | |
| BROMOMETHANE | 5.18 | | ug/L | 5.00 | ND | 104 | 70-130 | 0.8 | 20 | |
| CARBON TETRACHLORIDE | 5.18 | | ug/L | 5.00 | ND | 104 | 70-130 | 2 | 20 | |
| CHLOROBENZENE | 5.06 | | ug/L | 5.00 | ND | 101 | 70-130 | 3 | 20 | |
| CHLOROETHANE | 5.60 | | ug/L | 5.00 | ND | 112 | 70-130 | 1 | 20 | |
| CHLOROFORM | 7.83 | | ug/L | 5.00 | 2.69 | 103 | 70-130 | 0.4 | 20 | |
| CHLOROMETHANE | 5.03 | | ug/L | 5.00 | ND | 101 | 70-130 | 2 | 20 | |
| CIS-1,2-DICHLOROETHENE | 5.05 | | ug/L | 5.00 | ND | 101 | 70-130 | 3 | 20 | |
| CIS-1,3-DICHLOROPROPENE | 4.76 | | ug/L | 5.00 | ND | 95 | 70-130 | 1 | 20 | |
| DIBROMOCHLOROMETHANE | 5.08 | | ug/L | 5.00 | ND | 102 | 70-130 | 4 | 20 | |
| DIBROMOMETHANE | 5.14 | | ug/L | 5.00 | ND | 103 | 70-130 | 3 | 20 | |
| DICHLORODIFLUOROMETHANE | 7.04 | | ug/L | 5.00 | 2.27 | 95 | 70-130 | 3 | 20 | |
| DICHLOROMETHANE | 5.22 | | ug/L | 5.00 | ND | 104 | 70-130 | 4 | 20 | |
| ETHYLBENZENE | 5.18 | | ug/L | 5.00 | ND | 104 | 70-130 | 4 | 20 | |
| ETHYLENE DIBROMIDE | 5.03 | | ug/L | 5.00 | ND | 101 | 70-130 | 0.2 | 20 | |
| HEXACHLOROBUTADIENE | 5.00 | | ug/L | 5.00 | ND | 100 | 70-130 | 6 | 20 | |
| ISOPROPYLBENZENE | 5.15 | | ug/L | 5.00 | ND | 103 | 70-130 | 3 | 20 | |
| M/P-XYLENES | 10.1 | | ug/L | 10.0 | ND | 101 | 70-130 | 4 | 20 | |
| METHYL-TERT-BUTYL ETHER | 4.93 | | ug/L | 5.00 | ND | 99 | 70-130 | 1 | 20 | |
| NAPHTHALENE | 5.62 | | ug/L | 5.00 | ND | 112 | 70-130 | 0.2 | 20 | |
| N-BUTYLBENZENE | 5.36 | | ug/L | 5.00 | ND | 107 | 70-130 | 4 | 20 | |
| N-PROPYLBENZENE | 5.06 | | ug/L | 5.00 | ND | 101 | 70-130 | 4 | 20 | |
| ORTHO-XYLENE | 4.96 | | ug/L | 5.00 | ND | 99 | 70-130 | 4 | 20 | |
| SEC-BUTYLBENZENE | 5.24 | | ug/L | 5.00 | ND | 105 | 70-130 | 4 | 20 | |

**Tucson Water Quality Lab**
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**Tucson, AZ 85735**
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| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (BL51805-MSD1)** | **Source: L151419-01** | | Prepared & Analyzed: 12/16/2015 | | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | 4.37 | | ug/L | 5.00 | ND | 87 | 70-130 | 8 | 20 | |
| TERT-BUTYLBENZENE | 4.94 | | ug/L | 5.00 | ND | 99 | 70-130 | 7 | 20 | |
| TETRACHLOROETHENE | 7.04 | | ug/L | 5.00 | 1.65 | 108 | 70-130 | 0.2 | 20 | |
| TOLUENE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | 1 | 20 | |
| TRANS-1,2-DICHLOROETHENE | 5.71 | | ug/L | 5.00 | ND | 114 | 70-130 | 4 | 20 | |
| TRANS-1,3-DICHLOROPROPENE | 4.92 | | ug/L | 5.00 | ND | 98 | 70-130 | 0.6 | 20 | |
| TRICHLOROETHENE | 5.29 | | ug/L | 5.00 | ND | 106 | 70-130 | 1 | 20 | |
| TRICHLOROFLUOROMETHANE | 6.06 | | ug/L | 5.00 | 0.270 | 116 | 70-130 | 0.9 | 20 | |
| VINYL CHLORIDE | 5.26 | | ug/L | 5.00 | ND | 105 | 70-130 | 2 | 20 | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *4.87* | | ug/L | *5.00* | | *97* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *4.93* | | ug/L | *5.00* | | *99* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *5.05* | | ug/L | *5.00* | | *101* | *70-130* | | | |

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## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reference (BL51805-SRM1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| 1,1,1,2-TETRACHLOROETHANE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| 1,1,1-TRICHLOROETHANE | 4.87 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| 1,1,2,2-TETRACHLOROETHANE | 4.86 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| 1,1,2-TRICHLOROETHANE | 4.99 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| 1,1-DICHLOROETHANE | 5.05 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| 1,1-DICHLOROETHENE | 5.55 | | ug/L | 5.00 | | 111 | 70-130 | | | |
| 1,1-DICHLOROPROPENE | 5.08 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 1,2,3-TRICHLOROBENZENE | 5.01 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| 1,2,3-TRICHLOROPROPANE | 4.63 | | ug/L | 5.00 | | 93 | 70-130 | | | |
| 1,2,4-TRICHLOROBENZENE | 5.13 | | ug/L | 5.00 | | 103 | 70-130 | | | |
| 1,2,4-TRIMETHYLBENZENE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| 1,2-DIBROMO-3-CHLOROPROPANE | 4.07 | | ug/L | 5.00 | | 81 | 70-130 | | | |
| 1,2-DICHLOROBENZENE | 5.09 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 1,2-DICHLOROETHANE | 5.08 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 1,2-DICHLOROPROPANE | 4.89 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| 1,3,5-TRIMETHYLBENZENE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| 1,3-DICHLOROBENZENE | 5.01 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| 1,3-DICHLOROPROPANE | 4.82 | | ug/L | 5.00 | | 96 | 70-130 | | | |
| 1,4-DICHLOROBENZENE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| 2,2-DICHLOROPROPANE | 4.77 | | ug/L | 5.00 | | 95 | 70-130 | | | |
| 2-CHLOROTOLUENE | 5.08 | | ug/L | 5.00 | | 102 | 70-130 | | | |
| 4-CHLOROTOLUENE | 4.88 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| 4-ISOPROPYLTOLUENE | 5.07 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| BENZENE | 5.01 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| BROMOBENZENE | 4.96 | | ug/L | 5.00 | | 99 | 70-130 | | | |

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| Environmental Services | Project: Prudence Landfill | |
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| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reference (BL51805-SRM1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| BROMOCHLOROMETHANE | 5.02 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| BROMODICHLOROMETHANE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| BROMOFORM | 4.59 | | ug/L | 5.00 | | 92 | 70-130 | | | |
| BROMOMETHANE | 5.18 | | ug/L | 5.00 | | 104 | 70-130 | | | |
| CARBON TETRACHLORIDE | 4.97 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| CHLOROBENZENE | 4.92 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| CHLOROETHANE | 5.38 | | ug/L | 5.00 | | 108 | 70-130 | | | |
| CHLOROFORM | 4.85 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| CHLOROMETHANE | 4.79 | | ug/L | 5.00 | | 96 | 70-130 | | | |
| CIS-1,2-DICHLOROETHENE | 4.88 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| CIS-1,3-DICHLOROPROPENE | 4.64 | | ug/L | 5.00 | | 93 | 70-130 | | | |
| DIBROMOCHLOROMETHANE | 4.91 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| DIBROMOMETHANE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| DICHLORODIFLUOROMETHANE | 4.58 | | ug/L | 5.00 | | 92 | 70-130 | | | |
| DICHLOROMETHANE | 5.06 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| ETHYLBENZENE | 5.02 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| ETHYLENE DIBROMIDE | 4.90 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| HEXACHLOROBUTADIENE | 5.18 | | ug/L | 5.00 | | 104 | 70-130 | | | |
| ISOPROPYLBENZENE | 5.04 | | ug/L | 5.00 | | 101 | 70-130 | | | |
| M/P-XYLENES | 9.88 | | ug/L | 10.0 | | 99 | 70-130 | | | |
| METHYL-TERT-BUTYL ETHER | 4.94 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| NAPHTHALENE | 5.40 | | ug/L | 5.00 | | 108 | 70-130 | | | |
| N-BUTYLBENZENE | 5.21 | | ug/L | 5.00 | | 104 | 70-130 | | | |
| N-PROPYLBENZENE | 4.89 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| ORTHO-XYLENE | 4.88 | | ug/L | 5.00 | | 98 | 70-130 | | | |
| SEC-BUTYLBENZENE | 5.06 | | ug/L | 5.00 | | 101 | 70-130 | | | |

**Tucson Water Quality Lab**
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| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Volatile Organic Compounds by GC/MS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Reference (BL51805-SRM1)** | | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51805 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| STYRENE | 4.98 | | ug/L | 5.00 | | 100 | 70-130 | | | |
| TERT-BUTYLBENZENE | 4.85 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| TETRACHLOROETHENE | 4.93 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| TOLUENE | 4.97 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| TRANS-1,2-DICHLOROETHENE | 5.48 | | ug/L | 5.00 | | 110 | 70-130 | | | |
| TRANS-1,3-DICHLOROPROPENE | 4.80 | | ug/L | 5.00 | | 96 | 70-130 | | | |
| TRICHLOROETHENE | 4.95 | | ug/L | 5.00 | | 99 | 70-130 | | | |
| TRICHLOROFLUOROMETHANE | 5.55 | | ug/L | 5.00 | | 111 | 70-130 | | | |
| VINYL CHLORIDE | 4.85 | | ug/L | 5.00 | | 97 | 70-130 | | | |
| *Surrogate: BROMOFLUOROBENZENE (SURR.)* | *4.93* | | ug/L | *5.00* | | *99* | *70-130* | | | |
| *Surrogate: DIBROMOFLUOROMETHANE (SURR.)* | *5.05* | | ug/L | *5.00* | | *101* | *70-130* | | | |
| *Surrogate: TOLUENE-D8 (SURR.)* | *4.97* | | ug/L | *5.00* | | *99* | *70-130* | | | |

## Total Metals by ICP - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Total Metals by ICP - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL53002-BLK1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | ND | 0.0200 | mg/L | | | | | | | |
| CALCIUM | ND | 2.00 | mg/L | | | | | | | |
| IRON | ND | 0.0200 | mg/L | | | | | | | |
| MAGNESIUM | ND | 0.500 | mg/L | | | | | | | |
| MANGANESE | ND | 0.0200 | mg/L | | | | | | | |
| POTASSIUM | ND | 0.500 | mg/L | | | | | | | |
| SODIUM | ND | 2.00 | mg/L | | | | | | | |
| **LCS (BL53002-BS1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | 0.203 | 0.0200 | mg/L | 0.200 | | 101 | 85-115 | | | |
| CALCIUM | 20.2 | 2.00 | mg/L | 20.0 | | 101 | 85-115 | | | |
| IRON | 0.995 | 0.0200 | mg/L | 1.00 | | 99.5 | 85-115 | | | |
| MAGNESIUM | 5.07 | 0.500 | mg/L | 5.00 | | 101 | 85-115 | | | |
| MANGANESE | 0.204 | 0.0200 | mg/L | 0.200 | | 102 | 85-115 | | | |
| POTASSIUM | 2.05 | 0.500 | mg/L | 2.00 | | 102 | 85-115 | | | |
| SODIUM | 20.9 | 2.00 | mg/L | 20.0 | | 104 | 85-115 | | | |

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|---|---|---|
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| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Total Metals by ICP - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL53002-MS1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | 0.448 | 0.0200 | mg/L | 0.200 | 0.242 | 103 | 70-130 | | | |
| CALCIUM | 131 | 2.00 | mg/L | 20.0 | 110 | 106 | 70-130 | | | |
| IRON | 1.30 | 0.0200 | mg/L | 1.00 | 0.342 | 96.1 | 70-130 | | | |
| MAGNESIUM | 15.8 | 0.500 | mg/L | 5.00 | 11.0 | 97.6 | 70-130 | | | |
| MANGANESE | 0.201 | 0.0200 | mg/L | 0.200 | 0.00260 | 99.3 | 70-130 | | | |
| POTASSIUM | 4.21 | 0.500 | mg/L | 2.00 | 2.19 | 101 | 70-130 | | | |
| SODIUM | 55.2 | 2.00 | mg/L | 20.0 | 34.8 | 102 | 70-130 | | | |
| **Matrix Spike Dup (BL53002-MSD1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53002 - EPA 200.7/200.8** | | | | | | | | | | |
| BARIUM | 0.449 | 0.0200 | mg/L | 0.200 | 0.242 | 104 | 70-130 | 0.191 | 10 | |
| CALCIUM | 132 | 2.00 | mg/L | 20.0 | 110 | 110 | 70-130 | 0.560 | 10 | |
| IRON | 1.30 | 0.0200 | mg/L | 1.00 | 0.342 | 96.1 | 70-130 | 0.0389 | 10 | |
| MAGNESIUM | 15.9 | 0.500 | mg/L | 5.00 | 11.0 | 99.5 | 70-130 | 0.591 | 10 | |
| MANGANESE | 0.202 | 0.0200 | mg/L | 0.200 | 0.00260 | 99.5 | 70-130 | 0.180 | 10 | |
| POTASSIUM | 4.23 | 0.500 | mg/L | 2.00 | 2.19 | 102 | 70-130 | 0.468 | 10 | |
| SODIUM | 55.5 | 2.00 | mg/L | 20.0 | 34.8 | 104 | 70-130 | 0.496 | 10 | |

## Total Metals by ICPMS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|

**Tucson Water Quality Lab**
**4401 S. Tucson Estates Pkwy.**
**Tucson, AZ 85735**
**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Total Metals by ICPMS - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL53005-BLK1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | ND | 0.00100 | mg/L | | | | | | | |
| LEAD | ND | 0.00100 | mg/L | | | | | | | |
| **LCS (BL53005-BS1)** | | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | 0.0105 | 0.00100 | mg/L | 0.0100 | | 105 | 85-115 | | | |
| LEAD | 0.00925 | 0.00100 | mg/L | 0.0100 | | 92.5 | 85-115 | | | |
| **Matrix Spike (BL53005-MS1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | 0.0110 | 0.00100 | mg/L | 0.0100 | 0.000726 | 103 | 70-130 | | | |
| LEAD | 0.0103 | 0.00100 | mg/L | 0.0100 | 0.00120 | 91.0 | 70-130 | | | |
| **Matrix Spike Dup (BL53005-MSD1)** | **Source: L151419-01** | | | Prepared: 12/23/2015 Analyzed: 12/30/2015 | | | | | | |
| **Batch BL53005 - EPA 200.7/200.8** | | | | | | | | | | |
| ARSENIC | 0.0111 | 0.00100 | mg/L | 0.0100 | 0.000726 | 104 | 70-130 | 0.570 | 10 | |
| LEAD | 0.0104 | 0.00100 | mg/L | 0.0100 | 0.00120 | 92.0 | 70-130 | 0.918 | 10 | |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|

**Tucson Water Quality Lab**
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**(520) 837-2455**

| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51603-MS1)** | **Source: L151457-01** | | | Prepared & Analyzed: 12/15/2015 | | | | | | |
| **Batch BL51603 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| BROMIDE | 0.9 | 0.104 | mg/L | 0.833 | ND | 104 | 80-120 | | | |
| CHLORIDE | 126 | 3.12 | mg/L | 41.7 | 83.1 | 102 | 80-120 | | | |
| FLUORIDE | 1.2 | 0.104 | mg/L | 0.833 | 0.3 | 98.3 | 80-120 | | | |
| NITRATE AS N | 5.0 | 0.260 | mg/L | 4.17 | 0.8 | 101 | 80-120 | | | |
| NITRITE AS N | 1.3 | 0.104 | mg/L | 1.56 | ND | 85.6 | 80-120 | | | |
| ORTHO PHOSPHATE AS P | 0.8 | 0.208 | mg/L | 0.833 | ND | 95.4 | 80-120 | | | |
| SULFATE | 224 | 5.21 | mg/L | 41.7 | 181 | 101 | 80-120 | | | |
| **Matrix Spike Dup (BL51603-MSD1)** | **Source: L151457-01** | | | Prepared & Analyzed: 12/15/2015 | | | | | | |
| **Batch BL51603 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| BROMIDE | 0.9 | 0.104 | mg/L | 0.833 | ND | 105 | 80-120 | 0.275 | 10 | |
| CHLORIDE | 126 | 3.12 | mg/L | 41.7 | 83.1 | 102 | 80-120 | 0.125 | 10 | |
| FLUORIDE | 1.2 | 0.104 | mg/L | 0.833 | 0.3 | 98.2 | 80-120 | 0.0178 | 10 | |
| NITRATE AS N | 5.0 | 0.260 | mg/L | 4.17 | 0.8 | 101 | 80-120 | 0.0996 | 10 | |
| NITRITE AS N | 1.3 | 0.104 | mg/L | 1.56 | ND | 86.0 | 80-120 | 0.443 | 10 | |
| ORTHO PHOSPHATE AS P | 0.8 | 0.208 | mg/L | 0.833 | ND | 96.5 | 80-120 | 1.22 | 10 | |
| SULFATE | 224 | 5.21 | mg/L | 41.7 | 181 | 102 | 80-120 | 0.0816 | 10 | |
| **Duplicate (BL51706-DUP1)** | **Source: L151456-07** | | | Prepared & Analyzed: 12/15/2015 | | | | | | |
| **Batch BL51706 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| ALKALINITY, TOTAL | 136 | 20.0 | mg/L as CaCO3 | | 135 | | | 0.955 | 10 | |

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|---|---|---|
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| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (BL51706-MS1)** | **Source: L151456-07** | | | Prepared & Analyzed: 12/15/2015 | | | | | | |
| **Batch BL51706 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| ALKALINITY, TOTAL | 201 | 20.0 | mg/L as CaCO3 | 59.0 | 135 | 113 | 80-120 | | | |
| **Duplicate (BL51707-DUP1)** | **Source: L151419-01** | | | Prepared & Analyzed: 12/16/2015 | | | | | | |
| **Batch BL51707 - Default Prep - Wet Chemistry** | | | | | | | | | | |
| TOTAL DISSOLVED SOLIDS | 443 | 10.0 | mg/L | | 442 | | | 0.226 | 5 | |
| **Blank (BL51802-BLK1)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **Blank (BL51802-BLK2)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **Blank (BL51802-BLK3)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |

**Tucson Water Quality Lab**
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| | | |
|---|---|---|
| Environmental Services | Project: Prudence Landfill | |
| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (BL51802-BLK4)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **Blank (BL51802-BLK5)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | ND | 0.25 | mg/L | | | | | | | |
| **LCS (BL51802-BS1)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 4.70 | | mg/L | 5.00 | | 94 | 90-110 | | | |
| **LCS (BL51802-BS2)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 9.51 | | mg/L | 10.0 | | 95 | 90-110 | | | |
| **LCS (BL51802-BS3)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 4.70 | | mg/L | 5.00 | | 94 | 90-110 | | | |

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| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Wet Chemistry - Quality Control

## Tucson Water Quality Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (BL51802-BS4)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 9.58 | | mg/L | 10.0 | | 96 | 90-110 | | | |
| **LCS (BL51802-BS5)** | | | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 4.75 | | mg/L | 5.00 | | 95 | 90-110 | | | |
| **MRL Check (BL51802-MRL1)** | | | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 0.231 | | mg/L | 0.250 | | 92 | 50-150 | | | |
| **Matrix Spike (BL51802-MS1)** | | **Source: L151444-03** | | Prepared & Analyzed: 12/18/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 1.34 | | mg/L | 0.900 | 0.461 | 97 | 83-114 | | | |
| **Matrix Spike (BL51802-MS2)** | | **Source: L151457-01** | | Prepared & Analyzed: 12/19/2015 | | | | | | |
| **Batch BL51802 - DEFAULT ORGANIC PREP** | | | | | | | | | | |
| TOTAL ORGANIC CARBON | 1.34 | | mg/L | 0.900 | 0.443 | 99 | 83-114 | | | |

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| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Certified Analyses included in this Report

| Analyte | Certifications |
|---|---|

| Code | Description | Number | Expires |
|---|---|---|---|

**Tucson Water Quality Lab**
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|---|---|---|
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| - | Project Number: P01065 | **Reported:** |
| Tucson AZ, 85726 | Project Manager: Arturo Burgos | 01/05/2016 08:53 |

## Notes and Definitions

| | |
|---|---|
| M2 | Matrix spike recovery was low; the associated blank spike recovery was acceptable. |
| DET | Analyte DETECTED |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| NR | Not Reported |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |

## Items for Project Manager Review

| LabNumber | Analysis | Analyte | Exception |
|---|---|---|---|
| | | | Data included from: \ \\166.89.20.134\ElementServerFolders\TransferIn\L151419 TRANSFER 01 04 2016 1227 |

# TUCSON WATER CHAIN OF CUSTODY

LOGIN ID: L1514I9

CLIENT: ES

PROJECT NAME/FREQUENCY: Prudence Landfill
(Bjorn 12/10/15 ~~Annual~~ BIENNIAL

PROJECT #: P01065

SAMPLING DATE: 12/15/15

SAMPLED BY: print full name
Kayla Virgone
signature
Kayla Virgone

| SAMPLE # | TIME | LOCATION | SITE | NUMBER OF CONTAINERS | PRESERVATIVE | (Na2S2O3) | ( Unpreserved) | (HNO3) | | | | | (H2SO4) | (NaS2O3/H2SO4) | ( Unpreserved) | (NaS2O3/H2SO4) | (H2SO4) | (HCl) | (Ascorbic Acid) | (Na2S2O3) | | (Unpreserved) | | | | | | | | (H2SO4) | | (NaOH) | (NaOH/Zinc Acetate) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Ba | Fe - Mn | Ca - Mg - K - Na | | As - Pb | | | Anions - Alkalinity - TDS | | TOC | 8260 | | | | | | | | | | | | Ammonia | | | | |
| | | | | | | | | ICP | ICP | ICP | ICP | ICPMS | GE | | | | | | | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | EEA | |
| -01 | 0948 | R-124A | WELL | 10 | | | | X | X | | X | X | | | X | | X | X | | | | | | | | | | | X | | | | TB- 04 |
| -02 | 0952 | R-124A | WELL | 10 | | | | X | X | | X | X | | | X | | X | X | | | | | | | | | | | X | | | | TB- ↓ |
| -03 | 1046 | R-125A | WELL | 10 | | | | X | X | | X | X | | | X | | X | X | | | | | | | | | | | X | | | | TB- ↓ |
| -04 | 0948 | Trip Blank | TWQL | 2 | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | Lot# 100115 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

