

**2019 ANNUAL ENVIRONMENTAL REPORT**

**VINCENT MULLINS LANDFILL, TUCSON, ARIZONA**

**AQUIFER PROTECTION PERMIT NO. P-100917**

**Prepared for:**

**Arizona Department of Environmental Quality  
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**March 20, 2020**

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## Table of Contents

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION.....	1
2.0 GROUNDWATER MONITORING.....	1
2.1 Groundwater Level Monitoring .....	3
2.2 Groundwater Sampling Procedures and Results.....	3
2.2.1 VOC Groundwater Quality Results .....	4
2.2.2 Inorganic Groundwater Quality Results.....	6
2.2.3 Quality Assurance/Quality Control.....	7
3.0 DEEP SOIL VAPOR MONITORING.....	8
4.0 LANDFILL GAS MONITORING RESULTS.....	8
5.0 SITE INSPECTIONS.....	9
6.0 FINDINGS AND CONCLUSIONS.....	10

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## Figures

Figure 1	Location Map
Figure 2	Groundwater Contour and Flow Direction Map
Figure 3	Groundwater Monitor Wells Hydrographs - 1988 to Present
Figure 4	Groundwater Monitor Wells Hydrographs - 2009 to Present
Figure 5	PCE Concentration in Groundwater Monitor Wells
Figure 6	Approximate Extent of Tetrachloroethene (PCE) Groundwater Exceedance 2019
Figure 7	Landfill Gas Extraction System and Perimeter Probe Map

## Tables

Table 1	Well Information
Table 2	Summary of Groundwater Monitoring at the Vincent Mullins Landfill for 2019
Table 3	Groundwater Elevation Table for 2019
Table 4	Groundwater Monitor Wells - Selected VOCs
Table 5	Groundwater Monitor Wells - Selected Inorganic Analytes

## Appendices

Appendix A	Groundwater Analyte List, Field Sampling Sheets and Laboratory Analytical Reports
Appendix B	Groundwater Sample Duplicate Comparison
Appendix C	Landfill Gas Monitoring Data
Appendix D	Site Inspection Reports

## List of Acronyms

1,1-dichloroethane	1,1 DCA
Alert Level	AL
Aquifer Protection Permit	APP
Aquifer Quality Limit	AQL
Aquifer Water Quality Standard	AWQS
Arizona Department of Environmental Quality	ADEQ
Below Ground Surface	bgs
cis-1,2 dichloroethene	cis-1,2 DCE
City of Tucson-Environmental & General Services Department	COT-EGSD
Feet	ft
Feet above mean sea level	ft amsl
Groundwater Protection Level	GPL
Non-detect	ND
Non-Point of Compliance	non-POC
Micrograms per liter	µg/l
Point of Compliance	POC
Quality Assurance/Quality Control	QA/QC
Tetrachloroethene	PCE
Trichloroethene	TCE
Vincent Mullins Landfill	VML
Volatile Organic Compounds	VOC
Water Table Elevation	WTE



## 1.0 INTRODUCTION

This report documents landfill gas monitoring, groundwater monitoring and landfill inspection activities completed at the closed Vincent Mullins Landfill (VML) site from January 2019 to December 2019. These activities were conducted in compliance with the Arizona Department of Environmental Quality (ADEQ), Solid Waste Unit, Aquifer Protection Permit (APP) P-100917. The APP requires documentation of methane gas, groundwater monitoring, landfill inspections, and necessary repair and maintenance activities at the Vincent Mullins Landfill site. APP P-100917 expires on August 17, 2034.

The VML is located on the eastern bank of the Pantano Wash, north of East Speedway Boulevard in Tucson, Arizona (**Figure 1**). The VML is located adjacent to and west of the Speedway Recycling and Landfill Facility (Speedway Landfill). The privately owned Speedway Landfill is a non-municipal solid waste landfill, which is also located on the north side of East Speedway Boulevard. The VML is owned and maintained by the City of Tucson. The VML was used for the disposal of municipal solid waste by the City of Tucson from 1976 to 1987.

For this reporting period, the City of Tucson-Environmental & General Services Department (COT-EGSD) monitored 48 shallow landfill gas probes, 14 groundwater monitoring wells, and two privately owned irrigation wells around the landfill. In addition, a landfill gas collection and flare system operates to control the migration of landfill gas and other volatile organic compounds (VOCs) originating from the decomposing municipal solid waste.

In 2016, the City of Tucson constructed an extension of Sabino Canyon Road, from Tanque Verde Road on the north, to Kolb Road on the south. The new roadway section was completed in January 2017. A portion of the road was constructed as a bridge over the western portion of the Vincent Mullins Landfill site. The portion of the roadway located over the Vincent Mullins Landfill is supported by a series of metal pilings driven through the refuse mass and into the native soils beneath the landfill.

## 2.0 GROUNDWATER MONITORING

APP P-100917 specifies groundwater monitoring for VOCs at the VML to occur on a semi-annual basis and groundwater monitoring for inorganic compounds to occur annually at monitoring wells WR-115A, WR-116A, WR-117A, WR-118A, and the point of compliance (POC) monitoring well WR-453A. Analysis for VOCs in the groundwater is conducted semi-annually in March and September and analysis for inorganic compounds in the groundwater is conducted annually in March.

In addition to the groundwater monitoring specified in the APP, COT-EGSD voluntarily monitors groundwater monitoring wells VMW-502A, WR-456A, WR-457A, WR-458A, WR-459A, and a private irrigation well located at the El Dorado Country Club on a semi-annual

basis. The well at the El Dorado Country Club is designated as well HSL-97. Due to rebounding regional groundwater levels, COT-EGSD also began collecting groundwater samples from the former irrigation well HSL-96 at the El Dorado Country Club in March 2011 and from the deep soil vapor probe at R-126A, which is screened to a depth of 290 feet below ground surface (ft bgs), in October 2013. COT-EGSD also voluntarily monitors groundwater monitoring wells WR-186A, WR-439A, and WR-600A annually in March. Of the voluntarily monitored wells, only those wells in proximity to the landfill are monitored for inorganic compounds.

Well construction details for the soil vapor and groundwater monitoring wells are provided on **Table 1.** **Table 2** summarizes the required and voluntary groundwater monitoring completed at the Vincent Mullins Landfill site in 2019.

**Table 2**  
**Summary of Groundwater Monitoring Conducted at the Vincent Mullins Landfill in 2019**

Well Name	Monitored in March for VOCs and Inorganic Compounds	Monitored in September for VOCs only
Wells Required for Groundwater Monitoring by the APP		
WR-115A	•	•
WR-116A	•	•
WR-117A	•	•
WR-118A	•	•
WR-453A (POC)	•	•
Voluntary Groundwater Monitoring Monitoring Not Required by the APP		
Groundwater Monitoring Wells		
HSL-96	• * (April)	•
HSL-97	• *	•
VMW-502A	• *	•
WR-186A	• *	
WR-439A	• *	
WR-456A	•	•
WR-457A	•	•
WR-458A	• *	•
WR-459A	• *	•
WR-600A	• *	
Deep Soil Vapor Probe		
R-126A	• * (April)	•

*\*VOC analysis only*

## 2.1 Groundwater Level Monitoring

The depth to groundwater was measured in 15 monitoring wells prior to the March and September 2019 sampling events. A summary of the depth to groundwater measurements for this reporting period is provided on **Table 3**. The March and September 2019 water table elevations were both contoured and provided on **Figure 2**. This figure indicates the direction of groundwater flow beneath the Vincent Mullins Landfill is from the northeast to the southwest.

During 2019, the water table elevations ranged from a high elevation of 2,274.33 at WR-147A to a low of 2254.56 at VMW-502A feet above mean sea level. Hydrographs provided in **Figure 3** and **Figure 4** show the water table has been consistently rising in the vicinity of the Vincent Mullins Landfill at an approximate rate of 2.58 feet per year since 2006, however, in the last two years the rising trend has either slowed, stabilized, or decreased (dependent on which well) in groundwater wells at the site (**Figure 4**).

## 2.2 Groundwater Sampling Procedures and Results

The March 2019 groundwater monitoring event was conducted from March 26 to April 2, 2019. The March sampling event consisted of the collection of groundwater samples from 16 groundwater wells. The September 2019 groundwater monitoring event was conducted from September 18 to September 26, 2019 and consisted of the collection of groundwater samples from 13 groundwater wells. COT-EGSD also collected a groundwater sample from the deep soil vapor probe at R-126A during the March and September 2019 sampling events.

Field water quality parameters at each monitoring well was monitored and documented prior to the collection of the groundwater sample: temperature, pH, specific conductance, dissolved oxygen, oxidation-reduction potential, and turbidity. Groundwater samples were collected after a minimum of three well volumes had been purged from the well and water quality parameters had stabilized. The stabilized water quality parameters are summarized on the field data sheets provided in **Appendix A**. In accordance to the site permit, well stability is indicated by pH, temperature, and specific conductance. All wells sampled by 3-5 well volume were all purged a minimum of 3 well volumes, however due to a scoping miscommunication with the consulting firm collecting samples, six wells were not stable at sample collection (VMW-502A 9/26/19, SpC; WR-117A 3/28/2019, SpC and temp; WR-118A 9/18/2019, SpC; WR-453A 3/27/2019, SpC; WR-458A 3/27/2019 and 9/19/2019, both SpC).

Purge water was directed through a granular-activated carbon (GAC) vessel if VOCs had been previously detected at that well. No purge water was allowed to enter any jurisdictional waterways of the State of Arizona. All non-dedicated sampling equipment was decontaminated prior to each use.

The groundwater monitoring wells were sampled in order of increasing tetrachloroethene (PCE) concentrations from non-detect to the wells having the highest PCE concentrations, based on

concentrations observed during the previous sampling event. Immediately following purging, groundwater samples were collected from the spigot located 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 as listed on the analyte lists in **Appendix A**. Laboratory supplied containers were labeled and the groundwater samples were placed in the containers with an internal temperature of  $\pm 2$  degrees Celsius and submitted under chain-of-custody control to the Tucson Water Quality Laboratory (TWQL) for analysis.

Groundwater samples from privately owned former production well HSL-96 and deep soil vapor probe R-126A (290 ft bgs) were collected using disposable Hydrasleeves. Field parameters, including temperature, pH, specific conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity were measured and recorded on field sampling sheets after the sample vials were filled.

Field quality assurance protocols during each sampling event consisted of:

- Collection of one trip blank sample for each day of sampling or for each cooler.
- Collection of one duplicate sample for every ten groundwater samples.
- Collection of one equipment blank sample for each day of use of a non-dedicated pump.

The field quality assurance samples were also submitted to the TWQL for analysis.

## **2.2.1 VOC Groundwater Quality Results**

### **Point of Compliance Well WR-453A**

VOC concentrations observed in POC well WR-453A during the 2019 monitoring period were generally consistent with previous results. Groundwater quality alert levels (ALs) have been established at the laboratory practical quantitation limit (PQL), which is also the laboratory detection limit, for the Vincent Mullins Landfill site. PCE was detected in monitoring well WR-453A in concentrations that exceeded the groundwater quality numeric AL. The detected PCE concentrations exceed the AL, however do not exceed the aquifer water quality standard (AWQS) for PCE of 5  $\mu\text{g/L}$ .