COMMENTS:

SPECIAL TURNAROUND TIME:

| | SIGNATURE | DATE/TIME | | SIGNATURE | DATE/TIME |
|---|---|---|---|---|---|
| RELINQUISHED BY: | Kayla Virgone | 12/15/15 1203 | RECEIVED BY: | | 12/15/15 1210 |
| RELINQUISHED BY: | | | RECEIVED BY: | | |
| RELINQUISHED BY: | | | RECEIVED BY: | | |
| RELINQUISHED BY: | | | RECEIVED BY: | | |

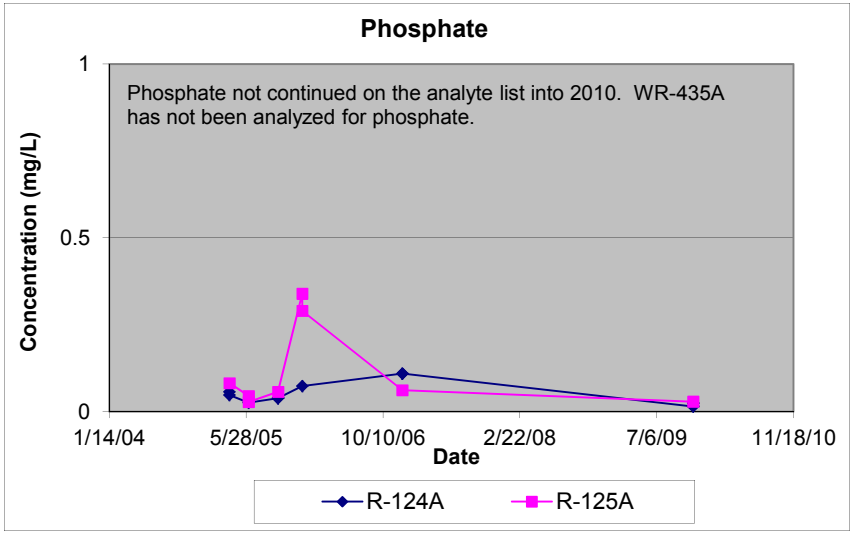
RECEIVING TEMPERATURE= 2.2 °C

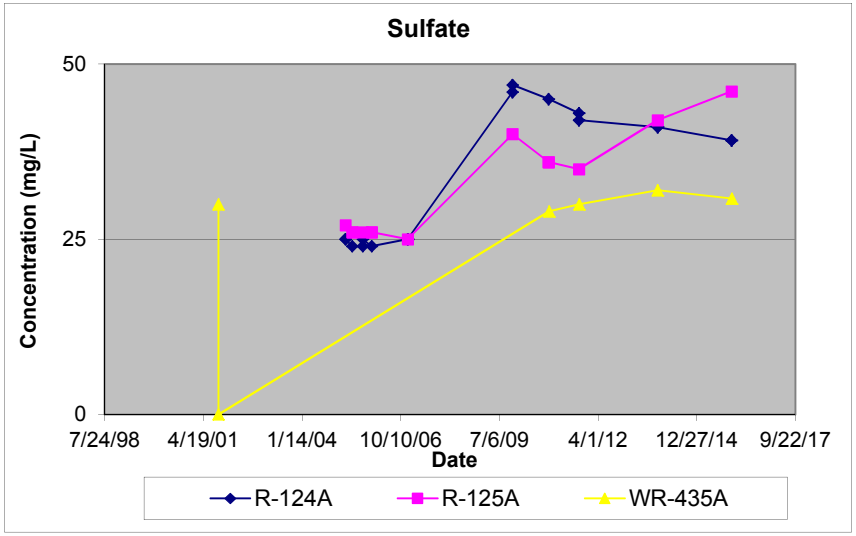
Jm 12-15-15

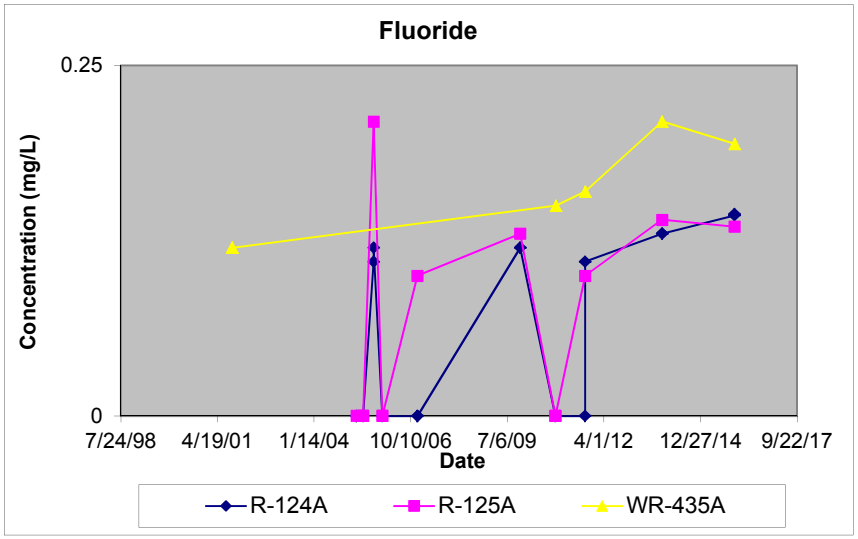
# APPENDIX B

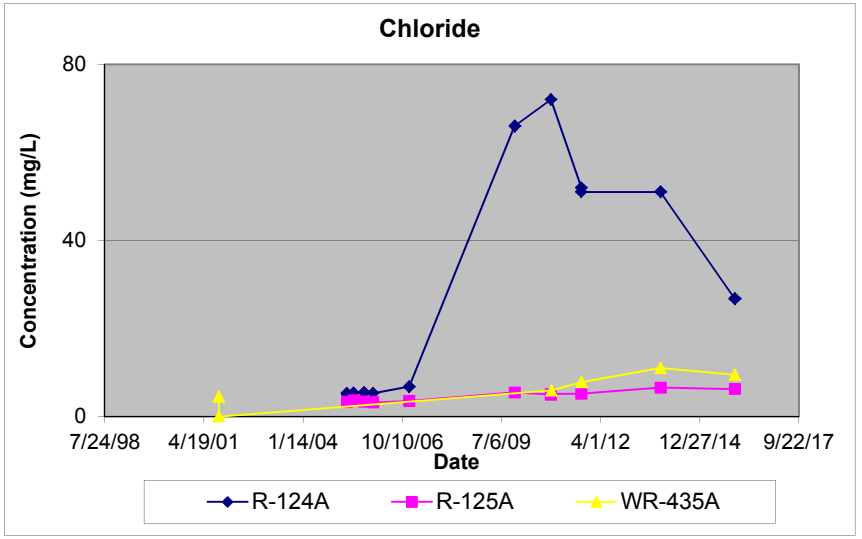
## Concentration Charts for Detected Compounds

Trend Analysis
**Prudence Landfill**

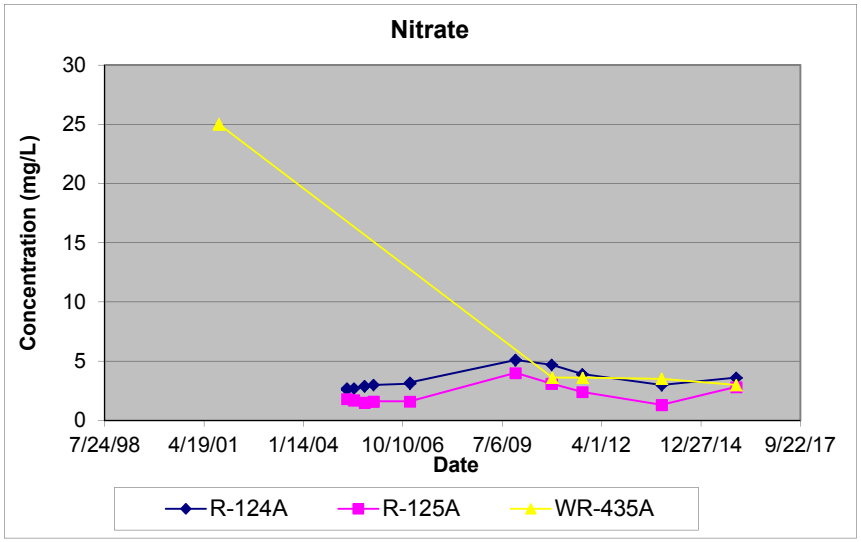


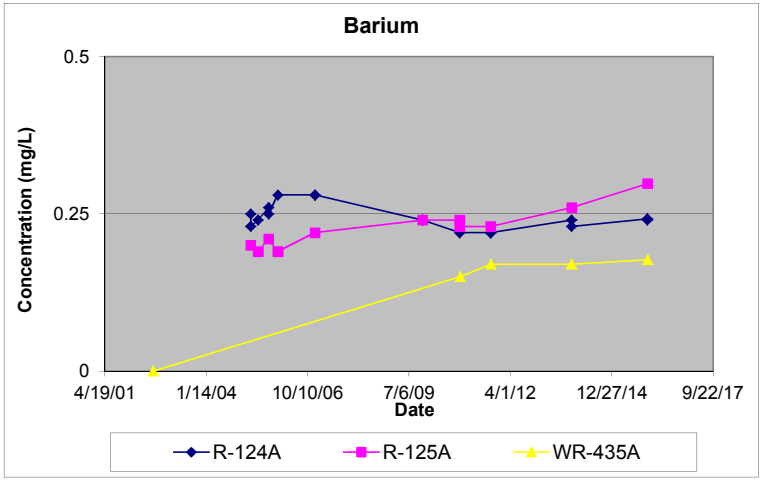



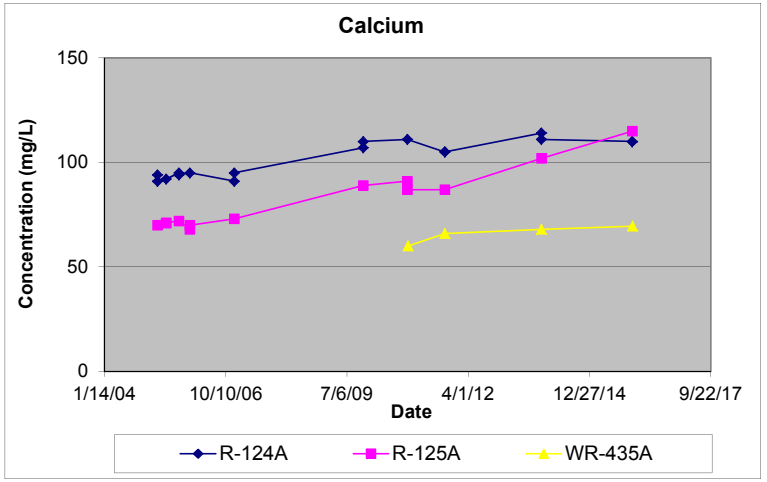
Trend Analysis
**Prudence Landfill**

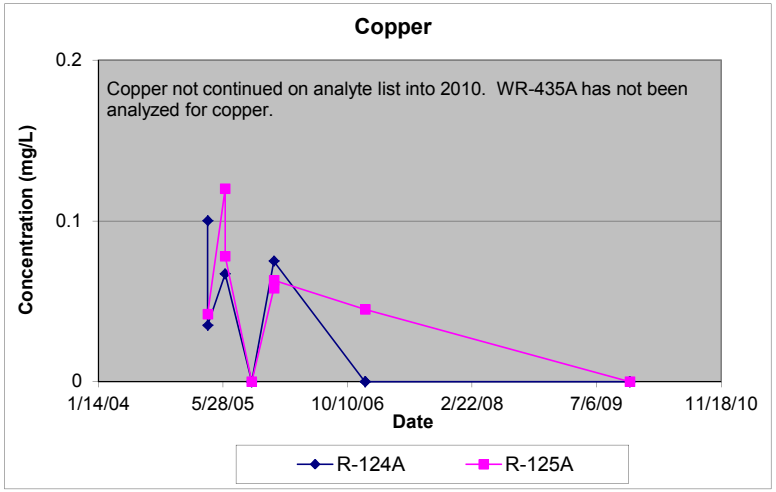


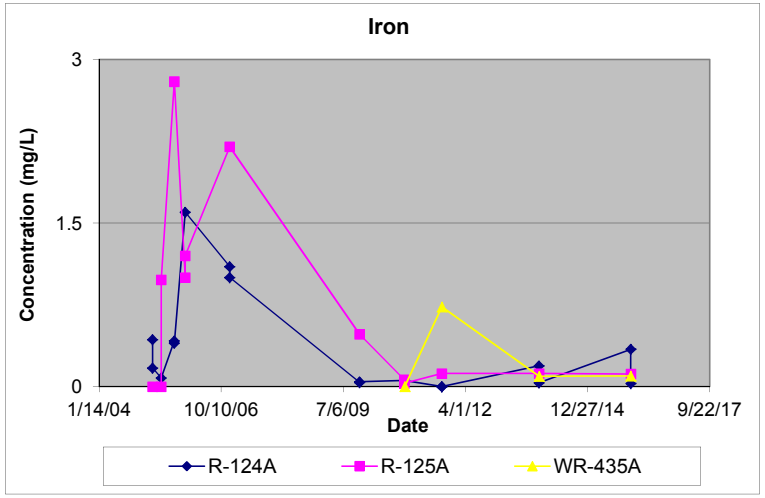

Note: Ammonia, total kjeldahl nitrogen, and nitrite have not been detected and are not plotted.