Chloroform was also detected in well WR-453A. This compound does not have a numeric AL. The probable source of chloroform in the groundwater was a previously recorded leak in a 24-inch diameter reclaimed water line that was identified in the Pantano Wash, located 185 feet upgradient from monitoring well WR-453A<sup>1</sup>.

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<sup>1</sup> COT-ES, *2012 Annual Report Vincent Mullins Landfill, Tucson, AZ APP No. P-100917*, March 27, 2013

## Aquifer Protection Permit Monitoring Wells

During the March and September 2019 sampling events, concentrations of PCE and TCE were detected in two APP non-POC listed wells, WR-116A and WR-117A. The concentrations of PCE and TCE detected at these two wells during 2019 are presented below:

Well	PCE March 2019 (µg/L)	PCE Sept. 2019 (µg/L)	TCE March 2019 (µg/L)	TCE Sept. 2019 (µg/L)
WR-116A	4.9	<b>6.7</b>	1.2	1.3
WR-117A	2.2	2.6	0.5	0.6

A summary of PCE concentration trends is provided on **Figure 5**. Only well WR-116A had PCE concentrations exceeding the groundwater quality AWQS. **Figure 6** shows the extent of the PCE groundwater plume above the AWQS. Individual groundwater well charts for PCE, TCE, and cis-1,2 dichloroethene (cis-1,2 DCE) concentrations are also provided on **Figure 6**. A historic summary of VOCs is provided on **Table 4** and the complete analytical laboratory reports are provided in **Appendix A**.

## Voluntary Monitoring Wells

Laboratory test results for the four voluntarily sampled monitoring wells (VMW-502A, WR-457A, WR-458A, and WR-459A) identified VOC concentrations below the AWQS during the two 2019 sampling events:

Well	PCE March 2019 (µg/L)	PCE Sept. 2019 (µg/L)	TCE March 2019 (µg/L)	TCE Sept. 2019 (µg/L)
VMW-502A	2.5	3.8	0.6	1.0
WR-457A	3.2	3.1	<0.5	<0.5
WR-458A	2.2	1.7	1.0	0.9
WR-459A	1.4	1.5	<0.5	0.6

**Figures 5 and 6** and **Table 4** show the PCE and other VOC trends over time. Historically the maximum PCE concentration was observed at WR-457A in 2005 at 18.2 µg/L. Recent VOC concentrations detected in the downgradient monitor wells (VMW-502A, WR-457A, WR-458A, and WR-459A) are likely attributed to the historic observed concentrations moving downgradient.

## 2.2.2 Inorganic Groundwater Quality Results

### Point of Compliance Well WR-453A

Inorganic concentrations observed in POC well WR-453A during the March 2019 monitoring event were consistent with previous analytical results. None of the inorganic results exceeded any of the AWQS for the compounds listed in Table 2 in the APP (**Table 5**). There were no exceedances of the groundwater quality ALs for any of the inorganic compounds.

### Aquifer Protection Permit Monitoring Wells

There were no inorganic parameter concentrations measured in the APP monitoring wells during the 2019 monitoring period that exceeded the AWQS for the compounds listed in the APP. Contaminant concentrations were consistent with previous analytical results (**Table 5**). ADEQ concurred with COT-EGSD's request that future analysis of lead in wells WR-115A, WR-116A, WR-117A, and WR-118A shall be the dissolved phase (filtered sample) instead of the total lead concentration<sup>2</sup> (unfiltered sample) in 2014. Total and dissolved lead samples were collected for these four APP non-POC wells. The dissolved lead concentrations (not total lead) are provided in the historic summary table (**Table 5**) since March 2015 for these four wells. The total and dissolved lead concentrations from the March 2019 event are provided in the table below:

Well	Dissolved Lead (mg/L)	Total Lead (mg/L)
WR-115A	<0.001	0.00501
WR-116A	<0.001	0.00425
WR-117A	<0.001	0.00768
WR-118A	<0.001	0.00187

All analytical test results for groundwater samples had no detections for dissolved lead, indicating the observed total lead concentrations were attributed to the presence of suspended solids in the groundwater. The presence of suspended solids is also supported in the field description of colored purge water and high turbidity values. POC well WR-453A will continue to be analyzed for total lead concentrations, VOCs, and inorganic compounds, as specified in the APP. POC monitor well WR-453A total lead concentration was 0.00179 mg/L.

### Voluntary Monitoring Wells

Laboratory analytical test results for the wells monitored on a voluntary basis for inorganic compounds during 2019 (WR-456A and WR-457A) were all below the AWQS values listed in

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<sup>2</sup> ADEQ, *Vincent Mullins Landfill, Tucson, AZ (closed), 2013 Annual Report, Aquifer Protection Permit No. P-100917*, March 27, 2014

the APP. As approved by ADEQ in April 2013<sup>3</sup>, COT-EGSD is not required to analyze for inorganic compounds in the following voluntary monitoring wells: HSL-96, VMW-502A, WR-186A, WR-439A, WR-458A, WR-459A, and WR-600A. Private irrigation well HSL-97, which is also monitored voluntarily, was excluded from inorganic analyses beginning in March 2015. Inorganic analysis will be continued for APP listed wells and voluntary wells WR-456A and WR-457A. Should groundwater quality conditions change, COT-EGSD will evaluate any recommended modifications to the monitoring program for this list of wells.

### **2.2.3 Quality Assurance/Quality Control**

Quality assurance/quality control (QA/QC) analyses for the 2019 sampling events included one equipment blank sample, 7 trip blank samples, and four duplicate samples. Laboratory analytical test results for the QA/QC samples are presented in the laboratory reports located in **Appendix A**.

The TWQL laboratory percent recoveries and quality controls were within laboratory quality assurance objectives for accuracy. All of the data qualifiers listed in the case narratives presented in **Appendix A** were within acceptable quality and would not affect data results.

#### **Trip Blank and Equipment Blank Sample Analysis**

There were no analytes detected in any of the trip blanks. Chloroform (and total trihalomethanes) was detected in the equipment blank sample at a concentration of 0.5 µg/L. This detection was likely residual from using tap water as part of the decontamination process.

#### **Duplicate Sample Analysis**

The four duplicate sample analyses were compared with the original sample analyses to evaluate the degree of laboratory precision in the sample analytical process. The industry standard for quality control evaluation criteria is 30% relative percent difference (RPD) between the original and the duplicate sample results. If the RPD between the original and duplicate samples is greater than 30%, laboratory precision and sampling protocols or sample crew field methodologies shall be evaluated. The RPD between all four of the original samples and duplicate samples was less than 30% for all detected analytes. Comparisons of the duplicate samples are provided on the tables in **Appendix B**.

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<sup>3</sup> ADEQ, *RE: Vincent Mullins Landfill, 2012 Annual Monitoring Report Aquifer Protection Permit (APP) No. P-100917*, April 12, 2013



### 3.0 DEEP SOIL VAPOR MONITORING

COT-EGSD had been monitoring VOCs on a voluntarily basis in the soil vapor at deep nested soil vapor probe locations R-103A, R-104A, and R-126A. The purpose of this analysis was to assess possible impacts to the groundwater from vapor phase VOCs potentially migrating from the waste mass at the Vincent Mullins Landfill site to the underlying groundwater. There are no regulatory standards for this monitoring data and analysis of the soil vapor for VOCs is not a requirement of the APP. HARGIS + Associates developed Groundwater Protection Limits (GPLs) for VOCs for the Vincent Mullins Landfill site in 2008<sup>4</sup>. The GPLs established the minimum soil vapor concentrations that would not cause an exceedance of the AWQS in the groundwater at the site due to vapor migration. At the Vincent Mullins Landfill, the GPL for PCE is 19 µg/l.

Historical VOC data obtained from soil vapor sampling was statistically evaluated to detect changes or trends over time<sup>5</sup>. Results of the statistical evaluation showed all of the deep nested probes had decreasing concentrations or showed no trend, indicating stable or declining PCE concentrations in the soil vapor. Therefore, COT-EGSD decided to discontinue the voluntary soil vapor monitoring at deep nested soil vapor probe locations R-103A, R-104A, and R-126A. In February 2017, ADEQ acknowledged COT-EGSD's request to discontinue this sampling program<sup>6</sup>.

### 4.0 LANDFILL GAS MONITORING RESULTS

An important element of the Corrective Action Plan at the Vincent Mullins Landfill was the expansion of the landfill gas extraction system, which was completed in 2004. The locations of the current gas extraction system wells, lateral piping, and header pipes are shown on **Figure 7**. The expanded landfill gas extraction system has been in operation since January 2005. Operation of the landfill gas extraction system has been effective in reducing VOC vapors in the vadose zone beneath the landfill to concentrations less than the GPLs established for the VML site.

The landfill gas probes were monitored quarterly in 2019 for percentage of landfill gas (methane, carbon dioxide, and oxygen) by COT-EGSD. The dates of the landfill gas monitoring events were March 25, June 24, September 18, and November 26 2019. The gas probes include: MUN-3, MUN-7, MUN-28, MUN-29, MUN-30, MUN-31, MUN-32, MUN-33, MUN-34, MUN-35, MUN-36, MUN-37, MUN-38, MUN-39, MUN-40, and MUN-41. Each probe contains

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<sup>4</sup> EEC and Hargis + Associates, Inc., *Soil Vapor Assessment at Los Reales, Prudence, Vincent Mullins, Irvington, Cottonwood, and Ryan Landfills*, April 10, 2008

<sup>5</sup> COT, *Vincent Mullins Landfill, Tucson, Arizona, Methane Gas, Soil Vapor, and Groundwater Monitoring Report, Reporting Period: January 1, 2016 through December 31, 2016*, January 29, 2017

<sup>6</sup> ADEQ, *Vincent Mullins Landfill, Tucson, Arizona, 2016 Annual Methane Gas, Soil Vapor, and Groundwater Monitoring Report, Aquifer Protection Permit No. P-100917*, February 9, 2017



three lengths of PVC pipe allowing the collection of soil vapor samples from 10-, 25-, and 50-feet below ground surface.

Methane concentrations observed in all of the gas probes were less than the equipment detection limit for each of the quarterly sampling events in 2019. The measurement range for each methane measurement is 0% to 100% and the accuracy for each measurement is  $\pm 0.3\%$ . **Appendix C** contains the quarterly landfill gas field monitoring summary sheets for the 2019 sampling events.

## 5.0 SITE INSPECTIONS

Site inspections of the Vincent Mullins Landfill are required under the APP. During 2019, routine and weather inspections were conducted either by COT-EGSD staff engineer or by Engineering and Environmental Consultants, Inc. (EEC), an engineering and environmental consulting firm, employee on behalf of COT-EGSD. Copies of the inspection reports are provided in **Appendix D**.