Trend Analysis
**Prudence Landfill**

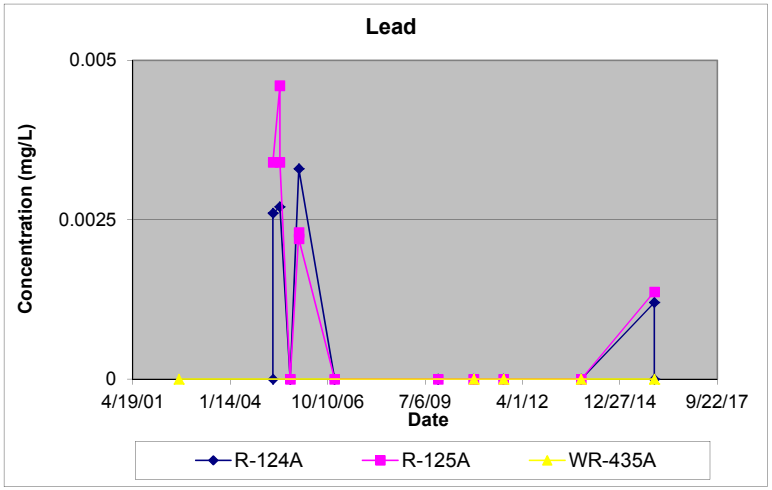


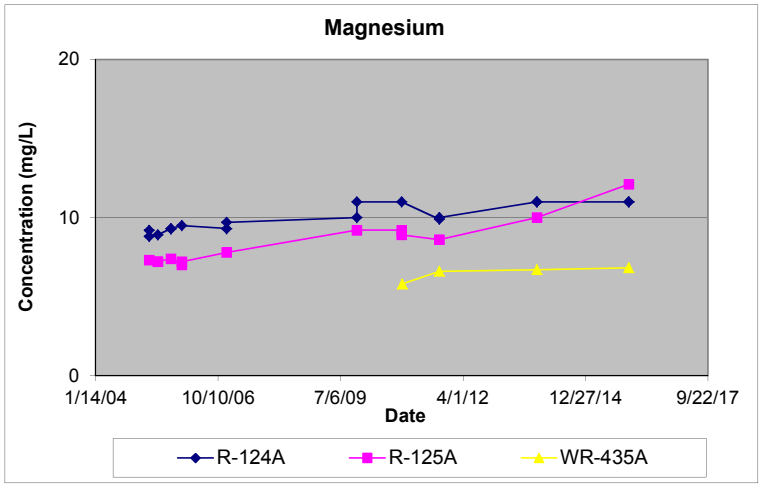



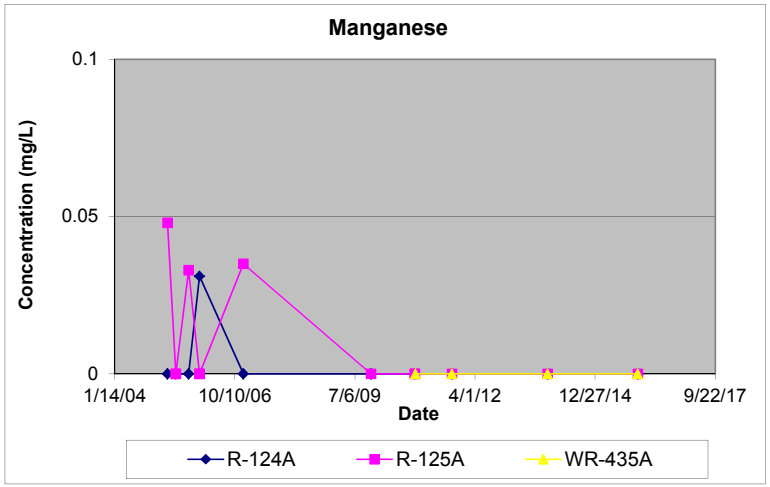



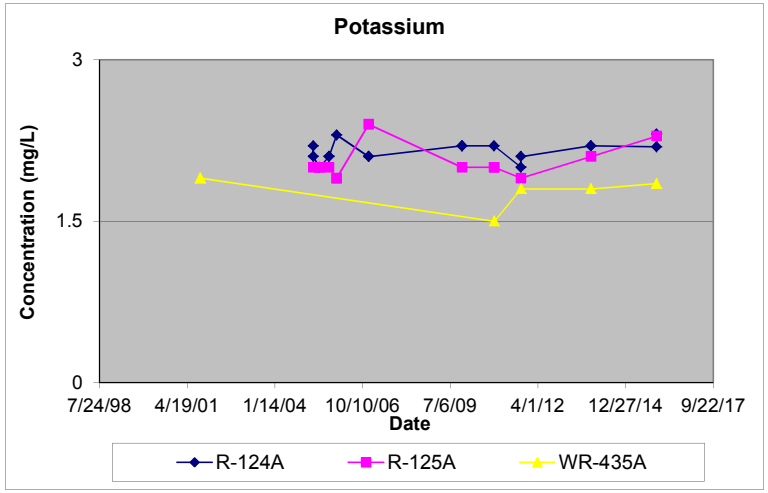



Trend Analysis
**Prudence Landfill**

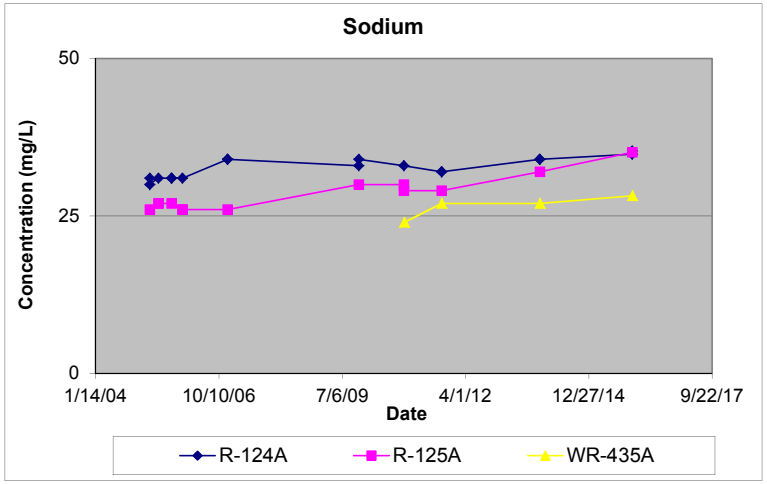


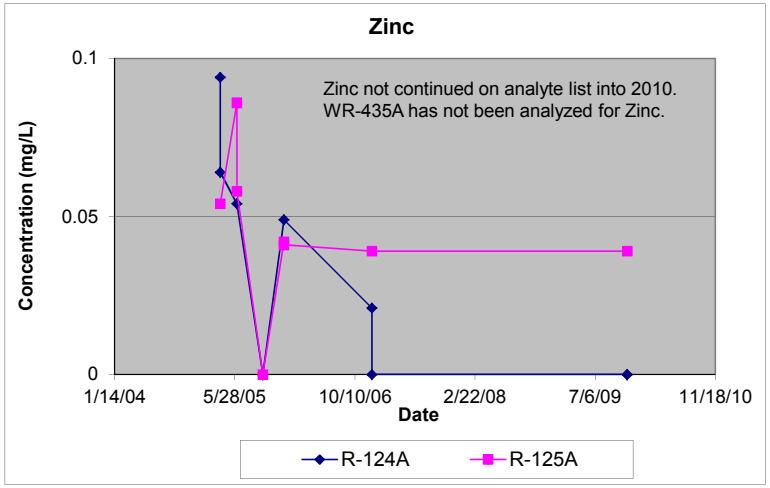



Trend Analysis
**Prudence Landfill**

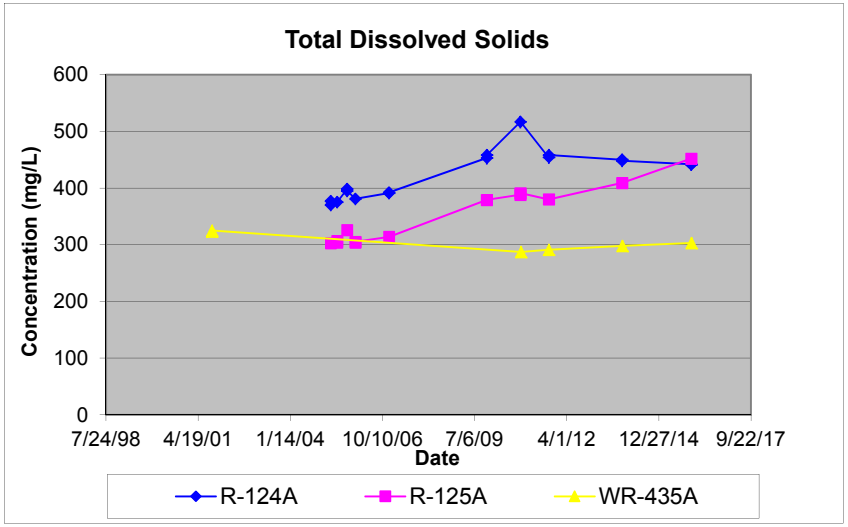


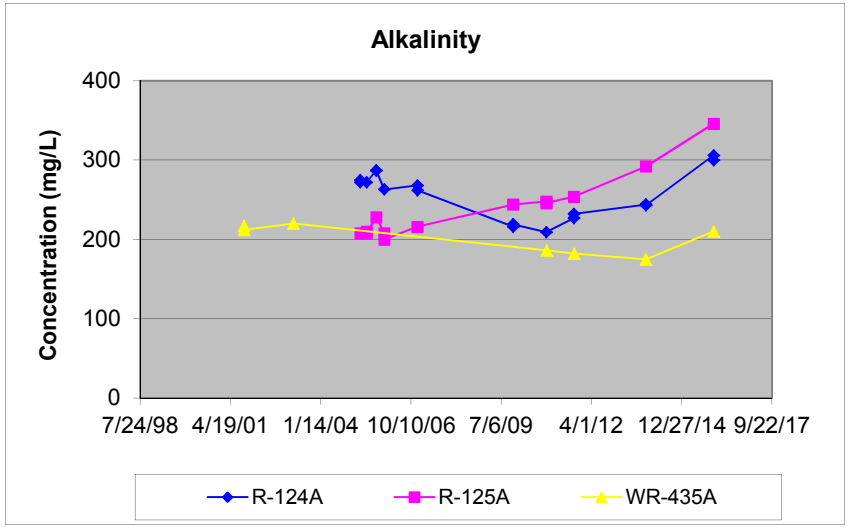



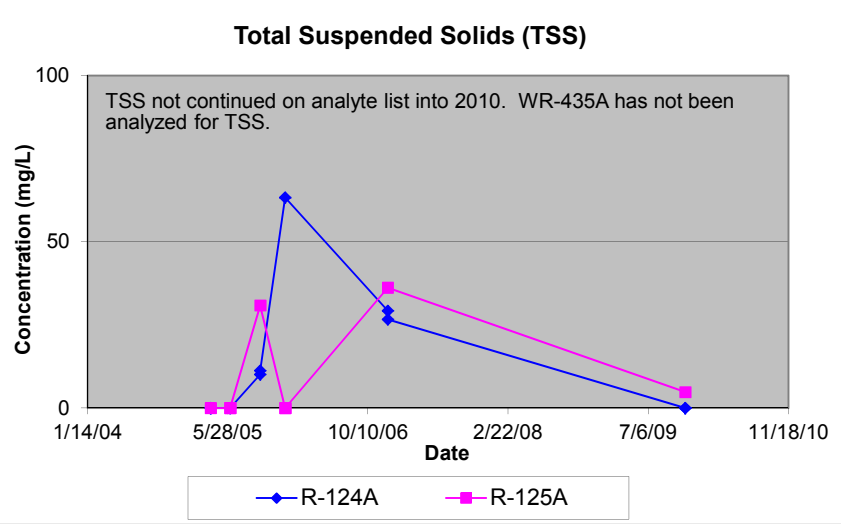

WR-435A historical data provided by ADEQ
Arsenic, cadmium, chromium, mercury, selenium and silver have not been detected and are not plotted for these wells.

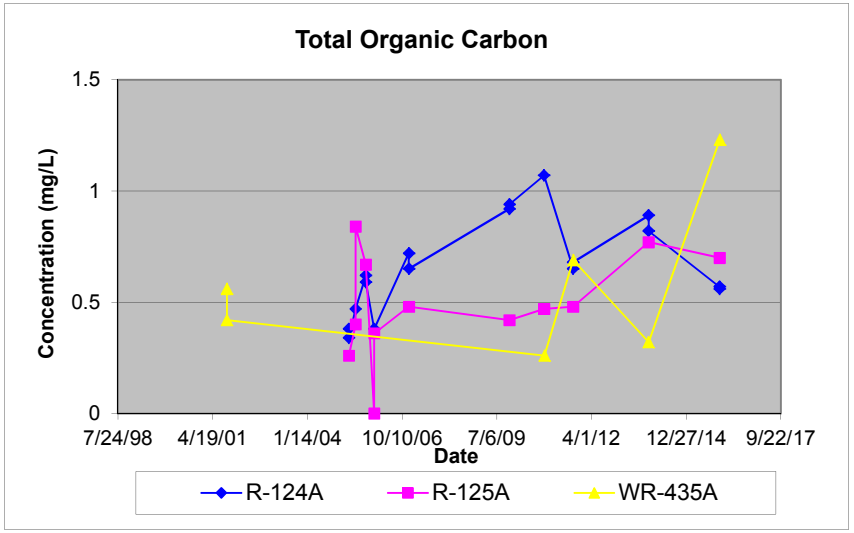
# Trend Analysis

Prudence Landfill



# APPENDIX C

## Groundwater Duplicate Comparison Sheet

Appendix C
Groundwater Duplicate Comparison Sheet

| LoginNum | Well ID | Date | Parameter | Prefix | Result | | LoginNum | Well ID | Date | Parameter | Prefix | Result | RPD% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,1,1,2-TETRACHLOROETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,1,1,2-TETRACHLOROETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,1,1-TRICHLOROETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,1,1-TRICHLOROETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,1,2,2-TETRACHLOROETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,1,2,2-TETRACHLOROETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,1,2-TRICHLOROETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,1,2-TRICHLOROETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,1-DICHLOROETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,1-DICHLOROETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,1-DICHLOROETHENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,1-DICHLOROETHENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,1-DICHLOROPROPENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,1-DICHLOROPROPENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2,3-TRICHLOROBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2,3-TRICHLOROBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2,3-TRICHLOROPROPANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2,3-TRICHLOROPROPANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2,4-TRICHLOROBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2,4-TRICHLOROBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2,4-TRIMETHYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2,4-TRIMETHYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2-DIBROMO-3-CHLOROPROPANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2-DIBROMO-3-CHLOROPROPANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2-DICHLOROBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2-DICHLOROBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2-DICHLOROETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2-DICHLOROETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,2-DICHLOROPROPANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,2-DICHLOROPROPANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,3,5-TRIMETHYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,3,5-TRIMETHYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,3-DICHLOROBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,3-DICHLOROBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,3-DICHLOROPROPANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,3-DICHLOROPROPANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 1,4-DICHLOROBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 1,4-DICHLOROBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 2,2-DICHLOROPROPANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 2,2-DICHLOROPROPANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 2-CHLOROTOLUENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 2-CHLOROTOLUENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 4-CHLOROTOLUENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 4-CHLOROTOLUENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | 4-ISOPROPYLTOLUENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | 4-ISOPROPYLTOLUENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ALKALINITY, BICARBONATE | | 306 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ALKALINITY, BICARBONATE | | 300 | 2% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ALKALINITY, TOTAL | | 306 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ALKALINITY, TOTAL | | 300 | 2% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | AMMONIA AS N | < | 0.05 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | AMMONIA AS N | < | 0.05 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ARSENIC | < | 0.001 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ARSENIC | < | 0.001 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BARIUM | | 0.242 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BARIUM | | 0.24 | 1% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BROMIDE | | 0.102 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BROMIDE | | 0.111 | 8% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BROMOBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BROMOBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BROMOCHLOROMETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BROMOCHLOROMETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BROMODICHLOROMETHANE | | 0.0006 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BROMODICHLOROMETHANE | | 0.0006 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BROMOFORM | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BROMOFORM | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | BROMOMETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | BROMOMETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CALCIUM | | 110 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CALCIUM | | 110 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CARBON TETRACHLORIDE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CARBON TETRACHLORIDE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CHLORIDE | | 26.8 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CHLORIDE | | 26.7 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CHLOROBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CHLOROBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CHLOROETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CHLOROETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CHLOROFORM | | 0.0027 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CHLOROFORM | | 0.0028 | 4% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CHLOROMETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CHLOROMETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CIS-1,2-DICHLOROETHENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CIS-1,2-DICHLOROETHENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | CIS-1,3-DICHLOROPROPENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | CIS-1,3-DICHLOROPROPENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | DIBROMOCHLOROMETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | DIBROMOCHLOROMETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | DIBROMOMETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | DIBROMOMETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | DICHLORODIFLUOROMETHANE | | 0.0023 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | DICHLORODIFLUOROMETHANE | | 0.0024 | 4% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | DICHLOROMETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | DICHLOROMETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ETHYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ETHYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ETHYLENE DIBROMIDE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ETHYLENE DIBROMIDE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | FLUORIDE | | 0.143 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | FLUORIDE | | 0.144 | 1% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | HEXACHLOROBUTADIENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | HEXACHLOROBUTADIENE | < | 0.0005 | 0% |

Appendix C
Groundwater Duplicate Comparison Sheet

| LoginNum | Well ID | Date | Parameter | Prefix | Result | | LoginNum | Well ID | Date | Parameter | Prefix | Result | RPD% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L151419-01 | R-124A | 12/15/2015 09:48 AM | IRON | | 0.342 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | IRON | | 0.028 | 170% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ISOPROPYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ISOPROPYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | LEAD | | 0.0012 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | LEAD | < | 0.001 | 18% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | M/P-XYLENES | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | M/P-XYLENES | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | MAGNESIUM | | 11 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | MAGNESIUM | | 11 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | MANGANESE | < | 0.02 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | MANGANESE | < | 0.02 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | METHYL-TERT-BUTYL ETHER | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | METHYL-TERT-BUTYL ETHER | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | NAPHTHALENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | NAPHTHALENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | N-BUTYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | N-BUTYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | NITRATE AS N | | 3.6 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | NITRATE AS N | | 3.6 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | NITRITE AS N | < | 0.1 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | NITRITE AS N | < | 0.1 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | N-PROPYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | N-PROPYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ORTHO PHOSPHATE AS P | < | 0.2 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ORTHO PHOSPHATE AS P | < | 0.2 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | ORTHO-XYLENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | ORTHO-XYLENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | POTASSIUM | | 2.19 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | POTASSIUM | | 2.31 | 5% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | SEC-BUTYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | SEC-BUTYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | SODIUM | | 34.8 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | SODIUM | | 35.3 | 1% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | STYRENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | STYRENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | SULFATE | | 39.1 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | SULFATE | | 39.1 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TERT-BUTYLBENZENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TERT-BUTYLBENZENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TETRACHLOROETHENE | | 0.0016 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TETRACHLOROETHENE | | 0.0017 | 6% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TOLUENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TOLUENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TOTAL DISSOLVED SOLIDS | | 442 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TOTAL DISSOLVED SOLIDS | | 441 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TOTAL ORGANIC CARBON | | 0.57 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TOTAL ORGANIC CARBON | | 0.56 | 2% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TOTAL TRIHALOMETHANES | | 0.0032 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TOTAL TRIHALOMETHANES | | 0.0034 | 6% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TRANS-1,2-DICHLOROETHENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TRANS-1,2-DICHLOROETHENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TRANS-1,3-DICHLOROPROPENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TRANS-1,3-DICHLOROPROPENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TRICHLOROETHENE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TRICHLOROETHENE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | TRICHLOROFLUOROMETHANE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | TRICHLOROFLUOROMETHANE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | VINYL CHLORIDE | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | VINYL CHLORIDE | < | 0.0005 | 0% |
| L151419-01 | R-124A | 12/15/2015 09:48 AM | XYLENES (TOTAL) | < | 0.0005 | | L151419-02 | R-124A | 12/15/2015 09:52 AM | XYLENES (TOTAL) | < | 0.0005 | 0% |

# APPENDIX D

## Soil-Vapor Field Sampling Sheets and Laboratory Analytical Reports

# CITY OF TUCSON

**Environmental Services**
**Soil Vapor Sample Form**

Well ID: R-125A Date: 12/16/15

Location: Prudence

Project Manager: Lori Ehman Personnel: KV/GB

Weather: (881-3333)
Temperature: 31 F
Wind Speed/Direction: 1mph SE
Barometric Pressure: 30.07 in Hg
Conditions: Sunny/Cold

Instrument: Landtec (11158)
Calibration: 12/16/15

| Sample Depth: 335' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 186sec | Initial Reading: | 0930 | 0.0 | 0.0 | 20.6 | |
| Relative Pressure: 0.00 | Stabilized Reading: | 0932 | 0.0 | 0.3 | 19.3 | |
| Start Purge Time: 0924 | | | | | | |
| End Purge Time: 0927 | Sample Time: | 0934 | | | | Sample ID: 1833 REG:111 |

| Sample Depth: 250' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 134sec | Initial Reading: | 0941 | 0.0 | 0.0 | 20.6 | |
| Relative Pressure: 0.00 | Stabilized Reading: | 0943 | 0.0 | 0.0 | 20.6 | |
| Start Purge Time: 0939 | | | | | | |
| End Purge Time: 0941 | Sample Time: | 0946 | | | | Sample ID: ~~E2372~~ REG:063 E2372 KV 12/16/15 |

| Sample Depth: 145' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 79sec | Initial Reading: | 0952 | 0.0 | 0.0 | 20.8 | |
| Relative Pressure: 0.00 | Stabilized Reading: | 0954 | 0.0 | 0.1 | 20.8 | |
| Start Purge Time: 0950 | | | | | | |
| End Purge Time: 0951 | Sample Time: | 0955 | | | | Sample ID: 1797 REG: 065 |

| Sample Depth: 50' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 27sec | Initial Reading: | 1001 | 0.0 | 0.0 | 21.1 | |
| Relative Pressure: 0.00 | Stabilized Reading: | 1003 | 3.8 | 22.2 | 0.1 | |
| Start Purge Time: 1000 | | | | | | |
| End Purge Time: 1000 | Sample Time: | 1006 | | | | Sample ID: E2286 REG: 037 |

d factor = $(d'/2)^2(3.1416)(h)(28.32)(60)/18$
Purge time = d factor x h (see calculations below)

Pump Type:
☑ Cole Palmer @ 29 LPM
☐ Landtec

3 well volumes (L) = $(d'/2)^2(3.1416)(h)(3)(28.32L/cf)$
Purge Time (min) = Purge Volume (L) x 1/Purge Rate (L/min) x 60 s/min
Purge Rate for Cole Palmer Pump is between 18-33 L/min. Purge Rate for the Landtec is about 0.3 L/min.

Comments: Manometer C.



12/16/15

# CITY OF TUCSON

**Environmental Services**
**Soil Vapor Sample Form**

Well ID: WR-434A Date: 12/16/15

Location: Prudence

Project Manager: Lori Ehman Personnel: KV/GB

Weather: (881-3333)
Temperature 37°F
Wind Speed/Direction 3mph SE
Barometric Pressure 30.13 in Hg
Conditions Sunny/cold

Instrument: Landtec (11158)
Calibration: 12/16/15

| Sample Depth: 350' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 193sec | Initial Reading: | 1047 | 0.0 | 0.0 | 20.3 | |
| Relative Pressure: -1.90 | Stabilized Reading: | 1049 | 0.0 | 0.1 | 20.2 | |
| Start Purge Time: 1041 | | | | | | |
| End Purge Time: 1044 | Sample Time: | 1057 | | | | Sample ID: 1793 REG: 144 |

| Sample Depth: 250' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 137sec | Initial Reading: | 1057 | 0.0 | 0.0 | 20.1 | |
| Relative Pressure: -1.44 | Stabilized Reading: | 1059 | 1.1 | 19.1 | 1.2 | |
| Start Purge Time: 1054 | | | | | | |
| End Purge Time: 1057 | Sample Time: | 1100 | | | | Sample ID: 1877 REG009 |

| Sample Depth: 150' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 82sec | Initial Reading: | 1108 | 0.0 | 0.0 | 20.0 | |
| Relative Pressure: -0.91 | Stabilized Reading: | 1110 | 0.0 | 0.1 | 19.9 | |
| Start Purge Time: 1105 | | | | | | |
| End Purge Time: 1106 | Sample Time: | 1112 | | | | Sample ID: E2097 REG: 143 |

| Sample Depth: 50' | | Time | $CH_4$ (%) | $CO_2$ (%) | $O_2$ (%) | Comments: |
|---|---|---|---|---|---|---|
| Purge Time: 27sec | Initial Reading: | 1117 | 0.0 | 0.0 | 20.0 | |
| Relative Pressure: 0.00 | Stabilized Reading: | 1119 | 0.0 | 14.6 | 4.2 | |
| Start Purge Time: 1116 | | | | | | |
| End Purge Time: 1116 | Sample Time: | 1120 | | | | Sample ID: 1842 REG: 031 |

d factor = $(d'/2)^2(3.1416)(h)(28.32)(60)/18$
Purge time = d factor x h (see calculations below)

Pump Type:
☑ Cole Palmer @ 29 LPM
☐ Landtec

3 well volumes (L) = $(d'/2)^2(3.1416)(h)(3)(28.32L/cf)$
Purge Time (min) = Purge Volume (L) x 1/Purge Rate (L/min) x 60 s/min
Purge Rate for Cole Palmer Pump is between 18-33 L/min. Purge Rate for the Landtec is about 0.3 L/min.

Comments: Monometer C.



KV 12/16/15

# Airtech Environmental Laboratories (AEL) - AZ 0740

Date: January 12, 2016

| | | | |
|---|---|---|---|
| Client: | Lori Ehman | Work Order #: | 15L022 |
| Company: | City of Tucson | Project Name: | Prudence |
| Address: | P.O. Box 27210 | Project Number: | P01065 |
| | Tucson, AZ 85726 | Received Date: | 12/21/15 |

Dear Client:

Airtech Environmental Laboratories received eight (8) 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

ADHS License No. AZ0740

## Airtech Environmental Laboratories (AEL) - AZ 0740

Date: January 12, 2016

| | | | |
|---|---|---|---|
| Client: | Lori Ehman | Work Order #: | 15L022 |
| Company: | City of Tucson | Project Name: | Prudence |
| Address: | P.O. Box 27210 | Project Number: | P01065 |
| | Tucson, AZ 85726 | Received Date: | 12/21/15 |

## SAMPLE SUMMARY

| LAB ID | CLIENT ID | METHOD | SAMPLED DATE | SAMPLED TIME |
|---|---|---|---|---|
| 15L022-01 | R-125A 335' | TO-15 | 12/16/2015 | 0934 |
| 15L022-02 | R-125A 250' | TO-15 | 12/16/2015 | 0946 |
| 15L022-03 | R-125A 145' | TO-15 | 12/16/2015 | 0955 |
| 15L022-04 | R-125A 50' | TO-15 | 12/16/2015 | 1006 |
| 15L022-05 | WR-434A 350' | TO-15 | 12/16/2015 | 1057 |
| 15L022-06 | WR-434A 250' | TO-15 | 12/16/2015 | 1100 |
| 15L022-07 | WR-434A 150' | TO-15 | 12/16/2015 | 1112 |
| 15L022-08 | WR-434A 50' | TO-15 | 12/16/2015 | 1120 |

## Airtech Environmental Laboratories (AEL) - AZ 0740

Date: January 12, 2016

| | | | |
|---|---|---|---|
| Client: | Lori Ehman | Work Order #: | 15L022 |
| Company: | City of Tucson | Project Name: | Prudence |
| Address: | P.O. Box 27210 | Project Number: | P01065 |
| | Tucson, AZ 85726 | Received Date: | 12/21/15 |