The inspections are intended to identify and review perimeter fencing, inspection roads, stormwater controls, storm water retention basins, landfill earthen cap, landfill gas extraction system wellfield, landfill gas extraction system, landfill gas monitoring wells, remediation equipment, illegal dumping, and neighboring land uses. COT-EGSD reviews inspection findings and implement corrective action when deemed necessary. The inspection reports are influenced by subjective opinion of the person conducting the inspection, and as a result, there is a shift of ‘viewed’ listed discrepancies between the early and later reports. Listed discrepancy findings are observed and evaluated by COT-EGSD staff to ensure items are addressed in a timely and economic fashion. During 2019, inspections were conducted on the following dates:

- February 19, 2019 Routine Quarterly Inspection
- June 19, 2019 Routine Quarterly Inspection
- August 6, 2019 Wind/Rain Inspection
- August 11, 2019 Rain Inspection
- August 16, 2019 Routine Quarterly Inspection
- September 26, 2019 Rain Inspection
- November 13, 2019 Wind Inspection
- November 20, 2019 Rain Inspection
- November 28 & 29, 2019 Rain Inspection
- December 8, 2019 Rain Inspection
- December 18, 2019 Wind Inspection

A weather event inspection can substitute for a routine quarterly inspection event since the inspection checklist is standardized for both types of inspections. COT-EGSD will continue quarterly and weather-qualifying inspections in 2020, and apply corrective actions when deemed necessary.

## 6.0 FINDINGS AND CONCLUSIONS

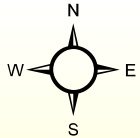
- The VML was in compliance with all conditions specified in APP P-100917 during 2019.
- The groundwater flow direction continues to be northeast to southwest.
- PCE was detected in POC monitoring well WR-453A at concentrations exceeding numeric groundwater quality ALs. The PCE concentrations did not exceed the AWQS.
- Two APP listed wells had PCE detections, with only one exceeding the groundwater quality AWQS for PCE. Final observed PCE concentrations for the year were 6.7 µg/L in well WR-116A and 2.6 µg/L in well WR-117A. TCE was detected in well WR-116A at 1.3 µg/L and in well WR-117A at 0.6 µg/L.
- PCE was detected in four of the voluntary monitoring wells: VMW-502A, WR-457A, WR-458A, and WR-459A. All concentrations were less than the AWQS in the voluntary monitor wells. TCE was detected in wells VMW-502A, WR-458A, and WR-459A and all concentrations were less than the AWQS.
- All inorganic analyte concentrations complied with the APP requirements in the 2019 sampling events.
- Methane gas was not detected in any of the perimeter landfill gas probes during quarterly monitoring conducted in 2019.
- Operation of the landfill gas extraction system has been effective in lowering concentrations of VOCs in the soil vapor.
- In 2019, COT-EGSD, with the assistance of EEC, conducted 11 routine and weather landfill inspections.

# FIGURES



**Explanation**

-  Major Street
-  Landfill Boundary
-  City Boundary
-  Intermittent Major Wash



**VINCENT MULLINS LANDFILL**



**Figure 1  
Location Map  
Vincent Mullins Landfill**

Drawn By:	LE
Checked:	-
Approved:	FB
Date:	3/16/2020
File:	See Below

GIS/MS 2019 LocationMap\_New.mxd



**Explanation**

- Active Private Production Well
- Groundwater Monitor Well
- Soil Vapor Monitor Well
- Tucson Water Potable Water Wells

**March 2019 Water Table Elevation Contours**

- Inferred Water Table Elevation Contour
- Approx. Water Table Elevation Contour

**Sept. 2019 Water Table Elevation Contours**

- Inferred Water Table Elevation Contour
- Approx. Water Table Elevation Contour
- General Groundwater Flow Direction
- Landfill Boundary

0 500 1,000 Feet

Well Name	March 2019 WTE	Sept. 2019 WTE
WR-115A	2267.83	2266.66
WR-116A	2265.29	2265.00
WR-117A	2265.42	2264.62
WR-118A	2267.98	2265.53
WR-147A	2274.33	2271.55
WR-181A	2266.86	2265.07
WR-186A	2265.17	2264.71
WR-439A	2269.45	2265.67
WR-453A	2264.20	2264.00
WR-456A*	2266.72	2266.91
WR-457A	2263.88	2263.99
WR-458A	2255.25	2255.64
WR-459A	2261.17	2261.29
WR-600A	2260.40	2260.20
VMM-502A	2254.56	2255.21

\*Not used for contouring.

Orthophoto dated 2018.

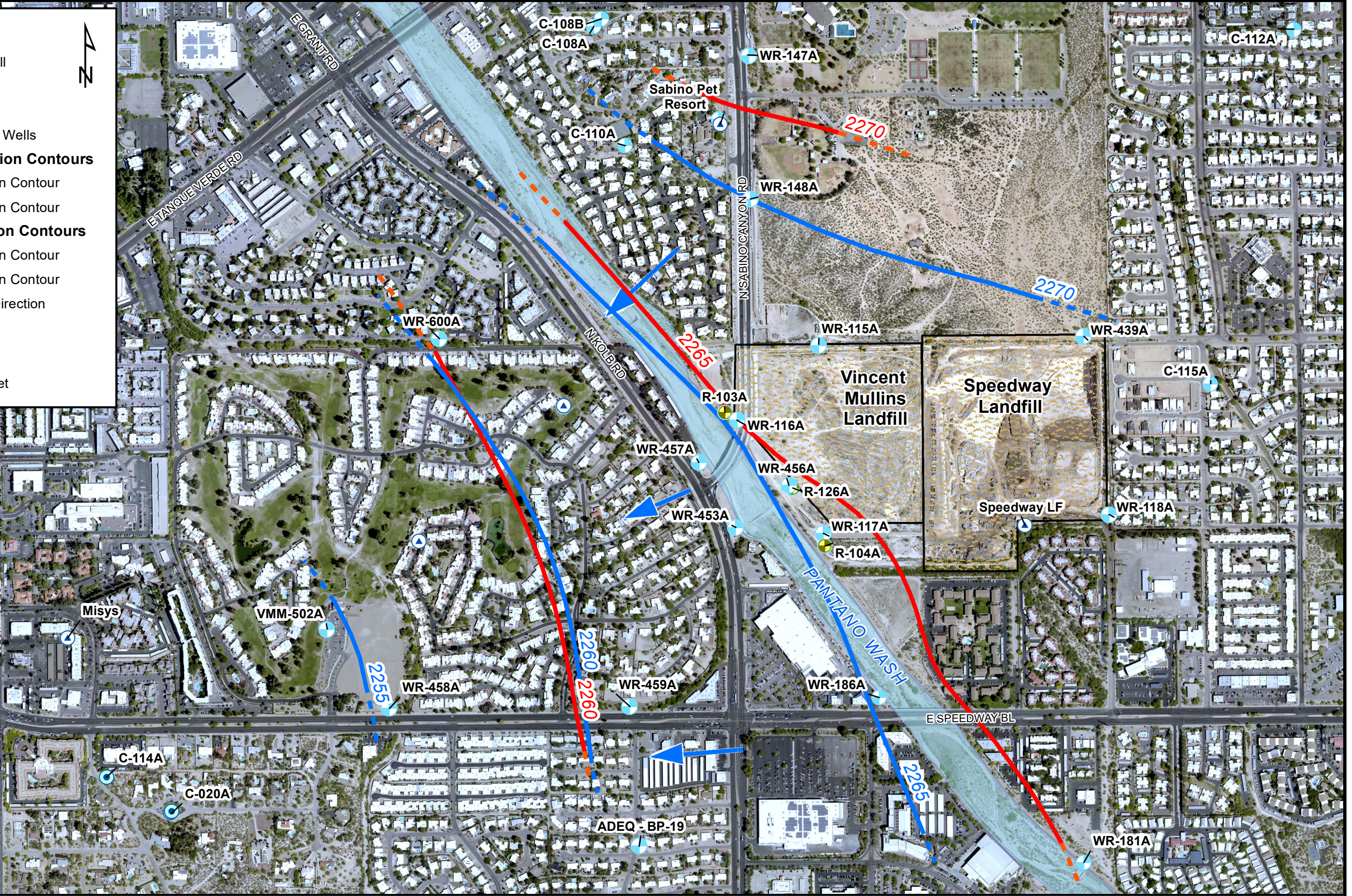
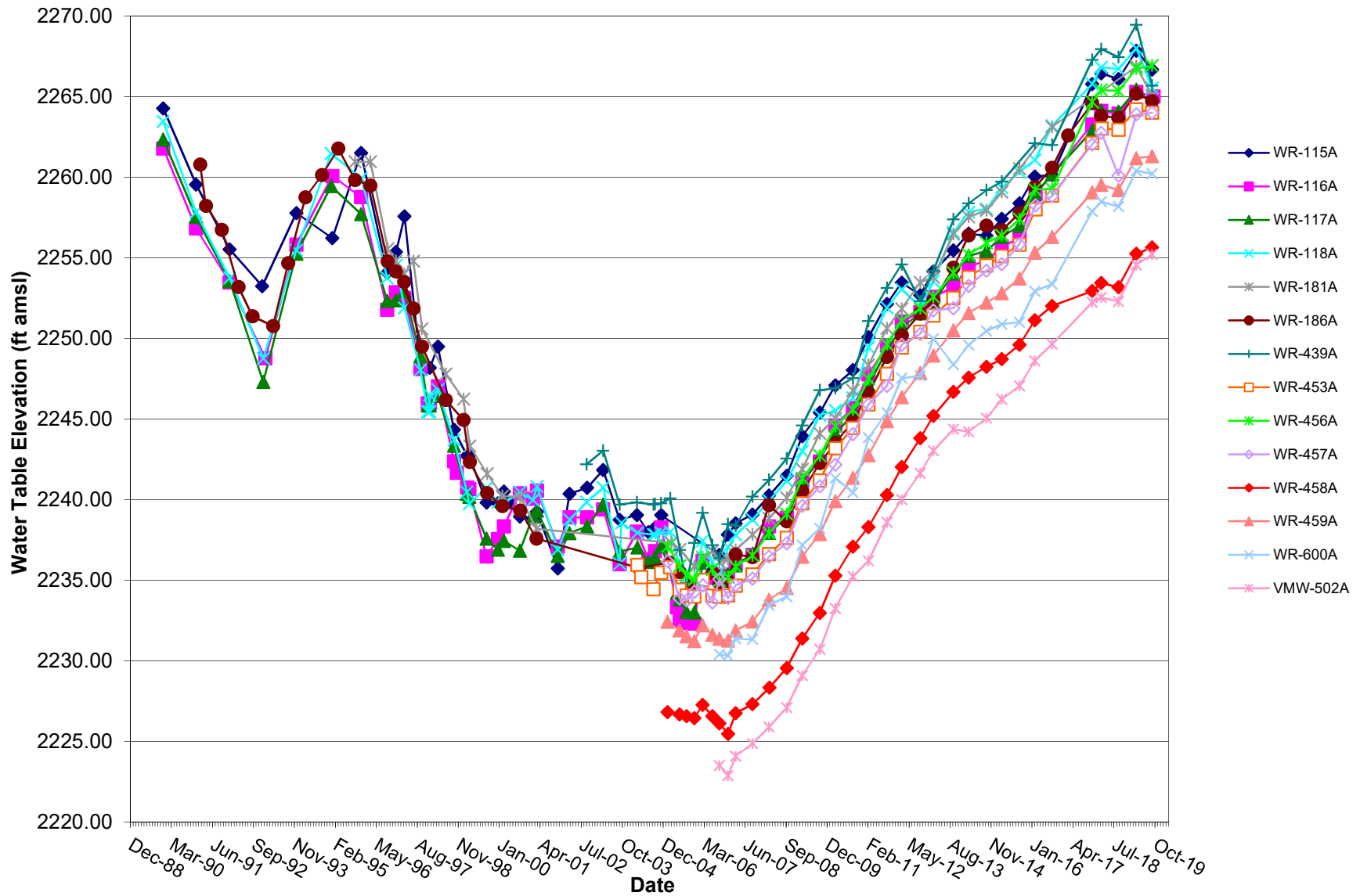