## 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:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | Kits QC | **Matrix:** | NA |

| | | Canister | | | | Grab Sampler | |
|---|---|---|---|---|---|---|---|
| | | Type | | Vacuum | Vacuum | 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# |
| 15L022-01 | R-125A 335' | 1833 | 1512-01 | 29.0 | 14.45 | 111 | 1512-01 |
| 15L022-02 | R-125A 250' | E2372 | 1512-01 | 29.0 | 14.31 | 063 | 1512-01 |
| 15L022-03 | R-125A 145' | 1797 | 1512-02 | 29.0 | 14.10 | 065 | 1512-01 |
| 15L022-04 | R-125A 50' | E2286 | 1512-01 | 29.0 | 14.33 | 037 | 1512-01 |
| 15L022-05 | WR-434A 350' | 1793 | 1512-01 | 29.0 | 14.25 | 144 | 1512-01 |
| 15L022-06 | WR-434A 250' | 1877 | 1512-01 | 29.0 | 14.10 | 009 | 1512-01 |
| 15L022-07 | WR-434A 150' | E2097 | 1512-02 | 29.0 | 14.06 | 143 | 1512-01 |
| 15L022-08 | WR-434A 50' | 1842 | 1512-01 | 29.0 | 14.08 | 031 | 1512-01 |
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# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 335' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 01 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/6/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/6/2016 |
| 1,2,4-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,2-Dichloropropane | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/6/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| 2,2,4-Trimethylpentane | < 0.001 | 0.001 | < 0.0047 | 0.0047 | | 2 | 1/6/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/6/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| 2-Propanol (IPA) | < 0.010 | 0.010 | < 0.0245 | 0.0245 | | 2 | 1/6/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/6/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| **Acetone** | **0.021** | **0.010** | **0.0508** | **0.0238** | | 2 | 1/6/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Benzene | < 0.001 | 0.001 | < 0.0032 | 0.0032 | | 2 | 1/6/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/6/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/6/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/6/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/6/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/6/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/6/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Chlorobenzene | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Chloroform | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/6/2016 |
| cis-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/6/2016 |
| Cyclohexane | < 0.001 | 0.001 | < 0.0034 | 0.0034 | | 2 | 1/6/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/6/2016 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 335' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 01 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| **Dichlorodifluoromethane(F-12)** | **0.092** | **0.002** | **0.453** | **0.0099** | | 2 | 1/6/2016 |
| **Dichlorotetrafluoroethane(F-114)** | **0.005** | **0.001** | **0.0337** | **0.0070** | | 2 | 1/6/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/6/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/6/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/6/2016 |
| Hexane | < 0.002 | 0.002 | < 0.0070 | 0.0070 | | 2 | 1/6/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/6/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| Methylene chloride | < 0.004 | 0.004 | < 0.0139 | 0.0139 | | 2 | 1/6/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/6/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Tetrachloroethene | < 0.002 | 0.002 | < 0.0136 | 0.0136 | | 2 | 1/6/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/6/2016 |
| **Toluene** | **0.004** | **0.001** | **0.0152** | **0.0038** | | 2 | 1/6/2016 |
| trans-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | L5 | 2 | 1/6/2016 |
| Trichloroethene | < 0.001 | 0.001 | < 0.0054 | 0.0054 | | 2 | 1/6/2016 |
| **Trichlorofluoromethane(F-11)** | **0.005** | **0.001** | **0.0302** | **0.0056** | | 2 | 1/6/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/6/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Surr: 4-Bromofluorobenzene | 87.2 | 70-130 | %REC | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 250' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 02 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/6/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/6/2016 |
| 1,2,4-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,2-Dichloropropane | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/6/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| 2,2,4-Trimethylpentane | < 0.001 | 0.001 | < 0.0047 | 0.0047 | | 2 | 1/6/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/6/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| 2-Propanol (IPA) | < 0.010 | 0.010 | < 0.0245 | 0.0245 | | 2 | 1/6/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/6/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| Acetone | < 0.010 | 0.010 | < 0.0238 | 0.0238 | | 2 | 1/6/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Benzene | < 0.001 | 0.001 | < 0.0032 | 0.0032 | | 2 | 1/6/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/6/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/6/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/6/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/6/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/6/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/6/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Chlorobenzene | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Chloroform | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/6/2016 |
| cis-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/6/2016 |
| Cyclohexane | < 0.001 | 0.001 | < 0.0034 | 0.0034 | | 2 | 1/6/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/6/2016 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 250' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 02 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| Dichlorodifluoromethane(F-12) | < 0.002 | 0.002 | < 0.0099 | 0.0099 | | 2 | 1/6/2016 |
| Dichlorotetrafluoroethane(F-114) | < 0.001 | 0.001 | < 0.0070 | 0.0070 | | 2 | 1/6/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/6/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/6/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/6/2016 |
| Hexane | < 0.002 | 0.002 | < 0.0070 | 0.0070 | | 2 | 1/6/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/6/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| Methylene chloride | < 0.004 | 0.004 | < 0.0139 | 0.0139 | | 2 | 1/6/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/6/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Tetrachloroethene | < 0.002 | 0.002 | < 0.0136 | 0.0136 | | 2 | 1/6/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/6/2016 |
| Toluene | < 0.001 | 0.001 | < 0.0038 | 0.0038 | | 2 | 1/6/2016 |
| trans-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | L5 | 2 | 1/6/2016 |
| Trichloroethene | < 0.001 | 0.001 | < 0.0054 | 0.0054 | | 2 | 1/6/2016 |
| Trichlorofluoromethane(F-11) | < 0.001 | 0.001 | < 0.0056 | 0.0056 | | 2 | 1/6/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/6/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Surr: 4-Bromofluorobenzene | 90.1 | 70-130 | %REC | | | | |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 145' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 03 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/6/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/6/2016 |
| 1,2,4-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,2-Dichloropropane | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/6/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| 2,2,4-Trimethylpentane | < 0.001 | 0.001 | < 0.0047 | 0.0047 | | 2 | 1/6/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/6/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| 2-Propanol (IPA) | < 0.010 | 0.010 | < 0.0245 | 0.0245 | | 2 | 1/6/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/6/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| Acetone | < 0.010 | 0.010 | < 0.0238 | 0.0238 | | 2 | 1/6/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Benzene | < 0.001 | 0.001 | < 0.0032 | 0.0032 | | 2 | 1/6/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/6/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/6/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/6/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/6/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/6/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/6/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Chlorobenzene | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Chloroform | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/6/2016 |
| cis-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/6/2016 |
| Cyclohexane | < 0.001 | 0.001 | < 0.0034 | 0.0034 | | 2 | 1/6/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/6/2016 |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 145' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 03 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| Dichlorodifluoromethane(F-12) | < 0.002 | 0.002 | < 0.0099 | 0.0099 | | 2 | 1/6/2016 |
| Dichlorotetrafluoroethane(F-114) | < 0.001 | 0.001 | < 0.0070 | 0.0070 | | 2 | 1/6/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/6/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/6/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/6/2016 |
| Hexane | < 0.002 | 0.002 | < 0.0070 | 0.0070 | | 2 | 1/6/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/6/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| Methylene chloride | < 0.004 | 0.004 | < 0.0139 | 0.0139 | | 2 | 1/6/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/6/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Tetrachloroethene | < 0.002 | 0.002 | < 0.0136 | 0.0136 | | 2 | 1/6/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/6/2016 |
| Toluene | < 0.001 | 0.001 | < 0.0038 | 0.0038 | | 2 | 1/6/2016 |
| trans-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | L5 | 2 | 1/6/2016 |
| Trichloroethene | < 0.001 | 0.001 | < 0.0054 | 0.0054 | | 2 | 1/6/2016 |
| Trichlorofluoromethane(F-11) | < 0.001 | 0.001 | < 0.0056 | 0.0056 | | 2 | 1/6/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/6/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Surr: 4-Bromofluorobenzene | 99.2 | 70-130 | %REC | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 50' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 04 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/6/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/6/2016 |
| 1,1-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/6/2016 |
| 1,2,4-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/6/2016 |
| 1,2-Dichloropropane | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/6/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/6/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| 2,2,4-Trimethylpentane | < 0.001 | 0.001 | < 0.0047 | 0.0047 | | 2 | 1/6/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/6/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| 2-Propanol (IPA) | < 0.010 | 0.010 | < 0.0245 | 0.0245 | | 2 | 1/6/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/6/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/6/2016 |
| Acetone | < 0.010 | 0.010 | < 0.0238 | 0.0238 | | 2 | 1/6/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Benzene | < 0.001 | 0.001 | < 0.0032 | 0.0032 | | 2 | 1/6/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/6/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/6/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/6/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/6/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/6/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/6/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/6/2016 |
| Chlorobenzene | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/6/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Chloroform | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/6/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/6/2016 |
| cis-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/6/2016 |
| Cyclohexane | < 0.001 | 0.001 | < 0.0034 | 0.0034 | | 2 | 1/6/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/6/2016 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | R-125A 50' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 04 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| Dichlorodifluoromethane(F-12) | < 0.002 | 0.002 | < 0.0099 | 0.0099 | | 2 | 1/6/2016 |
| Dichlorotetrafluoroethane(F-114) | < 0.001 | 0.001 | < 0.0070 | 0.0070 | | 2 | 1/6/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/6/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/6/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/6/2016 |
| Hexane | < 0.002 | 0.002 | < 0.0070 | 0.0070 | | 2 | 1/6/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/6/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/6/2016 |
| Methylene chloride | < 0.004 | 0.004 | < 0.0139 | 0.0139 | | 2 | 1/6/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/6/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/6/2016 |
| Tetrachloroethene | < 0.002 | 0.002 | < 0.0136 | 0.0136 | | 2 | 1/6/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/6/2016 |
| Toluene | < 0.001 | 0.001 | < 0.0038 | 0.0038 | | 2 | 1/6/2016 |
| trans-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/6/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | L5 | 2 | 1/6/2016 |
| Trichloroethene | < 0.001 | 0.001 | < 0.0054 | 0.0054 | | 2 | 1/6/2016 |
| Trichlorofluoromethane(F-11) | < 0.001 | 0.001 | < 0.0056 | 0.0056 | | 2 | 1/6/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/6/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/6/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/6/2016 |
| Surr: 4-Bromofluorobenzene | 107 | 70-130 | %REC | | | | |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 350' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 05 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/7/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| 1,1-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/7/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/7/2016 |
| 1,2,4-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/7/2016 |
| 1,2-Dichloropropane | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/7/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/7/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,4-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| 2,2,4-Trimethylpentane | < 0.001 | 0.001 | < 0.0047 | 0.0047 | | 2 | 1/7/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/7/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| 2-Propanol (IPA) | < 0.010 | 0.010 | < 0.0245 | 0.0245 | | 2 | 1/7/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/7/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| **Acetone** | **0.026** | **0.010** | **0.0612** | **0.0238** | | 2 | 1/7/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| **Benzene** | **0.006** | **0.001** | **0.0177** | **0.0032** | | 2 | 1/7/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/7/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/7/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/7/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/7/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/7/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/7/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| Chlorobenzene | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/7/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| Chloroform | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/7/2016 |
| cis-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| Cyclohexane | < 0.001 | 0.001 | < 0.0034 | 0.0034 | | 2 | 1/7/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/7/2016 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 350' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 05 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| Dichlorodifluoromethane(F-12) | < 0.002 | 0.002 | < 0.0099 | 0.0099 | | 2 | 1/7/2016 |
| Dichlorotetrafluoroethane(F-114) | < 0.001 | 0.001 | < 0.0070 | 0.0070 | | 2 | 1/7/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/7/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/7/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/7/2016 |
| Hexane | < 0.002 | 0.002 | < 0.0070 | 0.0070 | | 2 | 1/7/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/7/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| Methylene chloride | < 0.004 | 0.004 | < 0.0139 | 0.0139 | | 2 | 1/7/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/7/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Tetrachloroethene | < 0.002 | 0.002 | < 0.0136 | 0.0136 | | 2 | 1/7/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/7/2016 |
| Toluene | < 0.001 | 0.001 | < 0.0038 | 0.0038 | | 2 | 1/7/2016 |
| trans-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| Trichloroethene | < 0.001 | 0.001 | < 0.0054 | 0.0054 | | 2 | 1/7/2016 |
| Trichlorofluoromethane(F-11) | < 0.001 | 0.001 | < 0.0056 | 0.0056 | | 2 | 1/7/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/7/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| Surr: 4-Bromofluorobenzene | 97.6 | 70-130 | %REC | | | | |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 250' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 06 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| VOLATILE ORGANICS IN AIR | | TO-15 | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/7/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| **1,1-Dichloroethane** | **0.001** | **0.001** | **0.0045** | **0.0041** | | 2 | 1/7/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/7/2016 |
| **1,2,4-Trimethylbenzene** | **0.001** | **0.001** | **0.0055** | **0.0049** | | 2 | 1/7/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/7/2016 |
| **1,2-Dichloropropane** | **0.005** | **0.001** | **0.0235** | **0.0046** | | 2 | 1/7/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/7/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| **1,4-Dichlorobenzene** | **0.015** | **0.001** | **0.0902** | **0.0060** | | 2 | 1/7/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| **2,2,4-Trimethylpentane** | **0.002** | **0.001** | **0.0085** | **0.0047** | | 2 | 1/7/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/7/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| 2-Propanol (IPA) | < 0.010 | 0.010 | < 0.0245 | 0.0245 | | 2 | 1/7/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/7/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| **Acetone** | **0.032** | **0.010** | **0.0753** | **0.0238** | | 2 | 1/7/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| **Benzene** | **0.005** | **0.001** | **0.0171** | **0.0032** | | 2 | 1/7/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/7/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/7/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/7/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/7/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/7/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/7/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| **Chlorobenzene** | **0.002** | **0.001** | **0.0071** | **0.0046** | | 2 | 1/7/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| **Chloroform** | **0.002** | **0.001** | **0.0074** | **0.0049** | | 2 | 1/7/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/7/2016 |
| **cis-1,2-Dichloroethene** | **0.126** | **0.010** | **0.499** | **0.0396** | | 20 | 1/5/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| **Cyclohexane** | **0.010** | **0.001** | **0.0342** | **0.0034** | | 2 | 1/7/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/7/2016 |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 250' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 06 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| **Dichlorodifluoromethane(F-12)** | **0.114** | **0.020** | **0.562** | **0.0990** | | 20 | 1/5/2016 |
| **Dichlorotetrafluoroethane(F-114)** | **0.019** | **0.001** | **0.131** | **0.0070** | | 2 | 1/7/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/7/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/7/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/7/2016 |
| **Hexane** | **0.005** | **0.002** | **0.0161** | **0.0070** | | 2 | 1/7/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/7/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| **Methylene chloride** | **0.005** | **0.004** | **0.0185** | **0.0139** | | 2 | 1/7/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/7/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| **Tetrachloroethene** | **0.163** | **0.020** | **1.10** | **0.136** | | 20 | 1/5/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/7/2016 |
| **Toluene** | **0.002** | **0.001** | **0.0077** | **0.0038** | | 2 | 1/7/2016 |
| **trans-1,2-Dichloroethene** | **0.002** | **0.001** | **0.0066** | **0.0040** | | 2 | 1/7/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| **Trichloroethene** | **0.044** | **0.001** | **0.234** | **0.0054** | | 2 | 1/7/2016 |
| **Trichlorofluoromethane(F-11)** | **0.004** | **0.001** | **0.0250** | **0.0056** | | 2 | 1/7/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/7/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | %REC | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 150' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 07 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/7/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| 1,1-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/7/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/7/2016 |
| 1,2,4-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/7/2016 |
| 1,2-Dichloropropane | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/7/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/7/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,4-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| 2,2,4-Trimethylpentane | < 0.001 | 0.001 | < 0.0047 | 0.0047 | | 2 | 1/7/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/7/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| **2-Propanol (IPA)** | **0.018** | **0.010** | **0.0430** | **0.0245** | | 2 | 1/7/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/7/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| **Acetone** | **0.081** | **0.010** | **0.193** | **0.0238** | | 2 | 1/7/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| **Benzene** | **0.007** | **0.001** | **0.0223** | **0.0032** | | 2 | 1/7/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/7/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/7/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/7/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/7/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/7/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/7/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| Chlorobenzene | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/7/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| Chloroform | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/7/2016 |
| cis-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| Cyclohexane | < 0.001 | 0.001 | < 0.0034 | 0.0034 | | 2 | 1/7/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/7/2016 |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 150' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 07 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| Dichlorodifluoromethane(F-12) | < 0.002 | 0.002 | < 0.0099 | 0.0099 | | 2 | 1/7/2016 |
| Dichlorotetrafluoroethane(F-114) | < 0.001 | 0.001 | < 0.0070 | 0.0070 | | 2 | 1/7/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/7/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/7/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/7/2016 |
| Hexane | < 0.002 | 0.002 | < 0.0070 | 0.0070 | | 2 | 1/7/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/7/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| Methylene chloride | < 0.004 | 0.004 | < 0.0139 | 0.0139 | | 2 | 1/7/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/7/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Tetrachloroethene | < 0.002 | 0.002 | < 0.0136 | 0.0136 | | 2 | 1/7/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/7/2016 |
| **Toluene** | **0.001** | **0.001** | **0.0052** | **0.0038** | | 2 | 1/7/2016 |
| trans-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| Trichloroethene | < 0.001 | 0.001 | < 0.0054 | 0.0054 | | 2 | 1/7/2016 |
| Trichlorofluoromethane(F-11) | < 0.001 | 0.001 | < 0.0056 | 0.0056 | | 2 | 1/7/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/7/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| Surr: 4-Bromofluorobenzene | 92.3 | 70-130 | %REC | | | | |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 50' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 08 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.001 | 0.001 | < 0.0069 | 0.0069 | | 2 | 1/7/2016 |
| 1,1,2-Trichloroethane | < 0.001 | 0.001 | < 0.0055 | 0.0055 | | 2 | 1/7/2016 |
| 1,1-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/7/2016 |
| 1,1-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| 1,2,4-Trichlorobenzene | < 0.004 | 0.004 | < 0.0297 | 0.0297 | | 2 | 1/7/2016 |
| 1,2,4-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| 1,2-Dibromoethane | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| 1,2-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,2-Dichloroethane | < 0.001 | 0.001 | < 0.0041 | 0.0041 | | 2 | 1/7/2016 |
| 1,2-Dichloropropane | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/7/2016 |
| 1,3,5-Trimethylbenzene | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| 1,3-Butadiene | < 0.001 | 0.001 | < 0.0022 | 0.0022 | | 2 | 1/7/2016 |
| 1,3-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,4-Dichlorobenzene | < 0.001 | 0.001 | < 0.0060 | 0.0060 | | 2 | 1/7/2016 |
| 1,4-Dioxane | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| 2,2,4-Trimethylpentane | < 0.001 | 0.001 | < 0.0047 | 0.0047 | | 2 | 1/7/2016 |
| 2-Butanone (MEK) | < 0.010 | 0.010 | < 0.0295 | 0.0295 | | 2 | 1/7/2016 |
| 2-Hexanone | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| **2-Propanol (IPA)** | **0.029** | **0.010** | **0.0712** | **0.0245** | | 2 | 1/7/2016 |
| 4-Ethyltoluene | < 0.002 | 0.002 | < 0.0098 | 0.0098 | | 2 | 1/7/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.010 | 0.010 | < 0.0410 | 0.0410 | | 2 | 1/7/2016 |
| **Acetone** | **0.097** | **0.010** | **0.230** | **0.0238** | | 2 | 1/7/2016 |
| Allyl chloride | < 0.002 | 0.002 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| **Benzene** | **0.005** | **0.001** | **0.0157** | **0.0032** | | 2 | 1/7/2016 |
| Benzyl chloride | < 0.004 | 0.004 | < 0.0207 | 0.0207 | | 2 | 1/7/2016 |
| Bromodichloromethane | < 0.001 | 0.001 | < 0.0067 | 0.0067 | | 2 | 1/7/2016 |
| Bromoethene(Vinyl Bromide) | < 0.001 | 0.001 | < 0.0044 | 0.0044 | | 2 | 1/7/2016 |
| Bromoform | < 0.001 | 0.001 | < 0.0103 | 0.0103 | | 2 | 1/7/2016 |
| Bromomethane | < 0.001 | 0.001 | < 0.0039 | 0.0039 | | 2 | 1/7/2016 |
| Carbon disulfide | < 0.001 | 0.001 | < 0.0031 | 0.0031 | | 2 | 1/7/2016 |
| Carbon tetrachloride | < 0.001 | 0.001 | < 0.0063 | 0.0063 | | 2 | 1/7/2016 |
| Chlorobenzene | < 0.001 | 0.001 | < 0.0046 | 0.0046 | | 2 | 1/7/2016 |
| Chloroethane | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| Chloroform | < 0.001 | 0.001 | < 0.0049 | 0.0049 | | 2 | 1/7/2016 |
| Chloromethane | < 0.004 | 0.004 | < 0.0083 | 0.0083 | | 2 | 1/7/2016 |
| cis-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| cis-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| Cyclohexane | < 0.001 | 0.001 | < 0.0034 | 0.0034 | | 2 | 1/7/2016 |
| Dibromochloromethane | < 0.001 | 0.001 | < 0.0085 | 0.0085 | | 2 | 1/7/2016 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | WR-434A 50' |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | 12/16/2015 |
| **Lab ID:** | 08 | **Matrix:** | Soil Vapor |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| **Dichlorodifluoromethane(F-12)** | **0.023** | **0.002** | **0.114** | **0.0099** | | 2 | 1/7/2016 |
| **Dichlorotetrafluoroethane(F-114)** | **0.003** | **0.001** | **0.0229** | **0.0070** | | 2 | 1/7/2016 |
| Ethyl Acetate | < 0.001 | 0.001 | < 0.0036 | 0.0036 | | 2 | 1/7/2016 |
| Ethylbenzene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Heptane | < 0.002 | 0.002 | < 0.0082 | 0.0082 | | 2 | 1/7/2016 |
| Hexachlorobutadiene | < 0.002 | 0.002 | < 0.0213 | 0.0213 | | 2 | 1/7/2016 |
| Hexane | < 0.002 | 0.002 | < 0.0070 | 0.0070 | | 2 | 1/7/2016 |
| m&p-Xylene | < 0.002 | 0.002 | < 0.0087 | 0.0087 | | 2 | 1/7/2016 |
| Methyl tert-butyl ether | < 0.004 | 0.004 | < 0.0144 | 0.0144 | | 2 | 1/7/2016 |
| Methylene chloride | < 0.004 | 0.004 | < 0.0139 | 0.0139 | | 2 | 1/7/2016 |
| o-Xylene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| Propene (Propylene) | < 0.001 | 0.001 | < 0.0017 | 0.0017 | | 2 | 1/7/2016 |
| Styrene | < 0.001 | 0.001 | < 0.0043 | 0.0043 | | 2 | 1/7/2016 |
| **Tetrachloroethene** | **0.039** | **0.002** | **0.266** | **0.0136** | | 2 | 1/7/2016 |
| Tetrahydrofuran | < 0.004 | 0.004 | < 0.0118 | 0.0118 | | 2 | 1/7/2016 |
| Toluene | < 0.001 | 0.001 | < 0.0038 | 0.0038 | | 2 | 1/7/2016 |
| trans-1,2-Dichloroethene | < 0.001 | 0.001 | < 0.0040 | 0.0040 | | 2 | 1/7/2016 |
| trans-1,3-Dichloropropene | < 0.001 | 0.001 | < 0.0045 | 0.0045 | | 2 | 1/7/2016 |
| **Trichloroethene** | **0.002** | **0.001** | **0.0107** | **0.0054** | | 2 | 1/7/2016 |
| **Trichlorofluoromethane(F-11)** | **0.001** | **0.001** | **0.0058** | **0.0056** | | 2 | 1/7/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.001 | 0.001 | < 0.0077 | 0.0077 | | 2 | 1/7/2016 |
| Vinyl acetate | < 0.001 | 0.001 | < 0.0035 | 0.0035 | | 2 | 1/7/2016 |
| Vinyl chloride | < 0.001 | 0.001 | < 0.0026 | 0.0026 | | 2 | 1/7/2016 |
| Surr: 4-Bromofluorobenzene | 99.2 | 70-130 | %REC | | | | |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.0005 | 0.0005 | < 0.0027 | 0.0027 | | 1 | 1/5/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.0005 | 0.0005 | < 0.0034 | 0.0034 | | 1 | 1/5/2016 |
| 1,1,2-Trichloroethane | < 0.0005 | 0.0005 | < 0.0027 | 0.0027 | | 1 | 1/5/2016 |
| 1,1-Dichloroethane | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/5/2016 |
| 1,1-Dichloroethene | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/5/2016 |
| 1,2,4-Trichlorobenzene | < 0.0020 | 0.0020 | < 0.0148 | 0.0148 | | 1 | 1/5/2016 |
| 1,2,4-Trimethylbenzene | < 0.0005 | 0.0005 | < 0.0025 | 0.0025 | | 1 | 1/5/2016 |
| 1,2-Dibromoethane | < 0.0005 | 0.0005 | < 0.0038 | 0.0038 | | 1 | 1/5/2016 |
| 1,2-Dichlorobenzene | < 0.0005 | 0.0005 | < 0.0030 | 0.0030 | | 1 | 1/5/2016 |
| 1,2-Dichloroethane | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/5/2016 |
| 1,2-Dichloropropane | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/5/2016 |
| 1,3,5-Trimethylbenzene | < 0.0005 | 0.0005 | < 0.0025 | 0.0025 | | 1 | 1/5/2016 |
| 1,3-Butadiene | < 0.0005 | 0.0005 | < 0.0011 | 0.0011 | | 1 | 1/5/2016 |
| 1,3-Dichlorobenzene | < 0.0005 | 0.0005 | < 0.0030 | 0.0030 | | 1 | 1/5/2016 |
| 1,4-Dichlorobenzene | < 0.0005 | 0.0005 | < 0.0030 | 0.0030 | | 1 | 1/5/2016 |
| 1,4-Dioxane | < 0.0020 | 0.0020 | < 0.0072 | 0.0072 | | 1 | 1/5/2016 |
| 2,2,4-Trimethylpentane | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/5/2016 |
| 2-Butanone (MEK) | < 0.0050 | 0.0050 | < 0.0148 | 0.0148 | | 1 | 1/5/2016 |
| 2-Hexanone | < 0.0050 | 0.0050 | < 0.0205 | 0.0205 | | 1 | 1/5/2016 |
| 2-Propanol (IPA) | < 0.0050 | 0.0050 | < 0.0123 | 0.0123 | | 1 | 1/5/2016 |
| 4-Ethyltoluene | < 0.0010 | 0.0010 | < 0.0049 | 0.0049 | | 1 | 1/5/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.0050 | 0.0050 | < 0.0205 | 0.0205 | | 1 | 1/5/2016 |
| Acetone | < 0.0050 | 0.0050 | < 0.0119 | 0.0119 | | 1 | 1/5/2016 |
| Allyl chloride | < 0.0010 | 0.0010 | < 0.0031 | 0.0031 | | 1 | 1/5/2016 |
| Benzene | < 0.0005 | 0.0005 | < 0.0016 | 0.0016 | | 1 | 1/5/2016 |
| Benzyl chloride | < 0.0020 | 0.0020 | < 0.0104 | 0.0104 | | 1 | 1/5/2016 |
| Bromodichloromethane | < 0.0005 | 0.0005 | < 0.0034 | 0.0034 | | 1 | 1/5/2016 |
| Bromoethene(Vinyl Bromide) | < 0.0005 | 0.0005 | < 0.0022 | 0.0022 | | 1 | 1/5/2016 |
| Bromoform | < 0.0005 | 0.0005 | < 0.0052 | 0.0052 | | 1 | 1/5/2016 |
| Bromomethane | < 0.0005 | 0.0005 | < 0.0019 | 0.0019 | | 1 | 1/5/2016 |
| Carbon disulfide | < 0.0005 | 0.0005 | < 0.0016 | 0.0016 | | 1 | 1/5/2016 |
| Carbon tetrachloride | < 0.0005 | 0.0005 | < 0.0031 | 0.0031 | | 1 | 1/5/2016 |
| Chlorobenzene | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/5/2016 |
| Chloroethane | < 0.0005 | 0.0005 | < 0.0013 | 0.0013 | | 1 | 1/5/2016 |
| Chloroform | < 0.0005 | 0.0005 | < 0.0024 | 0.0024 | | 1 | 1/5/2016 |
| Chloromethane | < 0.0020 | 0.0020 | < 0.0041 | 0.0041 | | 1 | 1/5/2016 |
| cis-1,2-Dichloroethene | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/5/2016 |
| cis-1,3-Dichloropropene | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/5/2016 |
| Cyclohexane | < 0.0005 | 0.0005 | < 0.0017 | 0.0017 | | 1 | 1/5/2016 |
| Dibromochloromethane | < 0.0005 | 0.0005 | < 0.0043 | 0.0043 | | 1 | 1/5/2016 |