Figure 2  
Groundwater Contour and Flow Direction Map  
Vincent Mullins Landfill

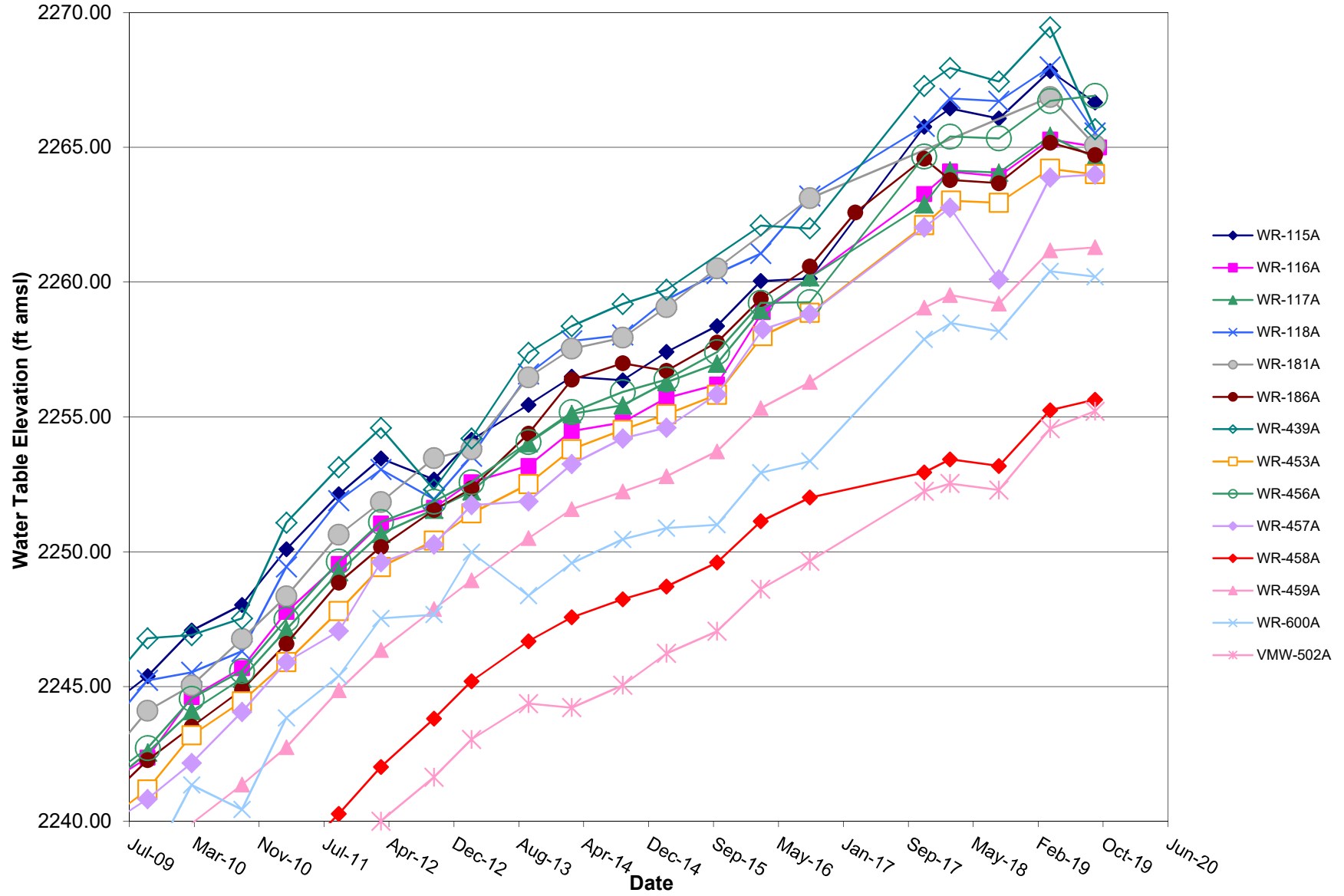


**Figure 3**  
 Groundwater Monitor Wells Hydrographs - 1988 to Present  
 Vincent Mullins Landfill

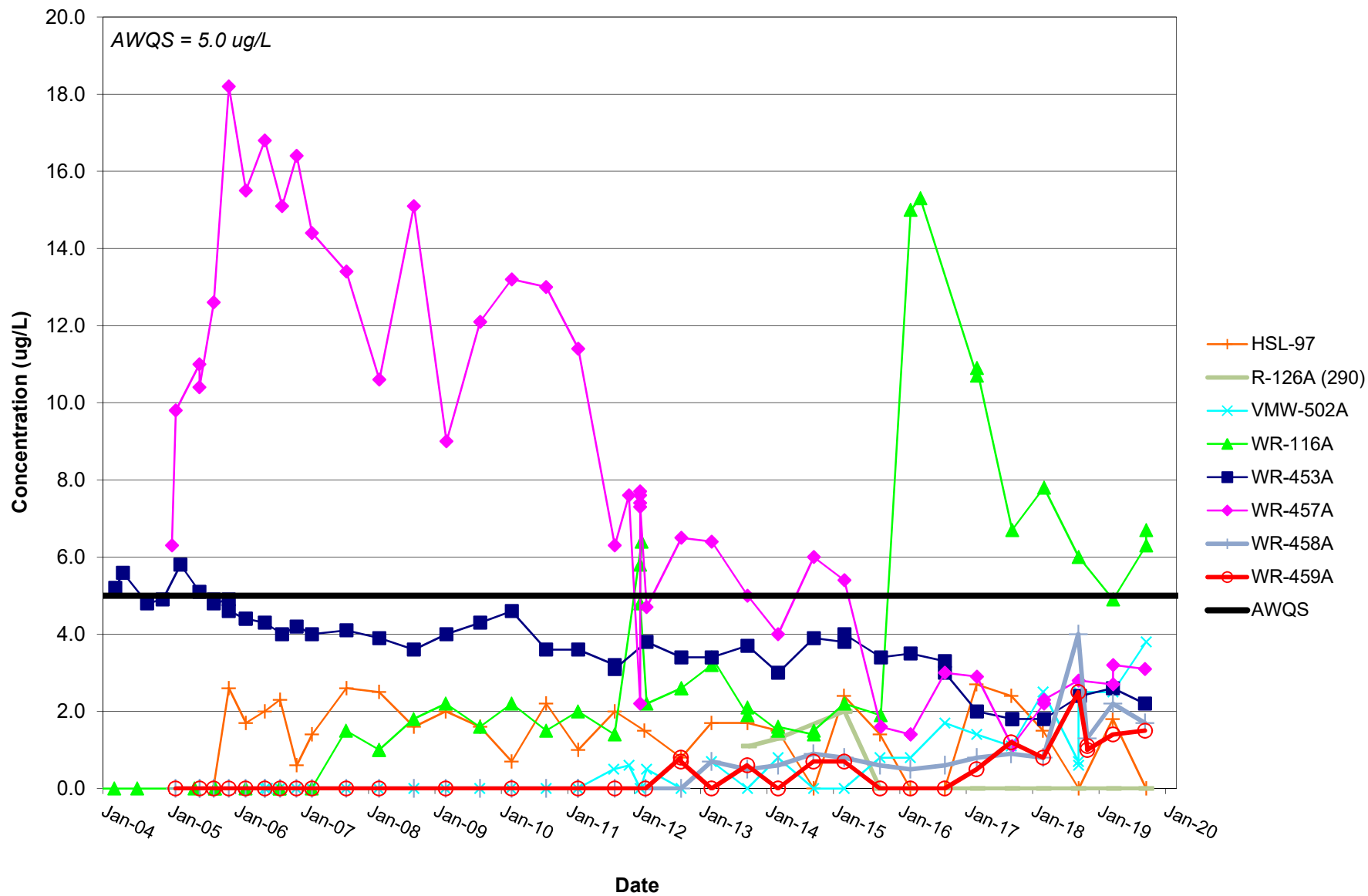


Note: See Figure 4 for a detail of recent water levels (September 2009 to Present).