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | Blank | **Matrix:** | NA |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| Dichlorodifluoromethane(F-12) | < 0.0010 | 0.0010 | < 0.0050 | 0.0050 | | 1 | 1/5/2016 |
| Dichlorotetrafluoroethane(F-114) | < 0.0005 | 0.0005 | < 0.0035 | 0.0035 | | 1 | 1/5/2016 |
| Ethyl Acetate | < 0.0005 | 0.0005 | < 0.0018 | 0.0018 | | 1 | 1/5/2016 |
| Ethylbenzene | < 0.0005 | 0.0005 | < 0.0022 | 0.0022 | | 1 | 1/5/2016 |
| Heptane | < 0.0010 | 0.0010 | < 0.0041 | 0.0041 | | 1 | 1/5/2016 |
| Hexachlorobutadiene | < 0.0010 | 0.0010 | < 0.0107 | 0.0107 | | 1 | 1/5/2016 |
| Hexane | < 0.0010 | 0.0010 | < 0.0035 | 0.0035 | | 1 | 1/5/2016 |
| m&p-Xylene | < 0.0010 | 0.0010 | < 0.0043 | 0.0043 | | 1 | 1/5/2016 |
| Methyl tert-butyl ether | < 0.0020 | 0.0020 | < 0.0072 | 0.0072 | | 1 | 1/5/2016 |
| Methylene chloride | < 0.0020 | 0.0020 | < 0.0069 | 0.0069 | | 1 | 1/5/2016 |
| o-Xylene | < 0.0005 | 0.0005 | < 0.0022 | 0.0022 | | 1 | 1/5/2016 |
| Propene (Propylene) | < 0.0005 | 0.0005 | < 0.0009 | 0.0009 | | 1 | 1/5/2016 |
| Styrene | < 0.0005 | 0.0005 | < 0.0021 | 0.0021 | | 1 | 1/5/2016 |
| Tetrachloroethene | < 0.0010 | 0.0010 | < 0.0068 | 0.0068 | | 1 | 1/5/2016 |
| Tetrahydrofuran | < 0.0020 | 0.0020 | < 0.0059 | 0.0059 | | 1 | 1/5/2016 |
| Toluene | < 0.0005 | 0.0005 | < 0.0019 | 0.0019 | | 1 | 1/5/2016 |
| trans-1,2-Dichloroethene | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/5/2016 |
| trans-1,3-Dichloropropene | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/5/2016 |
| Trichloroethene | < 0.0005 | 0.0005 | < 0.0027 | 0.0027 | | 1 | 1/5/2016 |
| Trichlorofluoromethane(F-11) | < 0.0005 | 0.0005 | < 0.0028 | 0.0028 | | 1 | 1/5/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.0005 | 0.0005 | < 0.0038 | 0.0038 | | 1 | 1/5/2016 |
| Vinyl acetate | < 0.0005 | 0.0005 | < 0.0018 | 0.0018 | | 1 | 1/5/2016 |
| Vinyl chloride | < 0.0005 | 0.0005 | < 0.0013 | 0.0013 | | 1 | 1/5/2016 |
| Surr: 4-Bromofluorobenzene | 83.0 | 70-130 | %REC | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 1/5/2016 Batch: MS010105 Analyst: JJ

| | LCS | | LCSD | | | | | Qualifier | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **%REC** | **Result** | **%REC** | **T.V.** | **%RPD** | **Unit** | **LCS** | **LCSD** | **RPD** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | | | <25% |
| Propene (Propylene) | 0.0109 | 109 | 0.0108 | 108 | 10.0 | 1.7 | ppmv | | | |
| Dichlorodifluoromethane(F-12) | 0.0110 | 110 | 0.0104 | 104 | 10.0 | 5.8 | ppmv | | | |
| Chloromethane | 0.0100 | 100 | 0.0094 | 93.8 | 10.0 | 6.7 | ppmv | | | |
| Dichlorotetrafluoroethane(F-114) | 0.0114 | 114 | 0.0103 | 103 | 10.0 | 10.2 | ppmv | | | |
| Vinyl Chloride | 0.0108 | 108 | 0.0096 | 96.0 | 10.0 | 11.9 | ppmv | | | |
| 1,3-Butadiene | 0.0091 | 90.8 | 0.0090 | 89.9 | 10.0 | 1.0 | ppmv | | | |
| Bromomethane | 0.0102 | 102 | 0.0097 | 96.8 | 10.0 | 5.3 | ppmv | | | |
| Chloroethane | 0.0097 | 96.9 | 0.0090 | 89.7 | 10.0 | 7.7 | ppmv | | | |
| Bromoethene(Vinyl Bromide) | 0.0103 | 103 | 0.0099 | 99.3 | 10.0 | 3.8 | ppmv | | | |
| Trichlorofluoromethane (F-11) | 0.0109 | 109 | 0.0103 | 103 | 10.0 | 5.5 | ppmv | | | |
| Acetone | 0.0123 | 123 | 0.0129 | 129 | 10.0 | 4.6 | ppmv | | | |
| Isopropyl Alcohol (2-Propanol) | 0.0102 | 102 | 0.0102 | 102 | 10.0 | 0.0 | ppmv | | | |
| 1,1-Dichloroethene | 0.0111 | 111 | 0.0110 | 110 | 10.0 | 0.4 | ppmv | | | |
| Trichlorotrifluoroethane (F-113) | 0.0104 | 104 | 0.0100 | 100 | 10.0 | 3.3 | ppmv | | | |
| Methylene Chloride | 0.0106 | 106 | 0.0104 | 104 | 10.0 | 2.7 | ppmv | | | |
| Allyl Chloride | 0.0109 | 109 | 0.0109 | 109 | 10.0 | 0.3 | ppmv | | | |
| Carbon disulfide | 0.0104 | 104 | 0.0100 | 100 | 10.0 | 3.5 | ppmv | | | |
| trans-1,2-Dichloroethene | 0.0094 | 94.1 | 0.0102 | 102 | 10.0 | 8.1 | ppmv | | | |
| Methyl tert-butyl ether | 0.0106 | 106 | 0.0101 | 101 | 10.0 | 4.8 | ppmv | | | |
| 1,1-Dichloroethane | 0.0105 | 105 | 0.0096 | 96.4 | 10.0 | 8.8 | ppmv | | | |
| Vinyl acetate | 0.0118 | 118 | 0.0113 | 113 | 10.0 | 4.9 | ppmv | | | |
| 2-Butanone (MEK) | 0.0108 | 108 | 0.0106 | 106 | 10.0 | 2.2 | ppmv | | | |
| Hexane | 0.0119 | 119 | 0.0113 | 113 | 10.0 | 4.9 | ppmv | | | |
| cis-1,2-Dichloroethene | 0.0103 | 103 | 0.0104 | 104 | 10.0 | 1.0 | ppmv | | | |
| Ethyl Acetate | 0.0119 | 119 | 0.0105 | 105 | 10.0 | 12.4 | ppmv | | | |
| Chloroform | 0.0108 | 108 | 0.0103 | 103 | 10.0 | 4.5 | ppmv | | | |
| Tetrahydrofuran | 0.0104 | 104 | 0.0107 | 107 | 10.0 | 2.6 | ppmv | | | |
| 1,1,1-Trichloroethane | 0.0105 | 105 | 0.0101 | 101 | 10.0 | 4.2 | ppmv | | | |
| 1,2-Dichloroethane | 0.0111 | 111 | 0.0108 | 108 | 10.0 | 3.0 | ppmv | | | |
| Benzene | 0.0107 | 107 | 0.0104 | 104 | 10.0 | 3.5 | ppmv | | | |
| Carbon tetrachloride | 0.0109 | 109 | 0.0103 | 103 | 10.0 | 5.6 | ppmv | | | |
| Cyclohexane | 0.0120 | 120 | 0.0113 | 113 | 10.0 | 6.2 | ppmv | | | |
| 2,2,4-Trimethylpentane | 0.0114 | 114 | 0.0113 | 113 | 10.0 | 0.9 | ppmv | | | |
| Heptane | 0.0117 | 117 | 0.0111 | 111 | 10.0 | 5.3 | ppmv | | | |
| 1,2-Dichloropropane | 0.0108 | 108 | 0.0113 | 113 | 10.0 | 4.7 | ppmv | | | |
| Trichloroethene | 0.0105 | 105 | 0.0104 | 104 | 10.0 | 1.0 | ppmv | | | |
| Bromodichloromethane | 0.0114 | 114 | 0.0110 | 110 | 10.0 | 3.0 | ppmv | | | |
| 1,4-Dioxane | 0.0104 | 104 | 0.0116 | 116 | 10.0 | 11.0 | ppmv | | | |
| cis-1,3-Dichloropropene | 0.0118 | 118 | 0.0119 | 119 | 10.0 | 1.0 | ppmv | | | |
| 4-methyl-2-pentanone | 0.0120 | 120 | 0.0125 | 125 | 10.0 | 3.6 | ppmv | | | |
| trans-1,3-Dichloropropene | 0.0126 | 126 | 0.0133 | 133 | 10.0 | 5.9 | ppmv | | L5 | |
| Toluene | 0.0118 | 118 | 0.0122 | 122 | 10.0 | 3.6 | ppmv | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | LCS/LCSD | **Matrix:** | NA |

**Method QC Data**

Date Analyzed: 1/5/2016 Batch: MS010105 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | RPD | Unit | Qualifier LCS | LCSD | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | 70-130% | <25% |
| 1,1,2-Trichloroethane | 0.0108 | 108 | 0.0106 | 106 | 10.0 | 1.8 | ppmv | | | |
| 2-Hexanone | 0.0126 | 126 | 0.0125 | 125 | 10.0 | 0.7 | ppmv | | | |
| Dibromochloromethane | 0.0115 | 115 | 0.0116 | 116 | 10.0 | 1.3 | ppmv | | | |
| 1,2-Dibromoethane | 0.0110 | 110 | 0.0111 | 111 | 10.0 | 1.2 | ppmv | | | |
| Tetrachloroethene | 0.0108 | 108 | 0.0109 | 109 | 10.0 | 0.7 | ppmv | | | |
| Chlorobenzene | 0.0100 | 99.8 | 0.0104 | 104 | 10.0 | 4.1 | ppmv | | | |
| Ethylbenzene | 0.0118 | 118 | 0.0120 | 120 | 10.0 | 1.3 | ppmv | | | |
| m&p-Xylene | 0.0223 | 112 | 0.0237 | 118 | 20.0 | 5.9 | ppmv | | | |
| Bromoform | 0.0115 | 115 | 0.0114 | 114 | 10.0 | 0.6 | ppmv | | | |
| Styrene | 0.0118 | 118 | 0.0119 | 119 | 10.0 | 1.2 | ppmv | | | |
| o-Xylene | 0.0108 | 108 | 0.0110 | 110 | 10.0 | 1.6 | ppmv | | | |
| 1,1,2,2-Tetrachloroethane | 0.0109 | 109 | 0.0112 | 112 | 10.0 | 2.9 | ppmv | | | |
| 4-Ethyltoluene | 0.0123 | 123 | 0.0123 | 123 | 10.0 | 0.2 | ppmv | | | |
| 1,3,5-Trimethylbenzene | 0.0124 | 124 | 0.0123 | 123 | 10.0 | 0.7 | ppmv | | | |
| 1,2,4-Trimethylbenzene | 0.0121 | 121 | 0.0120 | 120 | 10.0 | 1.1 | ppmv | | | |
| 1,3-Dichlorobenzene | 0.0111 | 111 | 0.0109 | 109 | 10.0 | 1.8 | ppmv | | | |
| Benzyl chloride | 0.0113 | 113 | 0.0117 | 117 | 10.0 | 3.4 | ppmv | | | |
| 1,4-Dichlorobenzene | 0.0119 | 119 | 0.0116 | 116 | 10.0 | 2.4 | ppmv | | | |
| 1,2-Dichlorobenzene | 0.0117 | 117 | 0.0118 | 118 | 10.0 | 1.5 | ppmv | | | |
| 1,2,4-Trichlorobenzene | 0.0109 | 109 | 0.0111 | 111 | 10.0 | 2.2 | ppmv | | | |
| Hexachlorobutadiene | 0.0114 | 114 | 0.0112 | 112 | 10.0 | 1.7 | ppmv | | | |
| Surr: 4-Bromofluorobenzene | 0.0108 | 108 | 0.0105 | 105 | | | %REC | | | |
| | | 70-130% | | 70-130% | | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | Blank | **Matrix:** | Nitrogen |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| 1,1,1-Trichloroethane | < 0.0005 | 0.0005 | < 0.0027 | 0.0027 | | 1 | 1/6/2016 |
| 1,1,2,2-Tetrachloroethane | < 0.0005 | 0.0005 | < 0.0034 | 0.0034 | | 1 | 1/6/2016 |
| 1,1,2-Trichloroethane | < 0.0005 | 0.0005 | < 0.0027 | 0.0027 | | 1 | 1/6/2016 |
| 1,1-Dichloroethane | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/6/2016 |
| 1,1-Dichloroethene | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/6/2016 |
| 1,2,4-Trichlorobenzene | < 0.0020 | 0.0020 | < 0.0148 | 0.0148 | | 1 | 1/6/2016 |
| 1,2,4-Trimethylbenzene | < 0.0005 | 0.0005 | < 0.0025 | 0.0025 | | 1 | 1/6/2016 |
| 1,2-Dibromoethane | < 0.0005 | 0.0005 | < 0.0038 | 0.0038 | | 1 | 1/6/2016 |
| 1,2-Dichlorobenzene | < 0.0005 | 0.0005 | < 0.0030 | 0.0030 | | 1 | 1/6/2016 |
| 1,2-Dichloroethane | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/6/2016 |
| 1,2-Dichloropropane | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/6/2016 |
| 1,3,5-Trimethylbenzene | < 0.0005 | 0.0005 | < 0.0025 | 0.0025 | | 1 | 1/6/2016 |
| 1,3-Butadiene | < 0.0005 | 0.0005 | < 0.0011 | 0.0011 | | 1 | 1/6/2016 |
| 1,3-Dichlorobenzene | < 0.0005 | 0.0005 | < 0.0030 | 0.0030 | | 1 | 1/6/2016 |
| 1,4-Dichlorobenzene | < 0.0005 | 0.0005 | < 0.0030 | 0.0030 | | 1 | 1/6/2016 |
| 1,4-Dioxane | < 0.0020 | 0.0020 | < 0.0072 | 0.0072 | | 1 | 1/6/2016 |
| 2,2,4-Trimethylpentane | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/6/2016 |
| 2-Butanone (MEK) | < 0.0050 | 0.0050 | < 0.0148 | 0.0148 | | 1 | 1/6/2016 |
| 2-Hexanone | < 0.0050 | 0.0050 | < 0.0205 | 0.0205 | | 1 | 1/6/2016 |
| 2-Propanol (IPA) | < 0.0050 | 0.0050 | < 0.0123 | 0.0123 | | 1 | 1/6/2016 |
| 4-Ethyltoluene | < 0.0010 | 0.0010 | < 0.0049 | 0.0049 | | 1 | 1/6/2016 |
| 4-Methyl-2-pentanone (MIK) | < 0.0050 | 0.0050 | < 0.0205 | 0.0205 | | 1 | 1/6/2016 |
| Acetone | < 0.0050 | 0.0050 | < 0.0119 | 0.0119 | | 1 | 1/6/2016 |
| Allyl chloride | < 0.0010 | 0.0010 | < 0.0031 | 0.0031 | | 1 | 1/6/2016 |
| Benzene | < 0.0005 | 0.0005 | < 0.0016 | 0.0016 | | 1 | 1/6/2016 |
| Benzyl chloride | < 0.0020 | 0.0020 | < 0.0104 | 0.0104 | | 1 | 1/6/2016 |
| Bromodichloromethane | < 0.0005 | 0.0005 | < 0.0034 | 0.0034 | | 1 | 1/6/2016 |
| Bromoethene(Vinyl Bromide) | < 0.0005 | 0.0005 | < 0.0022 | 0.0022 | | 1 | 1/6/2016 |
| Bromoform | < 0.0005 | 0.0005 | < 0.0052 | 0.0052 | | 1 | 1/6/2016 |
| Bromomethane | < 0.0005 | 0.0005 | < 0.0019 | 0.0019 | | 1 | 1/6/2016 |
| Carbon disulfide | < 0.0005 | 0.0005 | < 0.0016 | 0.0016 | | 1 | 1/6/2016 |
| Carbon tetrachloride | < 0.0005 | 0.0005 | < 0.0031 | 0.0031 | | 1 | 1/6/2016 |
| Chlorobenzene | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/6/2016 |
| Chloroethane | < 0.0005 | 0.0005 | < 0.0013 | 0.0013 | | 1 | 1/6/2016 |
| Chloroform | < 0.0005 | 0.0005 | < 0.0024 | 0.0024 | | 1 | 1/6/2016 |
| Chloromethane | < 0.0020 | 0.0020 | < 0.0041 | 0.0041 | | 1 | 1/6/2016 |
| cis-1,2-Dichloroethene | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/6/2016 |
| cis-1,3-Dichloropropene | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/6/2016 |
| Cyclohexane | < 0.0005 | 0.0005 | < 0.0017 | 0.0017 | | 1 | 1/6/2016 |
| Dibromochloromethane | < 0.0005 | 0.0005 | < 0.0043 | 0.0043 | | 1 | 1/6/2016 |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | Blank | **Matrix:** | NA |

| | ppmv | | $mg/M^3$ | | | | |
|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **Limit** | **Result** | **Limit** | **Qual** | **DF** | **Date Analyzed** |
| **VOLATILE ORGANICS IN AIR** | | **TO-15** | | | | | Analyst: JJ |
| Dichlorodifluoromethane(F-12) | < 0.0010 | 0.0010 | < 0.0050 | 0.0050 | | 1 | 1/6/2016 |
| Dichlorotetrafluoroethane(F-114) | < 0.0005 | 0.0005 | < 0.0035 | 0.0035 | | 1 | 1/6/2016 |
| Ethyl Acetate | < 0.0005 | 0.0005 | < 0.0018 | 0.0018 | | 1 | 1/6/2016 |
| Ethylbenzene | < 0.0005 | 0.0005 | < 0.0022 | 0.0022 | | 1 | 1/6/2016 |
| Heptane | < 0.0010 | 0.0010 | < 0.0041 | 0.0041 | | 1 | 1/6/2016 |
| Hexachlorobutadiene | < 0.0010 | 0.0010 | < 0.0107 | 0.0107 | | 1 | 1/6/2016 |
| Hexane | < 0.0010 | 0.0010 | < 0.0035 | 0.0035 | | 1 | 1/6/2016 |
| m&p-Xylene | < 0.0010 | 0.0010 | < 0.0043 | 0.0043 | | 1 | 1/6/2016 |
| Methyl tert-butyl ether | < 0.0020 | 0.0020 | < 0.0072 | 0.0072 | | 1 | 1/6/2016 |
| Methylene chloride | < 0.0020 | 0.0020 | < 0.0069 | 0.0069 | | 1 | 1/6/2016 |
| o-Xylene | < 0.0005 | 0.0005 | < 0.0022 | 0.0022 | | 1 | 1/6/2016 |
| Propene (Propylene) | < 0.0005 | 0.0005 | < 0.0009 | 0.0009 | | 1 | 1/6/2016 |
| Styrene | < 0.0005 | 0.0005 | < 0.0021 | 0.0021 | | 1 | 1/6/2016 |
| Tetrachloroethene | < 0.0005 | 0.0005 | < 0.0034 | 0.0034 | | 1 | 1/6/2016 |
| Tetrahydrofuran | < 0.0010 | 0.0010 | < 0.0030 | 0.0030 | | 1 | 1/6/2016 |
| Toluene | < 0.0005 | 0.0005 | < 0.0019 | 0.0019 | | 1 | 1/6/2016 |
| trans-1,2-Dichloroethene | < 0.0005 | 0.0005 | < 0.0020 | 0.0020 | | 1 | 1/6/2016 |
| trans-1,3-Dichloropropene | < 0.0005 | 0.0005 | < 0.0023 | 0.0023 | | 1 | 1/6/2016 |
| Trichloroethene | < 0.0005 | 0.0005 | < 0.0027 | 0.0027 | | 1 | 1/6/2016 |
| Trichlorofluoromethane(F-11) | < 0.0005 | 0.0005 | < 0.0028 | 0.0028 | | 1 | 1/6/2016 |
| Trichlorotrifluoroethane(F-113) | < 0.0005 | 0.0005 | < 0.0038 | 0.0038 | | 1 | 1/6/2016 |
| Vinyl acetate | < 0.0005 | 0.0005 | < 0.0018 | 0.0018 | | 1 | 1/6/2016 |
| Vinyl chloride | < 0.0005 | 0.0005 | < 0.0013 | 0.0013 | | 1 | 1/6/2016 |
| Surr: 4-Bromofluorobenzene | 88.3 | 70-130 | %REC | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | LCS/LCSD | **Matrix:** | Nitrogen |