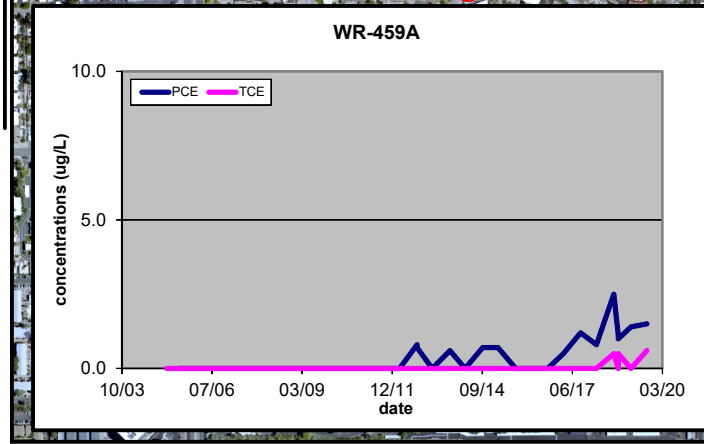
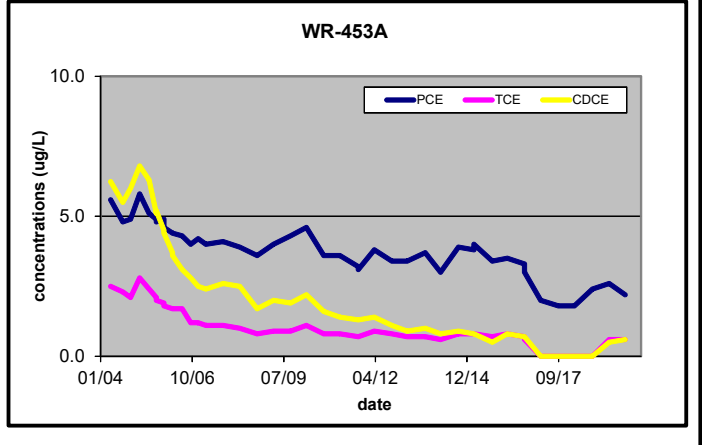
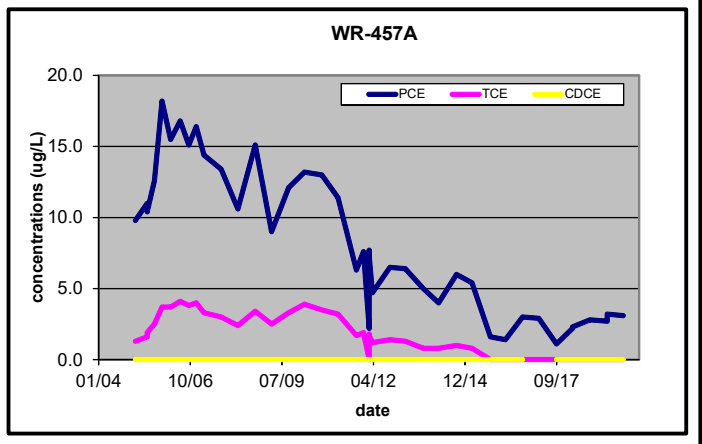
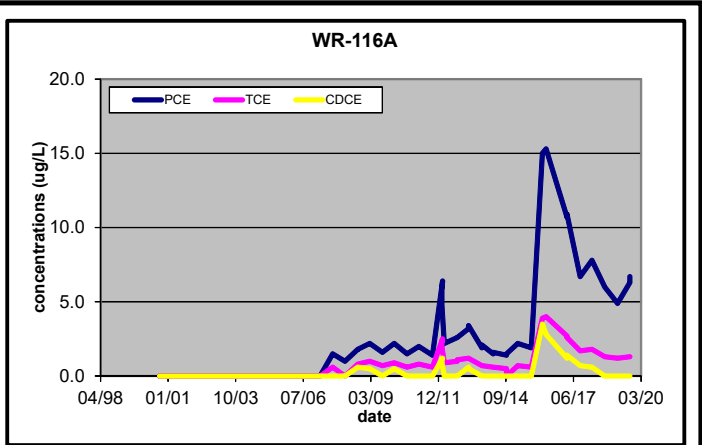
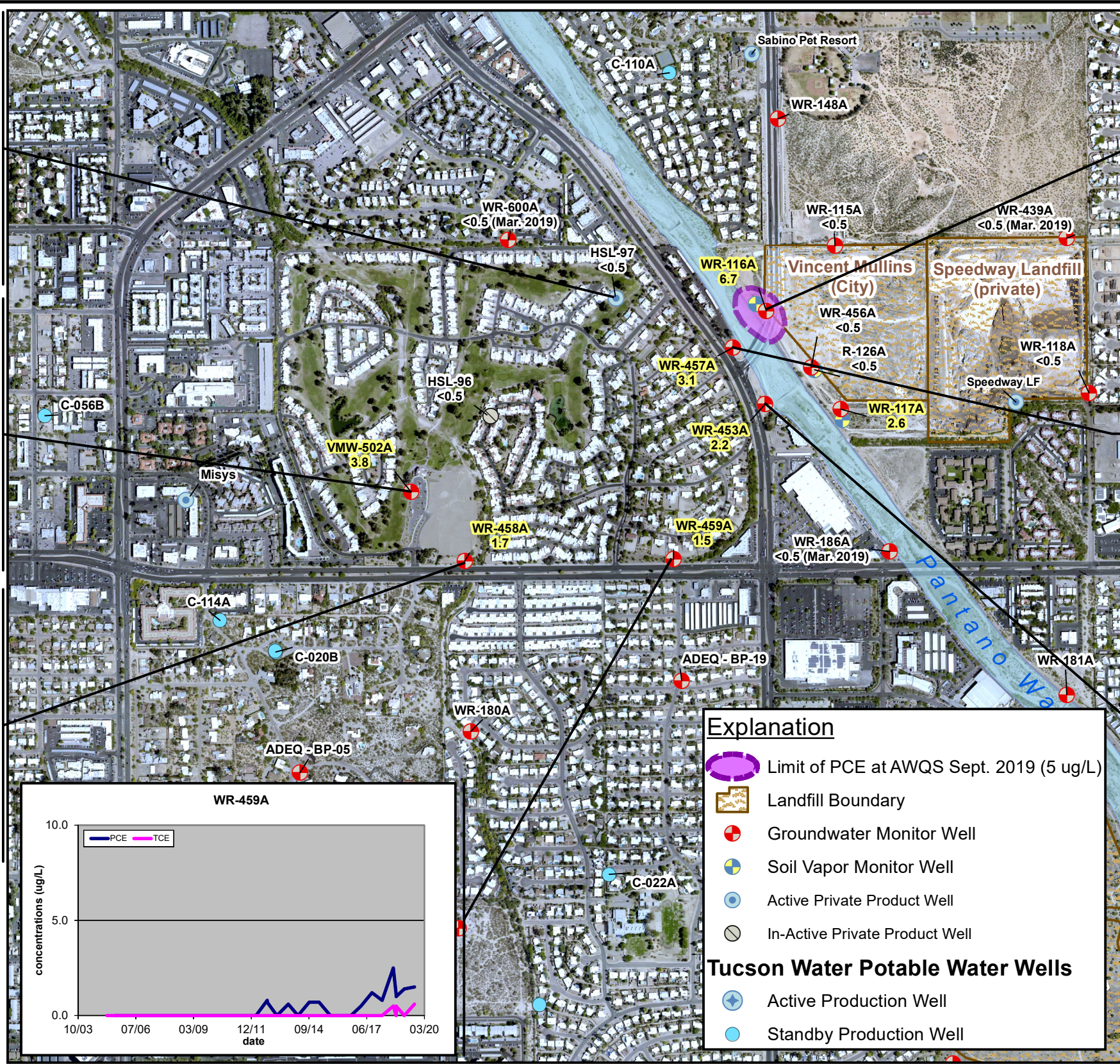
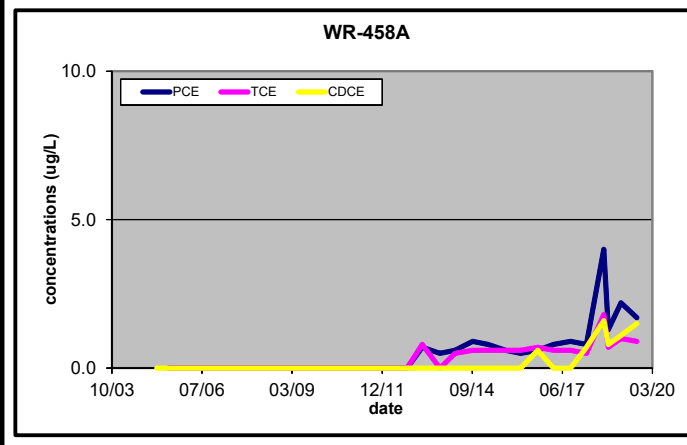
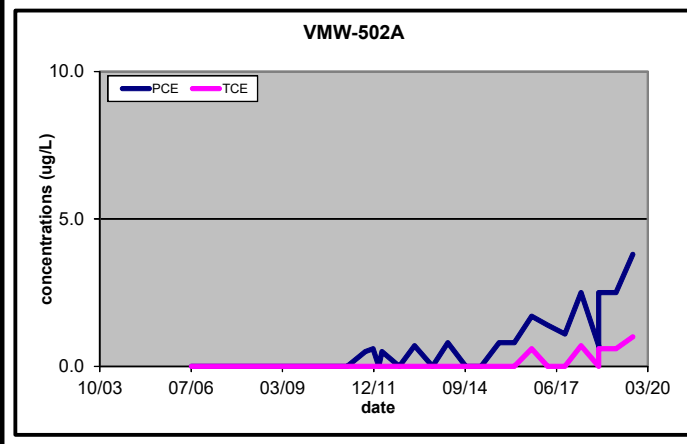
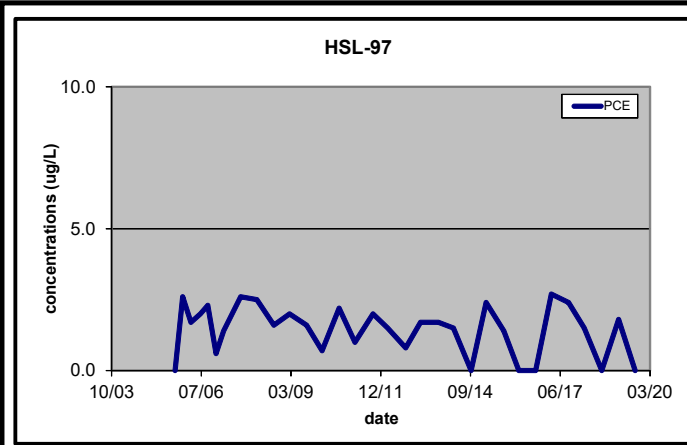
**Figure 4**  
 Groundwater Monitor Wells Hydrographs - July 2009 to Present  
 Vincent Mullins Landfill



**Figure 5**  
PCE Concentration in Groundwater Monitor Wells  
Vincent Mullins Landfill







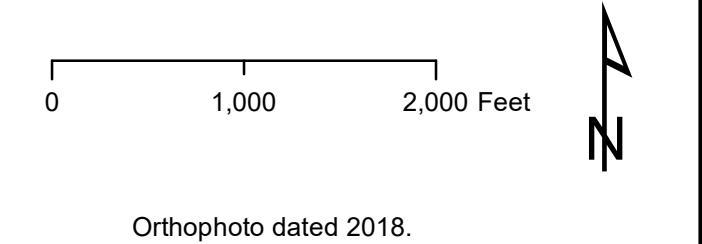
**Explanation**

- Limit of PCE at AWQS Sept. 2019 (5 ug/L)
- Landfill Boundary
- Groundwater Monitor Well
- Soil Vapor Monitor Well
- Active Private Product Well
- In-Active Private Product Well

**Tucson Water Potable Water Wells**

- Active Production Well
- Standby Production Well

Notes:  
PCE plume boundary for Sept 2019 was drawn to concentrations above AWQS.  
PCE concentrations present in the map next to wells are Sept 2019 unless noted otherwise.  
Charts include recent monitoring event data for PCE, TCE, and CDCE.  
PCE = tetrachloroethene  
TCE = trichloroethene  
CDCE = cis-1,2 dichloroethene



**FIGURE 6**  
Approximate Extent of Tetrachloroethene (PCE)  
Groundwater Exceedance 2019  
Vincent Mullins Landfill



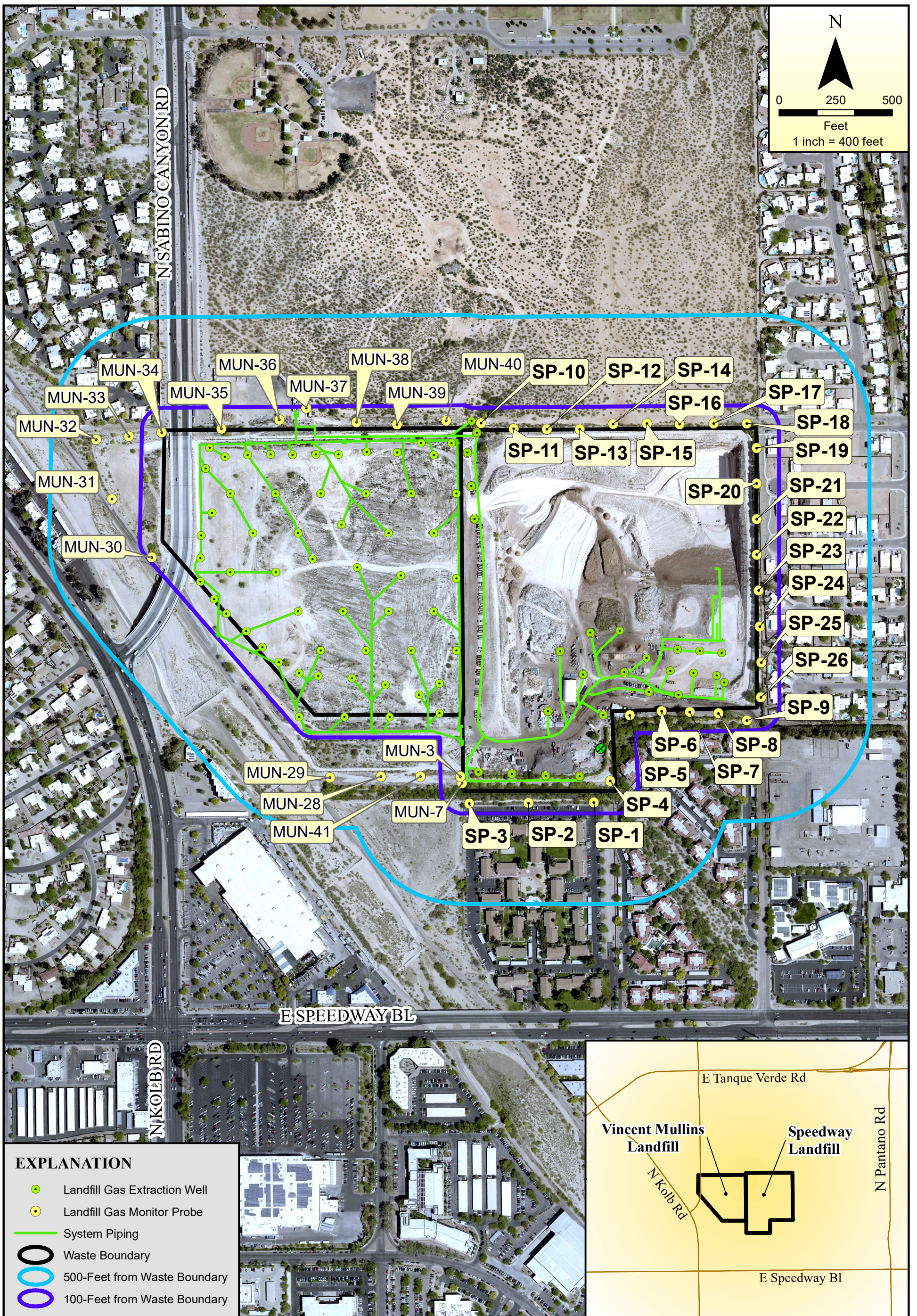


Figure 7  
Landfill Gas Extraction System and Perimeter Probe Map  
Vincent Mullins and Speedway Landfills



# **TABLES**

**Table 1  
Well Information  
Vincent Mullins Landfill**

<b>Well Name</b>	<b>ADWR # (55-xxxxxx)</b>	<b>Well Type</b>	<b>Diameter (inches)</b>	<b>Material</b>	<b>Total Depth (ft bgs)</b>	<b>Well Depth (ft bgs)</b>	<b>Screen Interval (ft bgs)</b>	<b>Slot Size (inches)</b>	<b>Pump Info</b>	<b>Easting</b>	<b>Northing</b>	<b>X-Concrete Elevation</b>	<b>Sounding Tube Elevation</b>	<b>Date of Survey</b>
<b>R-103A*</b>	590006	Soil Vapor Well	0.5, 0.5, 3.0, 0.5	Sch 80 PVC	285	75, 145, 235, 280	70-75, 140-145, 180-235, 275-280	0.02	Not Equipped	1032506	453264	NA	NA	estimated
<b>R-104A*</b>	590004	Soil Vapor Well	0.5, 0.5, 0.5, 3	Sch 80 PVC	319	75, 142, 215, 309	70-75, 137-142, 210-215, 304-309	0.02	Not Equipped	1033210	452326	NA	NA	estimated
<b>R-126A*</b>	205401	Soil Vapor Well	0.5, 0.5, 0.5, 3.0	Sch 80 PVC	310	75, 135, 205, 290	70-75, 130-135, 200-205, 285-290	0.02	Not Equipped	1032983	452731	NA	NA	estimated
<b>VMW-502A</b>	212345	Monitor Well-GW	5	Sch 80 PVC	420.33	420.33	280-420	0.02	3 Hp, 3 Ph, 230 V, 25 gpm, intake ~381.8'	1029703.36	451737.74	2539.26	2540.11	9/1/06
<b>WR-115A</b>	514277	Monitor Well-GW	6	Steel	340	335	235-335	0.125	5 Hp, 3 Ph, 230 V, intake ~317.8'	1033168.64	453740.58	2533.29	NA	9/1/06
<b>WR-116A</b>	514278	Monitor Well-GW	6	Steel	350	340	240-340	0.125	3 Hp, 3 Ph, 230 V, intake ~337.5'	1032594.69	453215.43	2535.69	2536.67	9/20/06
<b>WR-117A</b>	514279	Monitor Well-GW	6	Steel	350	345	245-345	0.125	5 Hp, 3 Ph, 230 V, intake ~317'	1033202.99	452413.67	2536.40	2537.64	9/20/06
<b>WR-118A</b>	514280	Monitor Well-GW	6	Steel	366	360	260-360	0.125	5 Hp, 3 Ph, 230 V, intake ~339'	1035215.83	452545.41	2555.03	2555.99	9/20/06
<b>WR-147A*</b>	520953	Monitor Well-GW	6	Steel	350	350	250-350	0.125	5HP, intake ~337'	1032673.5	455778.1	2529.09	NA	2/1/98
<b>WR-148A*</b>	520954	Monitor Well-GW	6	Steel	340	340	240-340	0.125	5Hp, intake ~328'	1032686.9	454770.7	NA	NA	2/1/98
<b>WR-181A</b>	527406	Monitor Well-GW	6	Steel	445	438	287-438	2	Not Equipped	1035034.29	450093.41	NA	2548.82	11/19/01
<b>WR-186A</b>	527407	Monitor Well-GW	6	Steel	415	410	260-410	2	Not Equipped	1033592.95	451256.01	NA	2545.49	11/19/01
<b>WR-439A</b>	590008	Monitor Well-GW	5	Sch 80 PVC	410	395	280-400	0.02	3 Hp, 3 Ph, 230 V, 25 gpm, intake ~380'	1035034.60	453800.99	2560.27	2560.53	7/8/02

**Table 1  
Well Information  
Vincent Mullins Landfill**

<i>Well Name</i>	<i>ADWR # (55-xxxxxx)</i>	<i>Well Type</i>	<i>Diameter (inches)</i>	<i>Material</i>	<i>Total Depth (ft bgs)</i>	<i>Well Depth (ft bgs)</i>	<i>Screen Interval (ft bgs)</i>	<i>Slot Size (inches)</i>	<i>Pump Info</i>	<i>Easting</i>	<i>Northing</i>	<i>X-Concrete Elevation</i>	<i>Sounding Tube Elevation</i>	<i>Date of Survey</i>
<b>WR-453A</b>	201627	Monitor Well-GW	5	Sch 80 PVC	410	405	250-400	0.02	5 Hp, 3 Ph, 230 V, 25 gpm, intake ~362'	1032582.83	452455.66	2532.87	2533.93	8/31/06
<b>WR-456A</b>	205402	Monitor Well-GW	5	Sch 80 PVC	410	356	316-356	0.02	5 Hp, 3 Ph, 230 V, intake ~362'	1032960.40	452754.72	2541.08	2542.08	8/31/06
<b>WR-457A</b>	205403	Monitor Well-GW	5	Sch 80 PVC	410	401.7	248-396.6	0.02	5 Hp, 3 Ph, 230 V, 25 gpm, intake ~359.2'	1032323.79	452913.09	2528.95	2529.76	8/31/06
<b>WR-458A</b>	205404	Monitor Well-GW	5	Sch 80 PVC	430	425	252-420	0.02	5 Hp, 3 Ph, 230 V, 25 gpm, intake ~360'	1030144.03	451181.01	2541.58	2542.49	8/31/06
<b>WR-459A</b>	205405	Monitor Well-GW	5	Sch 80 PVC	410	406	254-400	0.02	5 Hp, 3 Ph, 230 V, 25 gpm, intake ~360'	1031837.11	451193.73	2535.86	2536.51	8/31/06
<b>WR-600A</b>	904442	Monitor Well-GW	5	Sch 80 PVC	408	401.35	251.35-401	0.02	3 Hp, 230 V, 25 gpm, intake ~380'	1030495.50	453785.81	2514.43	2513.33	9/1/06
<b>HSL-96</b>	612396	private-not used	12	Steel	299	299	127-299	mills knife	Not Equipped					
<b>HSL-97</b>	612397	private-irrigation	16	Steel	475	475			Equipped - no info					
<b>Misys</b>	602755	private-irrigation	8	Steel	358	358			Equipped - no info					

Notes: Northing & Easting is State Plane, Arizona Central, NAD 83, International Feet  
Elevation is in NAVD 88, feet above mean sea level

ft bgs = feet below ground surface

NA = not available

\* Northing and Easting are estimated from orthophoto.

WR-148A benchmark elevation no longer valid due to construction of new Sabino Canyon Road.