**Method QC Data**

Date Analyzed: 1/6/2016 Batch: MS010106 Analyst: JJ

| | LCS | | LCSD | | | | | Qualifier | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyses** | **Result** | **%REC** | **Result** | **%REC** | **T.V.** | **%RPD** | **Unit** | **LCS** | **LCSD** | **RPD** |
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | | | <25% |
| Propene (Propylene) | 0.0105 | 105 | 0.0111 | 111 | 10.0 | 5.6 | ppmv | | | |
| Dichlorodifluoromethane(F-12) | 0.0114 | 114 | 0.0105 | 105 | 10.0 | 8.3 | ppmv | | | |
| Chloromethane | 0.0108 | 108 | 0.0098 | 97.7 | 10.0 | 10.1 | ppmv | | | |
| Dichlorotetrafluoroethane(F-114) | 0.0118 | 118 | 0.0105 | 105 | 10.0 | 11.7 | ppmv | | | |
| Vinyl Chloride | 0.0107 | 107 | 0.0104 | 104 | 10.0 | 3.4 | ppmv | | | |
| 1,3-Butadiene | 0.0111 | 111 | 0.0107 | 107 | 10.0 | 2.9 | ppmv | | | |
| Bromomethane | 0.0102 | 102 | 0.0099 | 99.0 | 10.0 | 2.5 | ppmv | | | |
| Chloroethane | 0.0094 | 94.2 | 0.0092 | 91.7 | 10.0 | 2.7 | ppmv | | | |
| Bromoethene(Vinyl Bromide) | 0.0106 | 106 | 0.0102 | 102 | 10.0 | 3.8 | ppmv | | | |
| Trichlorofluoromethane (F-11) | 0.0112 | 112 | 0.0106 | 106 | 10.0 | 5.2 | ppmv | | | |
| Acetone | 0.0119 | 119 | 0.0112 | 112 | 10.0 | 5.9 | ppmv | | | |
| Isopropyl Alcohol (2-Propanol) | 0.0118 | 118 | 0.0112 | 112 | 10.0 | 5.4 | ppmv | | | |
| 1,1-Dichloroethene | 0.0110 | 110 | 0.0111 | 111 | 10.0 | 0.7 | ppmv | | | |
| Trichlorotrifluoroethane (F-113) | 0.0104 | 104 | 0.0103 | 103 | 10.0 | 0.1 | ppmv | | | |
| Methylene Chloride | 0.0112 | 112 | 0.0106 | 106 | 10.0 | 5.4 | ppmv | | | |
| Allyl Chloride | 0.0110 | 110 | 0.0107 | 107 | 10.0 | 2.4 | ppmv | | | |
| Carbon disulfide | 0.0106 | 106 | 0.0101 | 101 | 10.0 | 4.6 | ppmv | | | |
| trans-1,2-Dichloroethene | 0.0106 | 106 | 0.0109 | 109 | 10.0 | 3.0 | ppmv | | | |
| Methyl tert-butyl ether | 0.0101 | 101 | 0.0104 | 104 | 10.0 | 3.4 | ppmv | | | |
| 1,1-Dichloroethane | 0.0102 | 102 | 0.0104 | 104 | 10.0 | 1.6 | ppmv | | | |
| Vinyl acetate | 0.0116 | 116 | 0.0117 | 117 | 10.0 | 1.1 | ppmv | | | |
| 2-Butanone (MEK) | 0.0105 | 105 | 0.0112 | 112 | 10.0 | 7.0 | ppmv | | | |
| Hexane | 0.0114 | 114 | 0.0118 | 118 | 10.0 | 3.5 | ppmv | | | |
| cis-1,2-Dichloroethene | 0.0107 | 107 | 0.0105 | 105 | 10.0 | 2.6 | ppmv | | | |
| Ethyl Acetate | 0.0112 | 112 | 0.0112 | 112 | 10.0 | 0.0 | ppmv | | | |
| Chloroform | 0.0105 | 105 | 0.0103 | 103 | 10.0 | 1.8 | ppmv | | | |
| Tetrahydrofuran | 0.0110 | 110 | 0.0104 | 104 | 10.0 | 5.2 | ppmv | | | |
| 1,1,1-Trichloroethane | 0.0108 | 108 | 0.0106 | 106 | 10.0 | 1.6 | ppmv | | | |
| 1,2-Dichloroethane | 0.0110 | 110 | 0.0106 | 106 | 10.0 | 3.2 | ppmv | | | |
| Benzene | 0.0106 | 106 | 0.0105 | 105 | 10.0 | 0.6 | ppmv | | | |
| Carbon tetrachloride | 0.0109 | 109 | 0.0108 | 108 | 10.0 | 1.4 | ppmv | | | |
| Cyclohexane | 0.0115 | 115 | 0.0116 | 116 | 10.0 | 0.2 | ppmv | | | |
| 2,2,4-Trimethylpentane | 0.0110 | 110 | 0.0113 | 113 | 10.0 | 2.8 | ppmv | | | |
| Heptane | 0.0120 | 120 | 0.0115 | 115 | 10.0 | 4.9 | ppmv | | | |
| 1,2-Dichloropropane | 0.0104 | 104 | 0.0105 | 105 | 10.0 | 1.0 | ppmv | | | |
| Trichloroethene | 0.0104 | 104 | 0.0107 | 107 | 10.0 | 2.8 | ppmv | | | |
| Bromodichloromethane | 0.0113 | 113 | 0.0113 | 113 | 10.0 | 0.3 | ppmv | | | |
| 1,4-Dioxane | 0.0119 | 119 | 0.0113 | 113 | 10.0 | 5.4 | ppmv | | | |
| cis-1,3-Dichloropropene | 0.0115 | 115 | 0.0118 | 118 | 10.0 | 2.8 | ppmv | | | |
| 4-methyl-2-pentanone | 0.0110 | 110 | 0.0116 | 116 | 10.0 | 4.9 | ppmv | | | |
| trans-1,3-Dichloropropene | 0.0123 | 123 | 0.0128 | 128 | 10.0 | 3.7 | ppmv | | | |
| Toluene | 0.0116 | 116 | 0.0119 | 119 | 10.0 | 2.2 | ppmv | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | LCS/LCSD | **Matrix:** | NA |

**Method QC Data**

Date Analyzed: 1/6/2016 Batch: MS010106 Analyst: JJ

| Analyses | LCS Result | LCS %REC | LCSD Result | LCSD %REC | T.V. | RPD | Unit | Qualifier LCS | LCSD | RPD |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS IN AIR** | **TO-15** | | | | | | | 70-130% | 70-130% | <25% |
| 1,1,2-Trichloroethane | 0.0103 | 103 | 0.0107 | 107 | 10.0 | 3.9 | ppmv | | | |
| 2-Hexanone | 0.0116 | 116 | 0.0127 | 127 | 10.0 | 9.0 | ppmv | | | |
| Dibromochloromethane | 0.0111 | 111 | 0.0115 | 115 | 10.0 | 3.3 | ppmv | | | |
| 1,2-Dibromoethane | 0.0108 | 108 | 0.0111 | 111 | 10.0 | 2.6 | ppmv | | | |
| Tetrachloroethene | 0.0108 | 108 | 0.0108 | 108 | 10.0 | 0.4 | ppmv | | | |
| Chlorobenzene | 0.0102 | 102 | 0.0105 | 105 | 10.0 | 3.3 | ppmv | | | |
| Ethylbenzene | 0.0113 | 113 | 0.0124 | 124 | 10.0 | 8.6 | ppmv | | | |
| m&p-Xylene | 0.0229 | 114 | 0.0242 | 121 | 20.0 | 5.6 | ppmv | | | |
| Bromoform | 0.0109 | 109 | 0.0115 | 115 | 10.0 | 5.1 | ppmv | | | |
| Styrene | 0.0115 | 115 | 0.0121 | 121 | 10.0 | 5.0 | ppmv | | | |
| o-Xylene | 0.0104 | 104 | 0.0110 | 110 | 10.0 | 5.1 | ppmv | | | |
| 1,1,2,2-Tetrachloroethane | 0.0107 | 107 | 0.0113 | 113 | 10.0 | 5.1 | ppmv | | | |
| 4-Ethyltoluene | 0.0119 | 119 | 0.0126 | 126 | 10.0 | 5.2 | ppmv | | | |
| 1,3,5-Trimethylbenzene | 0.0120 | 120 | 0.0125 | 125 | 10.0 | 3.8 | ppmv | | | |
| 1,2,4-Trimethylbenzene | 0.0116 | 116 | 0.0121 | 121 | 10.0 | 4.1 | ppmv | | | |
| 1,3-Dichlorobenzene | 0.0106 | 106 | 0.0112 | 112 | 10.0 | 5.0 | ppmv | | | |
| Benzyl chloride | 0.0110 | 110 | 0.0120 | 120 | 10.0 | 9.1 | ppmv | | | |
| 1,4-Dichlorobenzene | 0.0112 | 112 | 0.0118 | 118 | 10.0 | 5.4 | ppmv | | | |
| 1,2-Dichlorobenzene | 0.0112 | 112 | 0.0121 | 121 | 10.0 | 7.4 | ppmv | | | |
| 1,2,4-Trichlorobenzene | 0.0109 | 109 | 0.0113 | 113 | 10.0 | 3.4 | ppmv | | | |
| Hexachlorobutadiene | 0.0118 | 118 | 0.0116 | 116 | 10.0 | 1.7 | ppmv | | | |
| Surr: 4-Bromofluorobenzene | 0.0109 | 109 | 0.0105 | 105 | | | %REC | | | |
| | | 70-130% | | 70-130% | | | | | | |

# Airtech Environmental Laboratories (AEL) - AZ 0740

| | | | |
|---|---|---|---|
| **Client:** | City of Tucson | **Client Sample ID:** | NA |
| **Project:** | Prudence | **Project Number:** | P01065 |
| **Lab Order:** | 15L022 | **Collection:** | NA |
| **Lab ID:** | Standards | **Matrix:** | NA |

| AEL ID# | STD Name | Vendor | SGI Order# | Description | CONC. | Accuracy | Exp.Date |
|---|---|---|---|---|---|---|---|
| S-150731-01 | Stock | Spectra Gases | 113123527 | TO-14 39 Analytes | 1.0 ppmv | ± 5% | 7/31/2016 |
| S-150804-01 | Stock | Spectra Gases | 113123527 | TO-15 25 Analytes | 1.0 ppmv | ± 5% | 8/4/2016 |
| S-151229-01 | Stock | Spectra Gases | 113562719 | 15 Additional Compounds | 1.0 ppmv | ± 5% | 12/29/2016 |
| S-151113-01 | Stock | Spectra Gases | TB500009-110 | TO-15 IS 4 Compounds | 1.0 ppmv | ± 5% | 12/29/2016 |
| A-160104-01 | Working Std | AEL Dilution | | TO-15 74 Analytes | 10 ppbv | ± 5% | 4/4/2016 |
| A-151230-01 | Working IS | AEL Dilution | | TO-15 IS 4 Compounds | 50 ppbv | ± 5% | 3/30/2016 |
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# Airtech Environmental Laboratories (AEL)

## Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

| | | | |
|---|---|---|---|
| Customer: City of Tucson | Page 1 of 1 | | AEL Lab # 15L022 |
| Address: PO Box 27210 | Sampler: Kayla Virgone | Phone: 520 631 9350 | |
| | Project Name: Prudence | Project Number: P01065 | |
| City, State, Zip: Tucson AZ 85726 | Project location: | | |
| Contact: Lori Enman | P.O. Number: | | |
| Phone: 791-3175 Fax: | Fax Results: Y N | | |
| E-Mail Address: | 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

KV 12/16/15

## Sample Information

| AEL Lab # | Serial # Canister | Serial # ~~Grab~~ Reg | 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 | 1833 | 111 | 6 1 bag | 1 2 5 | R-125A 335' | 12/16/15 | 0934 | S | 1 | X | | | | | | | | | |
| 02 | E2372 | 063 | 6 1 bag | 1 2 5 | R-125A 250' | 12/16/15 | 0946 | S | 1 | X | | | | | | | | | |
| 03 | 1797 | 065 | 6 1 bag | 1 2 5 | R-125A 145' | 12/16/15 | 0955 | S | 1 | X | | | | | | | | | |
| 04 | E2286 | 037 | 6 1 bag | 1 2 5 | R-125A 50' | 12/16/15 | 1006 | S | 1 | 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: |
|---|---|---|---|
| 12/16/15 | 1330 | Kayla Virgone | FEDEX |
| 12-24-15 | 1140 | | |
| | | | |

# Airtech Environmental Laboratories (AEL)

## Chain of Custody

4620 E.Elwood Street, Suite 13, Phoenix, AZ 85040 480-968-5888 (phone) 480-966-1888 (fax)

| | | |
|---|---|---|
| Customer: City of Tucson | Page 2 of 2 | AEL Lab # |
| Address: P.O. Box 27210 | Sampler: Kayla Virgone Phone: 520 631 9350 | 151022 |
| | Project Name: Prudence Project Number: P01065 | |
| City, State, Zip: Tucson AZ 85726 | Project location: | |
| Contact: Lori Ehman | P.O. Number: | |
| Phone: 791-3175 Fax: | Fax Results: Y N | |
| E-Mail Address: | E-Mail Results: Y N | |

| Sample Receipt | Turn Around Request | Sample Type |
|---|---|---|
| Temperature_____ °C | ____ 24 Hours ____ 48 Hours | SVE: soil vapor extraction GW: ground water |
| Custody Seals: Yes_____ No_____ | ____ 72 Hours | A: ambient air WW: waste water |
| Custody Seals Intact: Yes_____ No_____ | ____ 5 working Day | I: indoor air |
| Total # of Containers:_____ | ____ Standard 10 Working Days | S: soil vapor |
| | | W: water |

KV 12/16/15

## Sample Information

| AEL Lab # | Serial # Canister | Serial # ~~Grab~~ 286 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05 | 1793 | 144 | 6 1 bag | 1 2 5 | WR-434A 350' | 12/16/15 | 1057 | S | 1 | X | | | | | | | | | |
| 06 | 1877 | 009 | 6 1 bag | 1 2 5 | WR-434A 250' | 12/16/15 | 1100 | S | 1 | X | | | | | | | | | |
| 07 | E2097 | 143 | 6 1 bag | 1 2 5 | WR-434A 150' | 12/16/15 | 1112 | S | 1 | X | | | | | | | | | |
| 08 | 1842 | 031 | 6 1 bag | 1 2 5 | WR-434A 50' | 12/16/15 | 1120 | S | 1 | 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: |
|---|---|---|---|
| 12/16/15 | 1330 | Kayla Virgone | FEDEX |
| 12/17/15 | 1140 | | |
| | | | |

# APPENDIX E

## Landfill Gas Monitoring Data

Prudence Landfill
Methane Monitoring
Well (16, follow up)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD1615 | 11/6/2015 8:52 | 0.0 | 6.8 | 15.3 | 77.9 | 27.4 | 0.00 |
| PRUD1625 | 11/6/2015 8:57 | 0.0 | 13.2 | 9.2 | 77.6 | 27.4 | 0.00 |
| | | | | | | | 11/6/15 |
| Note: GEM2000 ID: 11158 | | | | | Monitored by: K. Virgone | Kayla Virgone | |
| GEM2000 was calibrated using 15% methane (see K.V. calibration sheet for this date). | | | | | | | |
| Pressure readings were taken with the D.S. Mark III "C" digital manometer. | | | | | | | |
| Accuracy of the machine is +/-0.3% at methane concentrations of less than <5.0%. | | | | | | | |

Prudence Landfill
Methane Monitoring
Wells (16, Follow Up)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD1615 | 10/30/2015 8:28 | 0.0 | 8.5 | 13.4 | 78.1 | 27.0 | 0.00 |
| PRUD1625 | 10/30/2015 8:31 | 0.0 | 7.2 | 14.0 | 78.8 | 27.0 | 0.01 |
| | | | | | | | |
| Note: GEM2000 ID: 11158 | | | Monitored by: J. Montante | | | | |
| GEM2000 was calibrated using 15% methane (see J.M. calibration sheet for this date). | | | | | | | |
| Pressure readings were taken with the D.S. Mark III "B" digital manometer. | | | | | | | |
| Accuracy of the machine is +/-0.3% at methane concentrations of less than <5.0%. | | | | | | | |

J Montante - 10-30-15

Prudence Landfill
Methane Monitoring
Wells (16, Follow Up)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD1615 | 10/23/2015 8:32 | 0.0 | 12.6 | 8.2 | 79.2 | 27.2 | -0.02 |
| PRUD1625 | 10/23/2015 8:37 | 0.0 | 14.2 | 5.3 | 80.5 | 27.2 | -0.07 |
| | | | | | | | |
| Note: GEM2000 ID: 11158 | | | Monitored by: J. Montante | | | | |
| GEM2000 was calibrated using 15% methane (see J.M. calibration sheet for this date). | | | | | | | |
| Pressure readings were taken with the D.S. Mark III "B" digital manometer. | | | | | | | |
| Accuracy of the machine is +/-0.3% at methane concentrations of less than <5.0%. | | | | | | | |

J M Montante 10-23-15

Prudence Landfill
Methane Monitoring
Well (16 follow up)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD1615 | 10/20/2015 11:11 | 0.0 | 17.8 | 2.6 | 79.6 | 27.1 | 0.00 |
| PRUD1625 | 10/20/2015 11:23 | 0.0 | 18.5 | 0.0 | 81.5 | 27.1 | 0.00 |
| | | | | | | | |
| Note: GEM2000 ID: 11158 | | | | | Monitored by: K. Virgone | | |
| GEM2000 was calibrated using 15% methane (see K.V. calibration sheet for this date). | | | | | | | |
| Pressure readings were taken with the D.S. Mark III "H" digital manometer. | | | | | | | |
| Accuracy of the machine is +/-0.3% at methane concentrations of less than <5.0%. | | | | | | | |

10/20/15

Prudence Landfill
Methane Monitoring
Well (16 follow up)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD1615 | 10/16/2015 9:41 | 0.0 | 13.4 | 6.9 | 79.7 | 27.2 | 0.00 |
| PRUD1625 | 10/16/2015 9:50 | 0.7 | 14.5 | 4.5 | 80.3 | 27.2 | 0.00 |
| | | | | | | | |
| | | | | | | | |
| Note: GEM2000 ID: 11158 | | | | | Monitored by: K. Virgone | Kayla Virgone 10/11/15 | |
| GEM2000 was calibrated using 15% methane (see K.V. calibration sheet for this date). | | | | | | | |
| Pressure readings were taken with the D.S. Mark III "H" digital manometer. | | | | | | | |
| Accuracy of the machine is +/-0.3% at methane concentrations of less than <5.0%. | | | | | | | |