**Table 2**

**Summary of Groundwater Monitoring at the Vincent Mullins  
Landfill for 2019**

**(Embedded on Page 3 of the Report)**

**Table 3**  
**Groundwater Elevation Table for 2019**  
**Vincent Mullins Landfill APP No. P-100917**

Well ID	Date	Time	Depth To Water (ft)	Correction Factor (ft)	Corrected DTW (ft)	Benchmark Elevation (ft. a.m.s.l.)	Water Table Elevation (ft)	Sounder ID	Collected by
WR-115A	3/22/2019	8:23	266.74	-1.28	265.46	2533.29	2267.83	Verdad	EP/CW
WR-116A	3/22/2019	10:07	271.63	-1.23	270.40	2535.69	2265.29	Verdad	EP/CW
WR-117A	3/22/2019	7:55	272.11	-1.13	270.98	2536.40	2265.42	Verdad	EP/CW
WR-118A	3/22/2019	7:45	287.95	-0.90	287.05	2555.03	2267.98	Verdad	EP/CW
WR-147A	3/22/2019	9:33	255.34	-0.58	254.76	2529.09	2274.33	Verdad	EP/CW
WR-148A	3/22/2019	9:56	260.59	No Benchmark Elevation				Verdad	EP/CW
WR-181A	3/22/2019	12:15	281.96	0.00	281.96	2548.82	2266.86	Verdad	EP/CW
WR-186A	3/22/2019	8:54	280.32	0.00	280.32	2545.49	2265.17	Verdad	EP/CW
WR-439A	3/22/2019	9:13	291.65	-0.83	290.82	2560.27	2269.45	Verdad	EP/CW
WR-453A	3/22/2019	7:35	269.71	-1.04	268.67	2532.87	2264.20	Verdad	EP/CW
WR-456A	3/22/2019	8:15	275.49	-1.13	274.36	2541.08	2266.72	Verdad	EP/CW
WR-457A	3/22/2019	7:20	266.10	-1.03	265.07	2528.95	2263.88	Verdad	EP/CW
WR-458A	3/22/2019	10:41	285.56	0.77	286.33	2541.58	2255.25	Verdad	EP/CW
WR-459A	3/22/2019	10:27	275.25	-0.56	274.69	2535.86	2261.17	Verdad	EP/CW
WR-600A	3/22/2019	12:40	252.97	1.06	254.03	2514.43	2260.40	Verdad	EP/CW
VMW-502A	3/22/2019	10:53	285.38	-0.68	284.70	2539.26	2254.56	Verdad	EP/CW
HSL-96	3/22/2019	11:52	272.46	No Benchmark Elevation				Verdad	EP/CW
R-103A-280'	3/22/2019	10:14	dry	No Benchmark Elevation				Verdad	EP/CW
R-126A-290'	3/22/2019	8:07	276.00	No Benchmark Elevation				Verdad	EP/CW

Well ID	Date	Time	Depth To Water (ft)	Correction Factor (ft)	Corrected DTW (ft)	Benchmark Elevation (ft. a.m.s.l.)	Water Table Elevation (ft)	Sounder ID	Collected by
WR-115A	9/11/2019	9:00	267.91	-1.28	266.63	2533.29	2266.66	Verdad	MT
WR-116A	9/26/2019	9:36	271.92	-1.23	270.69	2535.69	2265.00	Verdad	MT
WR-117A	9/11/2019	8:24	272.91	-1.13	271.78	2536.40	2264.62	Verdad	MT
WR-118A	9/11/2019	8:19	290.40	-0.90	289.50	2555.03	2265.53	Verdad	MT
WR-147A	9/11/2019	9:52	258.12	-0.58	257.54	2529.09	2271.55	Verdad	MT
WR-148A	9/11/2019	9:42	262.73	No Benchmark Elevation				Verdad	MT
WR-181A	9/11/2019	10:37	283.75	0.00	283.75	2548.82	2265.07	Verdad	MT
WR-186A	9/11/2019	10:42	280.78	0.00	280.78	2545.49	2264.71	Verdad	MT
WR-439A	9/11/2019	9:23	295.43	-0.83	294.60	2560.27	2265.67	Verdad	MT
WR-453A	9/11/2019	9:51	269.91	-1.04	268.87	2532.87	2264.00	Verdad	MT
WR-456A	9/11/2019	8:38	275.30	-1.13	274.17	2541.08	2266.91	Verdad	MT
WR-457A	9/11/2019	9:46	265.99	-1.03	264.96	2528.95	2263.99	Verdad	MT
WR-458A	9/11/2019	10:11	285.17	0.77	285.94	2541.58	2255.64	Verdad	MT
WR-459A	9/11/2019	10:01	275.13	-0.56	274.57	2535.86	2261.29	Verdad	MT
WR-600A	9/11/2019	10:31	253.17	1.06	254.23	2514.43	2260.20	Verdad	MT
VMW-502A	9/11/2019	10:16	284.73	-0.68	284.05	2539.26	2255.21	Verdad	MT
HSL-96	9/11/2019	10:20	274.51	No Benchmark Elevation				Verdad	MT
R-103A-280'	9/11/2019	9:30	dry	No Benchmark Elevation				Verdad	MT
R-126A-290'	9/11/2019	8:49	276.81	No Benchmark Elevation				Verdad	MT

**Notes:**

ft = feet

ft a.m.s.l. = feet above mean sea level

Correction factor is the measured difference between the measuring point and the benchmark elevation.

Benchmark Elevation is normally a chiseled x on the concrete pad in NAVD88, feet above mean sea level.

Monitoring Wells WR-181A and WR-186A benchmark elevations are casing elevations and require no correction.

**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
VMW-502A		06/22/06	<1.0	<1.5	<0.5	<2.0	<3.0	<0.5	<0.5	<2.0	<0.5
VMW-502A		07/05/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		09/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		12/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/05/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		09/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A	D	03/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		09/17/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/09/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A	D	03/09/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		09/15/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/04/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A	D	03/04/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		09/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/07/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		09/21/11	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
VMW-502A	D	09/21/11	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
VMW-502A		12/14/11	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
VMW-502A	HS-306 ft	02/14/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A	HS-334 ft	02/14/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A	HS-362 ft	02/14/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A	HS-390 ft	02/14/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A	HS-418 ft	02/14/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/20/12	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
VMW-502A		09/26/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/12/13	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
VMW-502A		09/25/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/12/14	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
VMW-502A		09/24/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		03/11/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VMW-502A		09/23/15	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
VMW-502A		03/09/16	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
VMW-502A		09/14/16	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	0.6	<0.5	<0.5
VMW-502A		03/08/17	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5
VMW-502A		09/14/17	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5
VMW-502A		03/08/18	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	0.7	<0.5	<0.5
VMW-502A		09/18/18	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
VMW-502A	D	09/19/18	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
VMW-502A	D	09/19/18	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	0.6	<0.5	<0.5
VMW-502A		03/27/19	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	0.6	<0.5	<0.5
VMW-502A		09/26/19	<0.5	<0.5	0.6	<0.5	<0.5	3.8	1	<0.5	<0.5
R-126A		10/04/13	<0.5	<0.5	<0.5	2.7	<0.5	1.1	<0.5	0.6	<0.5
R-126A		03/13/14	<0.5	<0.5	<0.5	1.9	<0.5	1.3	<0.5	0.5	<0.5
R-126A		03/12/15	<0.5	<0.5	<0.5	2.0	<0.5	2.0	0.5	0.6	<0.5
R-126A		03/12/15	<0.5	<0.5	<0.5	2	<0.5	2.0	0.5	0.6	<0.5
R-126A		09/24/15	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5
R-126A		03/14/16	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5
R-126A		03/14/17	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5
R-126A		09/20/17	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
R-126A		03/12/18	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
R-126A		09/20/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
R-126A		04/02/19	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5