Prudence Landfill
Methane Monitoring
(PR-all)
QUARTERLY MONITORING

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD0130 | 10/13/2015 11:44 | 0.0 | 9.3 | 11.4 | 79.3 | 27.38 | -3.14 |
| PRUD0230 | 10/13/2015 11:47 | 0.0 | 2.8 | 18.1 | 79.1 | 27.38 | 0.80 |
| PRUD0330 | 10/13/2015 12:34 | 0.0 | 4.2 | 16.1 | 79.7 | 27.35 | 0.83 |
| PRUD0430 | 10/13/2015 12:41 | 0.0 | 1.4 | 20.1 | 78.5 | 27.35 | 0.82 |
| PRUD0530 | 10/13/2015 12:44 | 0.0 | 2.4 | 18.6 | 79.0 | 27.35 | 0.85 |
| PRUD0630 | 10/13/2015 12:49 | 0.0 | 2.0 | 18.8 | 79.2 | 27.35 | 0.86 |
| PRUD0730 | 10/13/2015 13:21 | 0.0 | 3.1 | 17.7 | 79.2 | 27.34 | -13.34 |
| PRUD0830 | 10/13/2015 13:18 | 0.0 | 5.1 | 14.6 | 80.3 | 27.34 | 0.93 |
| PRUD0930 | 10/13/2015 13:15 | 0.0 | 3.8 | 15.5 | 80.7 | 27.33 | 0.90 |
| PRUD1030 | 10/13/2015 13:11 | 0.0 | 5.6 | 13.0 | 81.4 | 27.33 | -9.56 |
| PRUD1130 | 10/13/2015 13:08 | 0.0 | 12.2 | 6.8 | 81.0 | 27.34 | 0.88 |
| PRUD1230 | 10/13/2015 13:04 | 0.0 | 12.2 | 6.2 | 81.6 | 27.33 | 0.88 |
| PRUD1315 | 10/13/2015 12:20 | 0.0 | 3.9 | 17.2 | 78.9 | 27.35 | 0.80 |
| PRUD1335 | 10/13/2015 12:22 | 0.0 | 14.3 | 5.0 | 80.7 | 27.35 | -4.26 |
| PRUD1415 | 10/13/2015 12:15 | 0.0 | 5.8 | 15.1 | 79.1 | 27.35 | -1.85 |
| PRUD1435 | 10/13/2015 12:17 | 0.0 | 16.4 | 2.7 | 80.9 | 27.35 | -7.82 |
| PRUD1515 | 10/13/2015 12:08 | 0.0 | 4.4 | 16.7 | 78.9 | 27.37 | 0.78 |
| PRUD1535 | 10/13/2015 12:11 | 0.0 | 16.2 | 3.7 | 80.1 | 27.35 | 0.81 |
| RUD1615 | 10/13/2015 11:31 | 0.0 | 17.7 | 2.2 | 80.1 | 27.37 | 0.67 |
| PRUD1615 | 10/13/2015 11:39 | 0.0 | 18.1 | 1.4 | 80.5 | 27.38 | -5.21 |
| PRUD1625 | 10/13/2015 11:37 | 1.1 | 17.4 | 0.0 | 81.5 | 27.37 | -2.87 |
| PRUD1625 | 10/13/2015 11:39 | 0.0 | 18.0 | 1.4 | 80.6 | 27.38 | 0.74 |
| PRUD1625 | 10/13/2015 11:42 | 1.2 | 17.2 | 0.0 | 81.6 | 27.38 | 0.74 |
| PRUD1710 | 10/13/2015 11:27 | 0.0 | 3.3 | 18.2 | 78.5 | 27.37 | -5.63 |
| PRUD1725 | 10/13/2015 11:28 | 0.0 | 6.5 | 11.9 | 81.6 | 27.37 | -5.33 |
| PRUD1810 | 10/13/2015 11:21 | 0.0 | 5.4 | 14.0 | 80.6 | 27.36 | 0.61 |
| PRUD1825 | 10/13/2015 11:23 | 0.0 | 3.0 | 16.8 | 80.2 | 27.36 | -5.06 |
| PRUD1910 | 10/13/2015 11:14 | 0.0 | 5.5 | 15.9 | 78.6 | 27.36 | -2.21 |
| PRUD1925 | 10/13/2015 11:17 | 0.0 | 0.0 | 21.4 | 78.6 | 27.36 | -5.18 |
| PRUD2010 | 10/13/2015 11:09 | 0.0 | 6.0 | 15.9 | 78.1 | 27.36 | 0.59 |
| PRUD2025 | 10/13/2015 11:11 | 0.0 | 4.7 | 15.2 | 80.1 | 27.36 | -2.68 |

Note: GEM2000 ID: 11159 Monitored by: G. Bejarano

GEM2000 was calibrated using 15% methane (see G. B.calibration sheet on this date)

Pressure readings were taken using Dwyer Series Mark III "A" digital manometer

G. Bejarano 10/13/15

Note: calibIDS is calibration gas being used a machine calibration check.

calibIDS zero is ambient air also can be used a machine calibration check.

Note: Accuracy of the machine is +/- 0.3% at methane concentrations of less than < 5.0%

GAS record LOT 43358-63 EXP 12/2016

Note: PR16-25 was monitored thrice: (1x-1.1% CH4)(2x-0.0% void inadvertently recorded)(3x-1.2% CH4)

PR-16-15 was recorded also to ensure no methane was present at 15ft.

Prudence
Methane Monitoring
(All- quarterly)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD0130 | 7/15/2015 7:50 | 0.0 | 8.1 | 13.0 | 78.9 | 27.27 | -0.03 |
| PRUD0230 | 7/15/2015 7:59 | 0.0 | 0.0 | 20.2 | 79.8 | 27.29 | -0.07 |
| PRUD0330 | 7/15/2015 8:57 | 0.0 | 0.9 | 19.3 | 79.8 | 27.26 | 0.00 |
| PRUD0430 | 7/15/2015 9:05 | 0.0 | 3.5 | 17.2 | 79.3 | 27.27 | 0.00 |
| PRUD0530 | 7/15/2015 9:12 | 0.0 | 2.0 | 18.1 | 79.9 | 27.27 | 0.00 |
| PRUD0630 | 7/15/2015 9:18 | 0.0 | 2.3 | 18.1 | 79.6 | 27.27 | 0.01 |
| PRUD0730 | 7/15/2015 9:24 | 0.0 | 1.0 | 18.9 | 80.1 | 27.28 | -0.01 |
| PRUD0830 | 7/15/2015 9:30 | 0.0 | 1.1 | 18.3 | 80.6 | 27.28 | 0.00 |
| PRUD0930 | 7/15/2015 9:35 | 0.0 | 1.8 | 17.8 | 80.4 | 27.27 | 0.00 |
| PRUD1030 | 7/15/2015 9:40 | 0.0 | 2.6 | 16.4 | 81.0 | 27.27 | 0.00 |
| PRUD1130 | 7/15/2015 9:46 | 0.0 | 10.5 | 11.1 | 78.4 | 27.26 | 0.00 |
| PRUD1230 | 7/15/2015 9:51 | 0.0 | 3.7 | 16.1 | 80.2 | 27.26 | 0.00 |
| PRUD1315 | 7/15/2015 10:04 | 0.0 | 4.7 | 16.2 | 79.1 | 27.26 | 0.00 |
| PRUD1335 | 7/15/2015 10:06 | 0.0 | 14.5 | 7.2 | 78.3 | 27.26 | 0.00 |
| PRUD1415 | 7/15/2015 10:11 | 0.0 | 5.0 | 15.7 | 79.3 | 27.27 | 0.00 |
| PRUD1435 | 7/15/2015 10:13 | 0.0 | 17.4 | 4.0 | 78.6 | 27.26 | 0.00 |
| PRUD1515 | 7/15/2015 10:31 | 0.0 | 3.0 | 17.1 | 79.9 | 27.26 | 0.00 |
| PRUD1535 | 7/15/2015 10:21 | 0.0 | 11.1 | 9.4 | 79.5 | 27.27 | 0.00 |
| PRUD1615 | 7/15/2015 8:04 | 0.0 | 0.3 | 20.0 | 79.7 | 27.29 | -0.07 |
| PRUD1625 | 7/15/2015 8:08 | 0.0 | 0.1 | 20.1 | 79.8 | 27.29 | -0.12 |
| PRUD1710 | 7/15/2015 8:12 | 0.0 | 3.9 | 16.2 | 79.9 | 27.29 | -0.01 |
| PRUD1725 | 7/15/2015 8:15 | 0.0 | 0.1 | 20.1 | 79.8 | 27.29 | -0.04 |
| PRUD1810 | 7/15/2015 8:18 | 0.0 | 3.2 | 17.9 | 78.9 | 27.29 | -0.05 |
| PRUD1825 | 7/15/2015 8:22 | 0.0 | 2.9 | 18.2 | 78.9 | 27.29 | -0.07 |
| PRUD1910 | 7/15/2015 8:25 | 0.0 | 6.3 | 15.8 | 77.9 | 27.29 | -0.35 |
| PRUD1925 | 7/15/2015 8:27 | 0.0 | 0.1 | 20.4 | 79.5 | 27.28 | -0.04 |
| PRUD2010 | 7/15/2015 8:30 | 0.0 | 4.0 | 16.6 | 79.4 | 27.28 | 0.14 |
| PRUD2025 | 7/15/2015 8:32 | 0.0 | 3.6 | 17.0 | 79.4 | 27.27 | 0.06 |
| | | | | | | | |
| Note: GEM2000 ID: 11159 | | | | Monitored by: H. Vimislik | H. Vimislik | | |
| GEM2000 was calibrated using 15% methane (see H V.calibration sheet on this date) | | | | | | | 7-15-15 |
| Pressure readings were taken using Dwyer Series Mark III "D" digital manometer | | | | | | | |
| Accuracy of the machine is +/- 0.3% at methane concentrations of less than <5.0%. | | | | | | | |

Prudence Landfill
Methane Monitoring
(PR1-20)
QUARTERLY MONITORING

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| LGGAM 3.01L 16/10/07 | | % | % | % | % | inches Hg | inches H2O |
| calibIDS | 4/17/2015 6:17 | 15.0 | 15.0 | 0.0 | 70.0 | 27.40 | n/a |
| calizero | 4/17/2015 6:18 | 0.0 | 0.1 | 20.7 | 79.2 | 27.40 | n/a |
| PRUD0001 | 4/17/2015 7:11 | 0.0 | 1.0 | 20.8 | 78.2 | 27.25 | 0.01 |
| PRUD0002 | 4/17/2015 7:04 | 0.0 | 1.5 | 20.2 | 78.3 | 27.25 | 0.01 |
| PRUD0003 | 4/17/2015 8:43 | 0.0 | 1.1 | 19.8 | 79.1 | 27.26 | 0.00 |
| PRUD0004 | 4/17/2015 8:51 | 0.0 | 2.5 | 18.4 | 79.1 | 27.27 | 0.01 |
| PRUD0005 | 4/17/2015 8:54 | 0.0 | 2.3 | 17.8 | 79.9 | 27.27 | 0.01 |
| PRUD0006 | 4/17/2015 9:00 | 0.0 | 1.7 | 18.6 | 79.7 | 27.27 | 0.00 |
| PRUD0007 | 4/17/2015 9:29 | 0.0 | 1.1 | 19.4 | 79.5 | 27.28 | -0.02 |
| PRUD0008 | 4/17/2015 9:25 | 0.0 | 1.8 | 19.2 | 79.0 | 27.27 | -0.01 |
| PRUD0009 | 4/17/2015 9:20 | 0.0 | 0.1 | 20.4 | 79.5 | 27.27 | -0.02 |
| PRUD0010 | 4/17/2015 9:16 | 0.0 | 0.7 | 20.2 | 79.1 | 27.27 | -0.02 |
| PRUD0011 | 4/17/2015 9:12 | 0.0 | 2.1 | 19.1 | 78.8 | 27.27 | -0.05 |
| PRUD0012 | 4/17/2015 9:08 | 0.0 | 1.1 | 19.7 | 79.2 | 27.27 | -0.03 |
| PRUD1315 | 4/17/2015 8:19 | 0.0 | 5.5 | 16.3 | 78.2 | 27.25 | 0.00 |
| PRUD1335 | 4/17/2015 8:24 | 0.0 | 16.1 | 6.0 | 77.9 | 27.25 | 0.00 |
| PRUD1415 | 4/17/2015 8:28 | 0.0 | 6.7 | 14.9 | 78.4 | 27.25 | 0.00 |
| PRUD1435 | 4/17/2015 8:30 | 0.0 | 17.2 | 3.6 | 79.2 | 27.26 | 0.00 |
| PRUD1515 | 4/17/2015 8:33 | 0.0 | 4.4 | 16.7 | 78.9 | 27.26 | 0.00 |
| PRUD1535 | 4/17/2015 8:35 | 0.0 | 14.5 | 7.0 | 78.5 | 27.26 | 0.00 |
| PRUD1615 | 4/17/2015 7:15 | 0.0 | 1.3 | 20.5 | 78.2 | 27.26 | -0.02 |
| PRUD1625 | 4/17/2015 7:18 | 0.0 | 3.1 | 20.0 | 76.9 | 27.26 | -0.03 |
| PRUD1710 | 4/17/2015 7:21 | 0.0 | 2.2 | 19.7 | 78.1 | 27.27 | 0.00 |
| PRUD1725 | 4/17/2015 7:24 | 0.0 | 0.8 | 20.8 | 78.4 | 27.26 | -0.02 |
| PRUD1810 | 4/17/2015 7:27 | 0.0 | 2.4 | 19.4 | 78.2 | 27.27 | 0.00 |
| PRUD1825 | 4/17/2015 7:30 | 0.0 | 2.2 | 20.1 | 77.7 | 27.27 | -0.01 |
| PRUD1910 | 4/17/2015 7:32 | 0.0 | 3.1 | 18.9 | 78.0 | 27.27 | 0.00 |
| PRUD1925 | 4/17/2015 7:38 | 0.0 | 1.8 | 19.9 | 78.3 | 27.27 | 0.00 |
| PRUD2010 | 4/17/2015 7:42 | 0.0 | 1.5 | 19.8 | 78.7 | 27.27 | -0.01 |
| PRUD2025 | 4/17/2015 7:49 | 0.0 | 0.4 | 20.6 | 79.0 | 27.27 | -0.01 |
| | | | | | | | |
| Note: GEM2000 ID: 11159 | | | Monitored by: G. Bejarano | | | | |
| GEM2000 was calibrated using 15% methane (see G. B.calibration sheet on this date) | | | | | | | |
| Pressure readings were taken using Dwyer Series Mark III "D" digital manometer | | | | | | | |
| Note: calibIDS is calibration gas being used a machine calibration check. | | | | | | | |
| calibIDS zero is ambient air also can be used a machine calibration check. | | | | | | | |
| Note: Accuracy of the machine is +/- 0.3% at methane concentrations of less than < 5.0% | | | | | | | |
| GAS record | LOT 43218-04 EXP 08 2016 | | | | | | |

4/17/15

S:\GA90\Data15\PR\pr 2015 04 17-qtrly

Prudence Landfill
Methane Monitoring
(PR-all)
QUARTERLY MONITORING

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| LGGAM 3.01L 16/10/07 | | % | % | % | % | inches Hg | inches H2O |
| calibIDS | 1/9/2015 7:39 | 14.9 | 15.0 | 0.0 | 70.1 | 27.47 | n/a |
| calizero | 1/9/2015 7:41 | 0.0 | 0.0 | 20.9 | 79.1 | 27.47 | n/a |
| PRUD0001 | 1/9/2015 10:40 | 0.0 | 0.3 | 20.5 | 79.2 | 27.36 | 0.02 |
| PRUD0002 | 1/9/2015 10:44 | 0.0 | 2.4 | 18.7 | 78.9 | 27.35 | 0.01 |
| PRUD0003 | 1/9/2015 11:20 | 0.0 | 2.8 | 17.6 | 79.6 | 27.32 | 0.03 |
| PRUD0004 | 1/9/2015 11:30 | 0.0 | 6.3 | 13.2 | 80.5 | 27.32 | 0.01 |
| PRUD0005 | 1/9/2015 11:31 | 0.0 | 0.1 | 20.2 | 79.7 | 27.33 | 0.02 |
| PRUD0005 | 1/9/2015 11:33 | 0.0 | 1.3 | 18.6 | 80.1 | 27.33 | 0.02 |
| PRUD0006 | 1/9/2015 11:36 | 0.0 | 1.1 | 18.9 | 80.0 | 27.33 | 0.02 |
| PRUD0007 | 1/9/2015 11:38 | 0.0 | 0.0 | 20.3 | 79.7 | 27.33 | 0.02 |
| PRUD0007 | 1/9/2015 11:40 | 0.0 | 1.1 | 18.6 | 80.3 | 27.33 | 0.02 |
| PRUD0008 | 1/9/2015 11:50 | 0.0 | 3.1 | 16.7 | 80.2 | 27.32 | 0.03 |
| PRUD0009 | 1/9/2015 11:56 | 0.0 | 2.7 | 16.2 | 81.1 | 27.31 | 0.02 |
| PRUD0010 | 1/9/2015 11:59 | 0.0 | 3.1 | 16.3 | 80.6 | 27.31 | 0.02 |
| PRUD0011 | 1/9/2015 12:03 | 0.0 | 13.8 | 5.4 | 80.8 | 27.30 | 0.01 |
| PRUD0012 | 1/9/2015 12:06 | 0.0 | 12.9 | 4.8 | 82.3 | 27.30 | 0.02 |
| PRUD1315 | 1/9/2015 10:57 | 0.0 | 5.2 | 15.1 | 79.7 | 27.33 | 0.01 |
| PRUD1335 | 1/9/2015 11:00 | 0.0 | 16.8 | 4.3 | 78.9 | 27.34 | 0.02 |
| PRUD1415 | 1/9/2015 11:03 | 0.0 | 8.5 | 12.1 | 79.4 | 27.34 | 0.01 |
| PRUD1435 | 1/9/2015 11:05 | 0.0 | 18.8 | 2.0 | 79.2 | 27.34 | 0.03 |
| PRUD1515 | 1/9/2015 11:07 | 0.0 | 7.2 | 13.7 | 79.1 | 27.34 | 0.01 |
| PRUD1535 | 1/9/2015 11:10 | 0.0 | 18.4 | 1.9 | 79.7 | 27.34 | 0.03 |
| PRUD1615 | 1/9/2015 10:34 | 0.0 | 0.0 | 20.9 | 79.1 | 27.36 | -0.01 |
| PRUD1625 | 1/9/2015 10:37 | 0.0 | 0.0 | 20.9 | 79.1 | 27.36 | -0.01 |
| PRUD1710 | 1/9/2015 10:29 | 0.0 | 6.2 | 14.0 | 79.8 | 27.36 | -0.01 |
| PRUD1725 | 1/9/2015 10:32 | 0.0 | 0.0 | 20.9 | 79.1 | 27.36 | -0.02 |
| PRUD1810 | 1/9/2015 10:25 | 0.0 | 2.2 | 18.9 | 78.9 | 27.37 | -0.01 |
| PRUD1825 | 1/9/2015 10:27 | 0.0 | 7.7 | 12.4 | 79.9 | 27.36 | -0.01 |
| PRUD1910 | 1/9/2015 10:20 | 0.0 | 7.1 | 15.4 | 77.5 | 27.37 | -0.01 |
| PRUD1925 | 1/9/2015 10:22 | 0.0 | 2.6 | 18.9 | 78.5 | 27.37 | -0.01 |
| PRUD2010 | 1/9/2015 10:13 | 0.0 | 3.4 | 17.5 | 79.1 | 27.36 | -0.01 |
| PRUD2025 | 1/9/2015 10:18 | 0.0 | 4.6 | 15.7 | 79.7 | 27.37 | -0.01 |

Note: GEM2000 ID: 11158 Monitored by: G. Bejarano

GEM2000 was calibrated using 15% methane (see G. B.calibration sheet on this date)

Pressure readings were taken using Dwyer Series Mark III "A" digital manometer

Note: calibIDS is calibration gas being used a machine calibration check.

calibIDS zero is ambient air also can be used a machine calibration check.

Note: Accuracy of the machine is +/- 0.3% at methane concentrations of less than < 5.0%

GAS record LOT 43218-04 EXP 08 2016

Note: PR-5 was recorded twice: (1x-void)(2x-ok to use)

Note: PR-7 was recorded twice: (1x-void)(2x-ok to use)

Prudence Landfill
Methane Monitoring
Wells (all, Quarterly)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD0001 | 10/17/2014 9:22 | 0.0 | 7.4 | 12.6 | 80.0 | 27.3 | 0.04 |
| PRUD0002 | 10/17/2014 9:25 | 0.0 | 8.2 | 11.6 | 80.2 | 27.3 | 0.05 |
| PRUD0003 | 10/17/2014 8:53 | 0.0 | 1.6 | 18.6 | 79.8 | 27.3 | 0.02 |
| PRUD0004 | 10/17/2014 8:55 | 0.0 | 2.0 | 18.3 | 79.7 | 27.3 | 0.03 |
| PRUD0005 | 10/17/2014 8:57 | 0.0 | 1.5 | 18.3 | 80.2 | 27.3 | 0.05 |
| PRUD0006 | 10/17/2014 9:00 | 0.0 | 1.6 | 18.6 | 79.8 | 27.3 | 0.01 |
| PRUD0007 | 10/17/2014 9:02 | 0.0 | 1.0 | 18.6 | 80.4 | 27.3 | 0.03 |
| PRUD0008 | 10/17/2014 9:05 | 0.0 | 1.9 | 18.5 | 79.6 | 27.3 | 0.05 |
| PRUD0009 | 10/17/2014 9:06 | 0.0 | 1.5 | 18.5 | 80.0 | 27.3 | 0.02 |
| PRUD0010 | 10/17/2014 9:09 | 0.0 | 1.9 | 18.6 | 79.5 | 27.3 | 0.03 |
| PRUD0011 | 10/17/2014 9:11 | 0.0 | 1.3 | 18.7 | 80.0 | 27.3 | 0.06 |
| PRUD0012 | 10/17/2014 9:13 | 0.0 | 1.6 | 18.9 | 79.5 | 27.3 | 0.04 |
| PRUD1315 | 10/17/2014 8:33 | 0.0 | 6.9 | 13.8 | 79.3 | 27.3 | 0.00 |
| PRUD1335 | 10/17/2014 8:35 | 0.0 | 10.5 | 11.8 | 77.7 | 27.3 | 0.00 |
| PRUD1415 | 10/17/2014 8:38 | 0.0 | 3.1 | 14.4 | 82.5 | 27.3 | 0.00 |
| PRUD1435 | 10/17/2014 8:40 | 0.0 | 4.6 | 11.3 | 84.1 | 27.3 | 0.01 |
| PRUD1515 | 10/17/2014 8:42 | 0.0 | 6.4 | 14.3 | 79.3 | 27.3 | 0.02 |
| PRUD1535 | 10/17/2014 8:44 | 0.0 | 10.9 | 11.1 | 78.0 | 27.3 | 0.03 |
| PRUD1615 | 10/17/2014 9:27 | 0.0 | 1.0 | 19.8 | 79.2 | 27.3 | 0.04 |
| PRUD1625 | 10/17/2014 9:30 | 0.0 | 0.4 | 20.2 | 79.4 | 27.3 | 0.05 |
| PRUD1710 | 10/17/2014 9:32 | 0.0 | 12.7 | 8.0 | 79.3 | 27.3 | 0.03 |
| PRUD1725 | 10/17/2014 9:34 | 0.0 | 0.0 | 20.5 | 79.5 | 27.3 | 0.07 |
| PRUD1810 | 10/17/2014 9:36 | 0.0 | 14.0 | 6.8 | 79.2 | 27.3 | 0.06 |
| PRUD1825 | 10/17/2014 9:38 | 0.0 | 0.0 | 20.4 | 79.6 | 27.3 | 0.09 |
| PRUD1910 | 10/17/2014 9:41 | 0.0 | 3.9 | 17.8 | 78.3 | 27.3 | 0.08 |
| PRUD1925 | 10/17/2014 9:44 | 0.0 | 0.0 | 20.6 | 79.4 | 27.3 | 0.07 |
| PRUD2010 | 10/17/2014 9:46 | 0.0 | 3.9 | 17.8 | 78.3 | 27.3 | 0.05 |
| PRUD2025 | 10/17/2014 9:48 | 0.0 | 0.0 | 20.6 | 79.4 | 27.3 | 0.10 |
| | | | | | | | |
| Note: GEM2000 ID: 11159 | | | Monitored by: J. Montante | | | | |
| GEM2000 was calibrated using 15% methane (see J.M. calibration sheet on this date). | | | | | | | |
| Pressure readings were taken with the Dwyer Series Mark III "H" digital manometer. | | | | | | | |
| Accuracy of the machine is +/- 0.3% at methane concentrations of less than <5.0%. | | | | | | | |

J. Montante
10-17-14

Prudence Landfill
Methane Monitoring
Wells (all, Quarterly)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD0001 | 7/8/2014 7:15 | 0.0 | 1.9 | 18.5 | 79.6 | 27.3 | 0.00 |
| PRUD0002 | 7/8/2014 7:17 | 0.0 | 3.0 | 18.5 | 78.5 | 27.3 | 0.01 |
| PRUD0003 | 7/8/2014 7:20 | 0.0 | 3.1 | 17.1 | 79.8 | 27.3 | 0.00 |
| PRUD0004 | 7/8/2014 7:22 | 0.0 | 2.0 | 19.0 | 79.0 | 27.3 | 0.01 |
| PRUD0005 | 7/8/2014 7:24 | 0.0 | 1.6 | 19.1 | 79.3 | 27.3 | 0.02 |
| PRUD0006 | 7/8/2014 7:27 | 0.0 | 2.1 | 18.6 | 79.3 | 27.3 | 0.03 |
| PRUD0007 | 7/8/2014 7:29 | 0.0 | 0.0 | 19.8 | 80.2 | 27.3 | 0.05 |
| PRUD0008 | 7/8/2014 7:32 | 0.0 | 0.0 | 19.7 | 80.3 | 27.3 | 0.04 |
| PRUD0009 | 7/8/2014 7:34 | 0.0 | 0.0 | 19.7 | 80.3 | 27.4 | 0.07 |
| PRUD0010 | 7/8/2014 7:36 | 0.0 | 0.1 | 19.9 | 80.0 | 27.4 | 0.03 |
| PRUD0011 | 7/8/2014 7:39 | 0.0 | 0.0 | 20.0 | 80.0 | 27.4 | 0.08 |
| PRUD0012 | 7/8/2014 7:41 | 0.0 | 0.2 | 19.9 | 79.9 | 27.4 | 0.09 |
| PRUD1315 | 7/8/2014 7:44 | 0.0 | 0.3 | 19.8 | 79.9 | 27.4 | 0.01 |
| PRUD1335 | 7/8/2014 7:47 | 0.0 | 0.3 | 18.1 | 81.6 | 27.4 | 0.05 |
| PRUD1415 | 7/8/2014 7:49 | 0.0 | 0.9 | 18.2 | 80.9 | 27.4 | 0.02 |
| PRUD1435 | 7/8/2014 7:52 | 0.0 | 0.5 | 19.4 | 80.1 | 27.4 | 0.07 |
| PRUD1515 | 7/8/2014 7:54 | 0.0 | 0.9 | 19.4 | 79.7 | 27.4 | 0.06 |
| PRUD1535 | 7/8/2014 7:56 | 0.0 | 0.7 | 19.6 | 79.7 | 27.4 | 0.09 |
| PRUD1615 | 7/8/2014 7:58 | 0.0 | 0.0 | 20.1 | 79.9 | 27.4 | 0.02 |
| PRUD1625 | 7/8/2014 8:01 | 0.0 | 0.0 | 20.0 | 80.0 | 27.4 | 0.03 |
| PRUD1710 | 7/8/2014 8:03 | 0.0 | 0.0 | 20.0 | 80.0 | 27.4 | 0.01 |
| PRUD1725 | 7/8/2014 8:05 | 0.0 | 0.0 | 20.2 | 79.8 | 27.4 | 0.06 |
| PRUD1810 | 7/8/2014 8:07 | 0.0 | 0.0 | 20.1 | 79.9 | 27.4 | 0.02 |
| PRUD1825 | 7/8/2014 8:09 | 0.0 | 0.0 | 20.1 | 79.9 | 27.4 | 0.04 |
| PRUD1910 | 7/8/2014 8:12 | 0.0 | 1.8 | 18.4 | 79.8 | 27.4 | 0.02 |
| PRUD1925 | 7/8/2014 8:14 | 0.0 | 0.0 | 20.0 | 80.0 | 27.4 | 0.07 |
| PRUD2010 | 7/8/2014 8:17 | 0.0 | 0.8 | 19.4 | 79.8 | 27.4 | 0.03 |
| PRUD2025 | 7/8/2014 8:19 | 0.0 | 0.0 | 20.2 | 79.8 | 27.4 | 0.08 |

Note: GEM2000 ID: 11159 Monitored by: J. Montante

GEM2000 was calibrated using 15% methane (see J.M. calibration sheet on this date).

Pressure readings were taken with the Dwyer Series Mark III "D" digital manometer.

Accuracy of the machine is +/- 0.3% at methane concentrations of less than <5.0%.

J. Montante 07-08-14

Prudence Landfill
Methane Monitoring
Wells (all, Quarterly)

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| | | % | % | % | % | inches Hg | inches H2O |
| PRUD0001 | 4/4/2014 7:45 | 0.0 | 2.1 | 18.7 | 79.2 | 27.2 | 0.00 |
| PRUD0002 | 4/4/2014 7:48 | 0.0 | 1.4 | 18.2 | 80.4 | 27.2 | 0.02 |
| PRUD0003 | 4/4/2014 7:52 | 0.0 | 2.4 | 18.3 | 79.3 | 27.2 | 0.03 |
| PRUD0004 | 4/4/2014 7:57 | 0.0 | 8.0 | 13.7 | 78.3 | 27.2 | 0.00 |
| PRUD0005 | 4/4/2014 7:59 | 0.0 | 2.6 | 19.3 | 78.1 | 27.2 | 0.03 |
| PRUD0006 | 4/4/2014 8:02 | 0.0 | 1.4 | 20.2 | 78.4 | 27.2 | 0.04 |
| PRUD0007 | 4/4/2014 8:42 | 0.0 | 0.7 | 19.6 | 79.7 | 27.2 | 0.00 |
| PRUD0008 | 4/4/2014 8:44 | 0.0 | 0.7 | 19.9 | 79.4 | 27.2 | 0.01 |
| PRUD0009 | 4/4/2014 8:48 | 0.0 | 0.2 | 20.3 | 79.5 | 27.2 | 0.03 |
| PRUD0010 | 4/4/2014 8:50 | 0.0 | 0.0 | 20.5 | 79.5 | 27.2 | 0.01 |
| PRUD0011 | 4/4/2014 8:54 | 0.0 | 1.2 | 19.5 | 79.3 | 27.2 | 0.04 |
| PRUD0012 | 4/4/2014 8:57 | 0.0 | 1.0 | 19.7 | 79.3 | 27.2 | 0.05 |
| PRUD1315 | 4/4/2014 7:18 | 0.0 | 5.9 | 15.4 | 78.7 | 27.2 | 0.02 |
| PRUD1335 | 4/4/2014 7:21 | 0.0 | 17.7 | 3.2 | 79.1 | 27.2 | 0.06 |
| PRUD1415 | 4/4/2014 7:23 | 0.0 | 6.0 | 15.4 | 78.6 | 27.2 | 0.01 |
| PRUD1435 | 4/4/2014 7:25 | 0.0 | 17.7 | 3.2 | 79.1 | 27.2 | 0.05 |
| PRUD1515 | 4/4/2014 7:28 | 0.0 | 2.1 | 19.0 | 78.9 | 27.2 | 0.03 |
| PRUD1535 | 4/4/2014 7:31 | 0.0 | 16.6 | 4.5 | 78.9 | 27.2 | 0.07 |
| PRUD1615 | 4/4/2014 8:05 | 0.0 | 16.3 | 2.3 | 81.4 | 27.2 | 0.03 |
| PRUD1625 | 4/4/2014 8:07 | 0.0 | 1.1 | 19.6 | 79.3 | 27.2 | 0.07 |
| PRUD1710 | 4/4/2014 8:12 | 0.0 | 6.0 | 14.4 | 79.6 | 27.2 | 0.04 |
| PRUD1725 | 4/4/2014 8:15 | 0.0 | 3.6 | 15.7 | 80.7 | 27.2 | 0.11 |
| PRUD1810 | 4/4/2014 8:17 | 0.0 | 9.3 | 10.3 | 80.4 | 27.2 | 0.01 |
| PRUD1825 | 4/4/2014 8:20 | 0.0 | 2.8 | 15.6 | 81.6 | 27.2 | 0.08 |
| PRUD1910 | 4/4/2014 8:22 | 0.0 | 4.0 | 16.8 | 79.2 | 27.2 | 0.03 |
| PRUD1925 | 4/4/2014 8:24 | 0.0 | 7.3 | 13.9 | 78.8 | 27.2 | 0.09 |
| PRUD2010 | 4/4/2014 8:27 | 0.0 | 5.0 | 16.1 | 78.9 | 27.2 | 0.09 |
| PRUD2025 | 4/4/2014 8:29 | 0.0 | 6.7 | 13.8 | 79.5 | 27.2 | 0.11 |

Note: GEM2000 ID: 11158 Monitored by: J. Montante

J. Montante 4-4-14.

GEM2000 was calibrated using 15% methane (see J.M. calibration sheet on this date).

Pressure readings were taken with the Dwyer Series Mark III "L" digital manometer.

Accuracy of the machine is +/- 0.3% at methane concentrations of less than <5.0%.

Prudence Landfill
Methane Monitoring
(PR-all)
QUARTERLY MONITORING

| Device ID | Date/Time | CH4 | CO2 | O2 | Balance | Baro. Press. | Rel. Pressure |
|---|---|---|---|---|---|---|---|
| LGGAM 3.01L 16/10/07 | | % | % | % | % | inches Hg | inches H2O |
| PRUD0001 | 1/17/2014 9:53 | 0.0 | 4.9 | 17.4 | 77.7 | 27.47 | 0.03 |
| PRUD0002 | 1/17/2014 9:57 | 0.0 | 1.2 | 19.3 | 79.5 | 27.46 | 0.02 |
| PRUD0003 | 1/17/2014 10:46 | 0.0 | 2.0 | 17.8 | 80.2 | 27.46 | -0.15 |
| PRUD0004 | 1/17/2014 10:54 | 0.0 | 4.6 | 15.8 | 79.6 | 27.47 | 0.00 |
| PRUD0005 | 1/17/2014 10:58 | 0.0 | 1.7 | 17.5 | 80.8 | 27.47 | 0.00 |
| PRUD0006 | 1/17/2014 11:05 | 0.0 | 0.5 | 19.0 | 80.5 | 27.47 | 0.00 |
| PRUD0007 | 1/17/2014 11:10 | 0.0 | 0.4 | 19.4 | 80.2 | 27.47 | 0.00 |
| PRUD0008 | 1/17/2014 11:14 | 0.0 | 1.1 | 18.8 | 80.1 | 27.46 | 0.00 |
| PRUD0009 | 1/17/2014 11:19 | 0.0 | 0.8 | 19.1 | 80.1 | 27.46 | 0.00 |
| PRUD0010 | 1/17/2014 11:24 | 0.0 | 0.8 | 18.8 | 80.4 | 27.46 | 0.00 |
| PRUD0011 | 1/17/2014 11:28 | 0.0 | 6.7 | 13.5 | 79.8 | 27.46 | 0.00 |
| PRUD0012 | 1/17/2014 11:33 | 0.0 | 2.5 | 16.9 | 80.6 | 27.45 | -0.01 |
| PRUD1315 | 1/17/2014 11:50 | 0.0 | 4.7 | 15.0 | 80.3 | 27.44 | -0.01 |
| PRUD1335 | 1/17/2014 11:53 | 0.0 | 17.9 | 3.1 | 79.0 | 27.44 | -0.08 |
| PRUD1415 | 1/17/2014 11:59 | 0.0 | 7.0 | 12.9 | 80.1 | 27.44 | 0.00 |
| PRUD1435 | 1/17/2014 12:01 | 0.0 | 18.2 | 2.2 | 79.6 | 27.43 | -0.08 |
| PRUD1515 | 1/17/2014 12:06 | 0.0 | 5.1 | 14.6 | 80.3 | 27.44 | 0.00 |
| PRUD1535 | 1/17/2014 12:08 | 0.0 | 16.9 | 2.9 | 80.2 | 27.43 | -0.04 |
| PRUD1615 | 1/17/2014 10:12 | 0.0 | 3.4 | 18.6 | 78.0 | 27.48 | 0.03 |
| PRUD1625 | 1/17/2014 10:06 | 0.0 | 0.1 | 19.8 | 80.1 | 27.47 | 0.04 |
| PRUD1710 | 1/17/2014 10:17 | 0.0 | 7.4 | 11.9 | 80.7 | 27.47 | 0.03 |
| PRUD1725 | 1/17/2014 10:19 | 0.0 | 3.5 | 17.2 | 79.3 | 27.47 | 0.01 |
| PRUD1810 | 1/17/2014 10:22 | 0.0 | 4.2 | 16.9 | 78.9 | 27.48 | 0.00 |
| PRUD1825 | 1/17/2014 10:23 | 0.0 | 0.2 | 19.0 | 80.8 | 27.48 | 0.00 |
| PRUD1910 | 1/17/2014 10:27 | 0.0 | 5.7 | 15.2 | 79.1 | 27.48 | 0.00 |
| PRUD1925 | 1/17/2014 10:29 | 0.0 | 0.0 | 18.9 | 81.1 | 27.48 | 0.00 |
| PRUD2010 | 1/17/2014 10:32 | 0.0 | 3.0 | 16.8 | 80.2 | 27.48 | 0.01 |
| PRUD2025 | 1/17/2014 10:42 | 0.0 | 0.1 | 19.3 | 80.6 | 27.48 | 0.03 |

Note: GEM2000 ID: 11159 Monitored by: H. Vimislik H. Vimislik

GEM2000 was calibrated using 15% methane (see G. B.calibration sheet on this date) 1-17-14

Pressure readings were taken using Dwyer Series Mark III "H" digital manometer

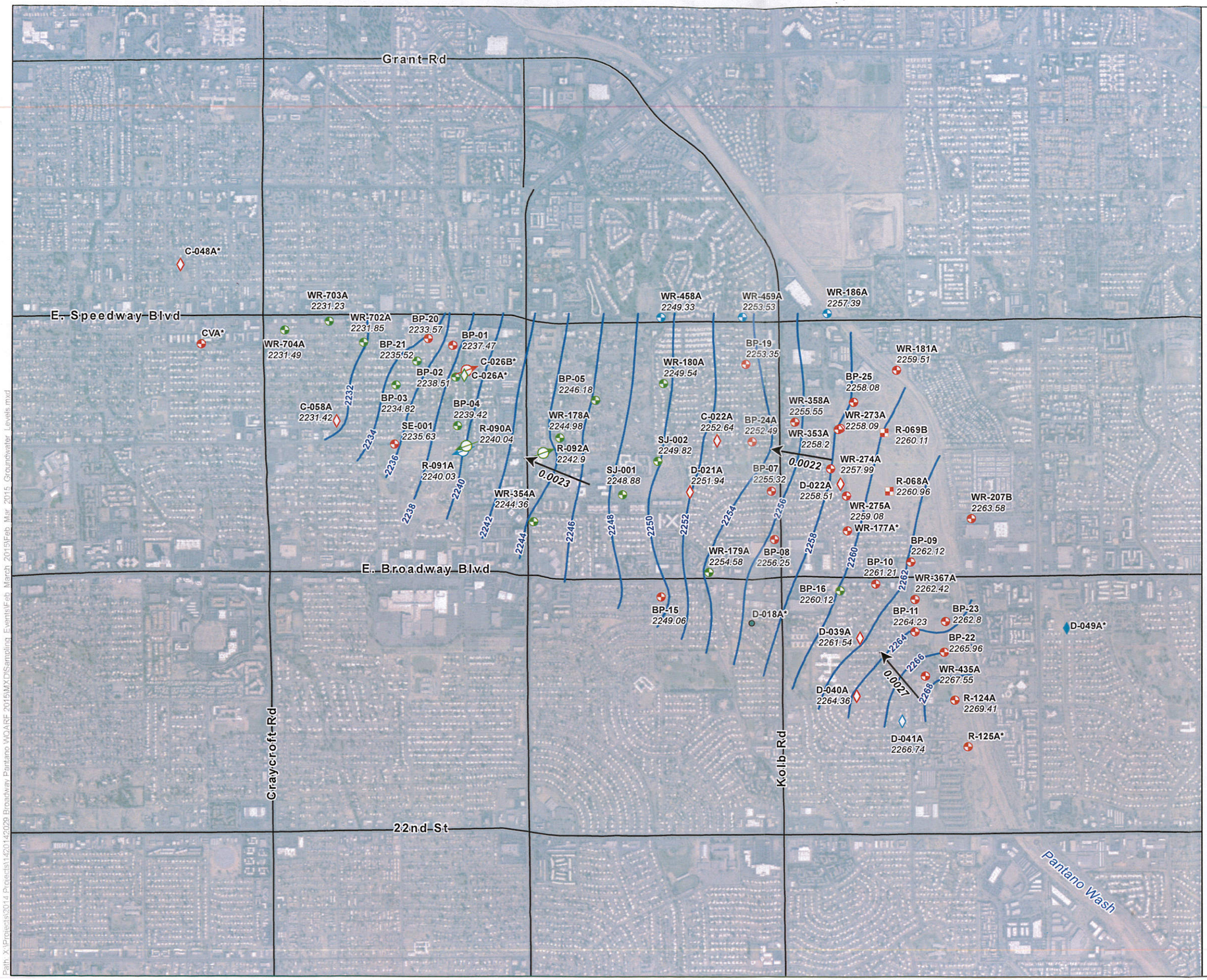
Note: calibIDS is calibration gas being used a machine calibration check.

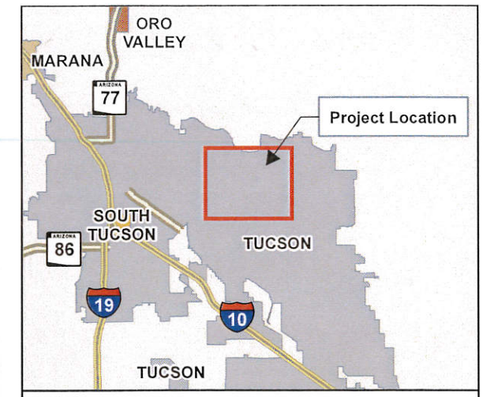
calibIDS zero is ambient air also can be used a machine calibration check.

Note: Accuracy of the machine is +/- 0.3% at methane concentrations of less than < 5.0%

APPENDIX F

Figure 2
Groundwater Elevation Contour Map
Obtained from the Amec Foster Wheeler report
Sitewide Groundwater Monitoring Report, December 2014 through March 2015, Broadway-Pantano WQARF Site, Tucson, Arizona,
December 15, 2015




Area of Detail

## Legend

**Key to Well Symbology**

- Active Monitoring Well
- Active Production Well
- Inactive Production Well
- Last On/First Off Well
- Air Injection/Monitoring Well
- Western Containment Injection Well
- Western Containment Extraction Well
- Abandoned Well
- Groundwater flow direction and gradient
- Feb/March Groundwater Elevation Contours (ft)

**RED** Symbol indicates ADEQ sampling
**GREEN** Symbol indicates City of Tucson/Tucson Water Sampling
**BLUE** Symbol indicates Water Level Well

**Notes:**

**WR-178A** Well Identification
*2244.98* Groundwater elevation (amsl)
* Water level not used in contouring due to suspect reference elevation or water level measurement.
- Groundwater elevation in feet amsl (above mean sea level)
- Sampling Interval: 2/24/2015 to 3/2/2015
***0.0023*** - Groundwater gradient in feet/feet
ADEQ Arizona Department of Environmental Quality

0 1,000 2,000 4,000 Feet

N

Feb/March 2015 Sampling Event
Broadway - Pantano WQARF Site
Tucson, Arizona

**Groundwater Elevation Contour Map**

FIGURE **2**

| | |
|---|---|
| Job No.: | 14-2014-2029 |
| PM: | AY |
| Date: | 4/29/2015 |
| Scale: | 1" = 2000' |



amec foster wheeler

Path: X:\Projects\2014 Projects\14201420290 Broadway Pantano WQARF 2015\MXD\Sampling Events\Feb March 2015\Feb Mar 2015 Groundwater Levels.mxd