**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
WR-116A		09/11/06	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
WR-116A	D	09/11/06	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
WR-116A		03/06/07	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
WR-116A		09/10/07	<0.5	<0.5	<0.5	0.9	<0.5	1.5	0.6	<0.5	<0.5
WR-116A		03/11/08	<0.5	<0.5	<0.5	0.9	<0.5	1.0	<0.5	<0.5	<0.5
WR-116A	D	03/11/08	<0.5	<0.5	<0.5	1.0	<0.5	1.0	<0.5	<0.5	<0.5
WR-116A		09/16/08	0.6	<0.5	0.6	1.0	<0.5	1.8	0.8	<0.5	<0.5
WR-116A		03/12/09	0.7	<0.5	0.5	0.6	<0.5	2.2	1.0	<0.5	<0.5
WR-116A		09/16/09	<0.5	<0.5	<0.5	1.0	<0.5	1.6	0.7	<0.5	<0.5
WR-116A		03/09/10	0.7	<0.5	0.5	0.5	<0.5	2.2	0.9	<0.5	<0.5
WR-116A		09/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	0.6	<0.5	<0.5
WR-116A		03/09/11	0.5	<0.5	<0.5	<0.5	<0.5	2.0	0.8	<0.5	<0.5
WR-116A		09/26/11	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	0.6	<0.5	<0.5
WR-116A	HS-303 ft	02/22/12	2.1	<0.5	1.2	1.2	<0.5	<b>6.4</b>	2.5	<0.5	<0.5
WR-116A	HS-323 ft	02/14/12	2.1	<0.5	1.2	1.2	<0.5	<b>5.8</b>	2.3	<0.5	<0.5
WR-116A	HS-343 ft	02/14/12	1.5	<0.5	0.9	1.0	<0.5	4.8	2.0	<0.5	<0.5
WR-116A		03/20/12	0.6	<0.5	<0.5	0.7	<0.5	2.2	0.9	<0.5	<0.5
WR-116A		09/27/12	0.8	<0.5	<0.5	0.6	<0.5	2.6	1.0	<0.5	<0.5
WR-116A	D	09/27/12	0.8	<0.5	<0.5	0.6	<0.5	2.6	1.1	<0.5	<0.5
WR-116A		03/13/13	0.9	<0.5	0.6	0.7	<0.5	3.2	1.2	<0.5	<0.5
WR-116A		03/13/13	0.8	<0.5	0.5	0.7	<0.5	3.4	1.2	<0.5	<0.5
WR-116A		09/26/13	0.5	<0.5	<0.5	0.5	<0.5	1.9	0.7	<0.5	<0.5
WR-116A	D	09/26/13	0.5	<0.5	<0.5	0.5	<0.5	2.1	0.7	<0.5	<0.5
WR-116A		03/13/14	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	0.6	<0.5	<0.5
WR-116A	D	03/13/14	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	0.6	<0.5	<0.5
WR-116A		09/25/14	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	0.5	<0.5	<0.5
WR-116A	D	09/25/14	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5
WR-116A		03/12/15	0.5	<0.5	<0.5	<0.5	<0.5	2.2	0.7	<0.5	<0.5
WR-116A		09/28/15	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	0.6	<0.5	<0.5
WR-116A		03/10/16	3.6	<0.5	3.5	3.8	<0.5	<b>15</b>	3.9	1.4	<0.5
WR-116A		05/03/16	3.6	<0.5	2.8	2.9	<0.5	<b>15.3</b>	4	1.0	<0.5
WR-116A		03/09/17	2.6	<0.5	1.2	1.6	<0.5	<b>10.7</b>	2.7	0.7	<0.5
WR-116A	D	03/09/17	2.6	<0.5	1.4	1.6	<0.5	<b>10.9</b>	2.6	0.7	<0.5
WR-116A		09/19/17	1.6	<0.5	0.7	1.3	<0.5	<b>6.7</b>	1.7	<0.5	<0.5
WR-116A		03/13/18	1.5	<0.5	0.6	1	<0.5	<b>7.8</b>	1.8	<0.5	<0.5
WR-116A		09/20/18	1.2	<0.5	<0.5	1	<0.5	<b>6.0</b>	1.3	<0.5	<0.5
WR-116A		03/28/19	1.1	<0.5	<0.5	0.8	<0.5	4.9	1.2	<0.5	<0.5
WR-116A		09/26/19	1.1	<0.5	<0.5	1.4	<0.5	<b>6.3</b>	1.3	<0.5	<0.5
WR-116A	D	09/26/19	1.3	<0.5	<0.5	1.6	<0.5	<b>6.7</b>	1.3	<0.5	<0.5
WR-117A		03/15/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/07/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/15/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		10/29/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/06/02	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5
WR-117A		09/16/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/11/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/08/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/22/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		07/20/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		05/31/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A	D	05/31/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/07/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
WR-117A		09/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/06/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/16/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/10/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/15/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/08/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/13/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/08/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/22/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/14/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/24/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/23/13	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/11/14	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/22/14	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/10/15	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/22/15	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		03/08/16	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	<0.5	<0.5	<0.5
WR-117A		09/12/16	<0.5	<0.5	<0.5	1.3	<0.5	0.7	<0.5	<0.5	<0.5
WR-117A		03/08/17	<0.5	<0.5	<0.5	1.9	<0.5	1	<0.5	<0.5	<0.5
WR-117A		09/13/17	<0.5	<0.5	<0.5	1.6	<0.5	0.9	<0.5	<0.5	<0.5
WR-117A	D	09/13/17	<0.5	<0.5	<0.5	1.6	<0.5	0.9	<0.5	<0.5	<0.5
WR-117A		03/07/18	<0.5	<0.5	<0.5	1.5	<0.5	1.3	<0.5	<0.5	<0.5
WR-117A		09/19/18	<0.5	<0.5	<0.5	2.1	<0.5	1.7	<0.5	<0.5	<0.5
WR-117A		03/28/19	<0.5	<0.5	<0.5	1.7	<0.5	2.2	0.5	<0.5	<0.5
WR-117A		09/19/19	<0.5	<0.5	<0.5	2.3	<0.5	2.6	0.6	0.6	<0.5
WR-118A		03/15/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/07/00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/15/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		10/29/01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/06/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/11/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/11/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/29/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/22/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/13/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/16/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A	D	09/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/07/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/25/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A	D	09/25/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/06/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A	D	09/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/16/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A	D	09/16/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		03/11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A	D	03/11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-118A		09/15/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
WR-439A	D	03/07/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		09/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/05/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		09/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/10/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/04/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/07/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A	D	03/07/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		09/22/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/08/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/07/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/10/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/09/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/07/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A	D	03/07/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/06/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/06/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-439A		03/26/19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-453A		03/22/04	1.0	<0.5	5.5	2.0	1.4	<b>5.2</b>	2.1	1.3	<0.5
WR-453A		05/03/04	1.1	<0.5	6.2	2.5	1.8	<b>5.6</b>	2.5	1.4	<0.5
WR-453A		09/13/04	1.0	<0.5	5.5	2.3	1.6	4.8	2.3	1.3	<0.5
WR-453A		12/07/04	1.1	<0.5	6.0	2.8	1.8	4.9	2.1	1.2	<0.5
WR-453A		03/15/05	1.4	<0.5	6.8	3.0	2.7	<b>5.8</b>	2.8	1.6	<0.5
WR-453A		06/27/05	1.4	<0.5	6.3	4.3	2.5	<b>5.1</b>	2.4	1.7	<0.5
WR-453A		09/14/05	1.1	<0.5	5.1	3.9	2.0	4.9	2.1	1.5	<0.5
WR-453A	D	09/14/05	1.2	<0.5	5.2	4.0	2.0	4.8	2.0	1.5	<0.5
WR-453A		12/06/05	1.0	<0.5	4.5	4.0	1.7	4.9	1.9	1.8	<0.5
WR-453A	D	12/06/05	1.0	<0.5	4.4	3.3	1.6	4.6	1.8	1.4	<0.5
WR-453A		03/09/06	0.9	<0.5	3.7	3.0	1.1	4.4	1.7	1.4	<0.5
WR-453A	D	03/09/06	0.9	<0.5	3.6	3.1	1.1	4.4	1.7	1.5	<0.5
WR-453A		06/22/06	0.8	<0.5	3.1	3.3	0.7	4.3	1.7	1.4	<0.5
WR-453A		09/25/06	0.6	<0.5	2.8	3.6	0.6	4.0	1.2	1.4	<0.5
WR-453A		12/14/06	0.6	<0.5	2.5	2.7	<0.5	4.2	1.2	1.1	<0.5
WR-453A		03/08/07	0.5	<0.5	2.4	2.5	<0.5	4.0	1.1	1.1	<0.5
WR-453A		09/13/07	<0.5	<0.5	2.6	3.6	<0.5	4.1	1.1	1.5	<0.5
WR-453A		03/12/08	<0.5	<0.5	2.5	4.2	<0.5	3.9	1.0	1.5	<0.5
WR-453A		09/18/08	<0.5	<0.5	1.7	4.2	<0.5	3.6	0.8	1.2	<0.5
WR-453A		03/16/09	<0.5	<0.5	2.0	3.5	<0.5	4.0	0.9	1.2	<0.5
WR-453A		09/17/09	<0.5	<0.5	1.9	6.8	<0.5	4.3	0.9	1.6	<0.5
WR-453A		03/10/10	<0.5	<0.5	2.2	4.5	<0.5	4.6	1.1	1.5	<0.5
WR-453A		09/15/10	<0.5	<0.5	1.6	2.7	<0.5	3.6	0.8	1.1	<0.5
WR-453A		03/10/11	<0.5	<0.5	1.4	3.4	<0.5	3.6	0.8	1.0	<0.5
WR-453A		09/27/11	<0.5	<0.5	1.3	2.9	<0.5	3.2	0.7	0.9	<0.5
WR-453A	D	09/27/11	<0.5	<0.5	1.3	2.7	<0.5	3.1	0.7	0.9	<0.5
WR-453A		03/20/12	<0.5	<0.5	1.4	5.2	<0.5	3.8	0.9	1.1	<0.5
WR-453A		09/27/12	<0.5	<0.5	1.1	5.8	<0.5	3.4	0.8	1.3	<0.5
WR-453A		03/13/13	<0.5	<0.5	0.9	5.3	<0.5	3.4	0.7	1.2	<0.5
WR-453A		09/26/13	<0.5	<0.5	1.0	7.2	<0.5	3.7	0.7	1.6	<0.5
WR-453A		03/13/14	<0.5	<0.5	0.8	4.0	<0.5	3.0	0.6	0.9	<0.5
WR-453A		09/25/14	<0.5	<0.5	0.9	7.6	<0.5	3.9	0.8	1.3	<0.5
WR-453A		03/12/15	<0.5	<0.5	0.8	4.3	<0.5	3.8	0.8	1.1	<0.5
WR-453A	D	03/12/15	<0.5	<0.5	0.8	4.1	<0.5	4.0	0.8	1.1	<0.5

**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
WR-453A		09/28/15	<0.5	<0.5	0.5	5.3	<0.5	3.4	0.7	1.3	<0.5
WR-453A		03/10/16	0.6	<0.5	0.8	4.8	<0.5	3.5	0.8	1.0	<0.5
WR-453A		09/15/16	<0.5	<0.5	0.7	8.0	<0.5	3.3	0.7	1.7	<0.5
WR-453A	D	09/15/16	<0.5	<0.5	0.7	7.2	<0.5	3.0	0.6	1.5	<0.5
WR-453A		03/09/17	<0.5	<0.5	<0.5	6.7	<0.5	2.0	<0.5	1.4	<0.5
WR-453A		09/19/17	<0.5	<0.5	<0.5	8.1	<0.5	1.8	<0.5	1.6	<0.5
WR-453A	D	09/19/17	<0.5	<0.5	<0.5	8.2	<0.5	1.8	<0.5	1.6	<0.5
WR-453A		03/13/18	<0.5	<0.5	<0.5	6.1	<0.5	1.8	<0.5	1.4	<0.5
WR-453A		09/27/18	<0.5	<0.5	<0.5	8.2	<0.5	2.4	<0.5	1.2	<0.5
WR-453A		03/27/19	<0.5	<0.5	0.5	5.3	<0.5	2.6	0.6	1.0	<0.5
WR-453A		09/19/19	<0.5	<0.5	0.6	5.4	<0.5	2.2	0.6	0.8	<0.5
WR-456A		1/28/2005*	<1.0	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		02/17/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		06/28/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		12/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A	D	12/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/08/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A	D	03/08/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		06/21/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		12/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/07/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A	D	03/07/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/17/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/16/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/08/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/14/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/08/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/26/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/13/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/25/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/07/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A	D	03/07/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/24/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/10/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A	D	03/10/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/23/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/09/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/22/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/07/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/13/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/06/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/12/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/06/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/18/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A	D	09/18/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		03/26/19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-456A		09/18/19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
WR-457A		01/27/05	<0.5	<1.5	0.1	<0.5	<0.5	<b>6.3</b>	0.7	<0.5	<0.5
WR-457A		02/17/05	<0.5	<0.5	1.3	1.2	0.6	<b>9.8</b>	1.3	1.0	<0.5
WR-457A		06/27/05	0.9	<0.5	2.8	3.0	0.8	<b>11.0</b>	1.6	1.6	<0.5
WR-457A	D	06/27/05	0.8	<0.5	2.7	2.6	0.9	<b>10.4</b>	1.9	1.3	<0.5
WR-457A		09/14/05	1.1	<0.5	3.9	2.2	0.9	<b>12.6</b>	2.5	1.0	<0.5
WR-457A		12/06/05	1.6	<0.5	6.0	3.2	1.1	<b>18.2</b>	3.7	1.4	<0.5
WR-457A		03/09/06	1.8	0.6	6.2	2.2	1.2	<b>15.5</b>	3.7	0.9	<0.5
WR-457A		06/22/06	1.9	0.5	5.9	2.6	1.0	<b>16.8</b>	4.1	1.1	<0.5
WR-457A		09/25/06	1.9	0.6	5.4	2.1	1.2	<b>15.1</b>	3.8	0.8	<0.5
WR-457A		12/14/06	2.0	0.6	5.2	2.1	1.0	<b>16.4</b>	4.0	0.9	<0.5
WR-457A		03/08/07	1.6	<0.5	4.3	2.0	0.6	<b>14.4</b>	3.3	0.9	<0.5
WR-457A		09/13/07	1.5	<0.5	4.4	3.2	<0.5	<b>13.4</b>	3.0	1.3	<0.5
WR-457A		03/12/08	1.2	<0.5	3.6	3.7	<0.5	<b>10.6</b>	2.4	1.6	<0.5
WR-457A		09/18/08	1.7	<0.5	4.9	5.3	<0.5	<b>15.1</b>	3.4	1.7	<0.5
WR-457A		03/16/09	1.3	0.5	4.0	1.5	<0.5	<b>9.0</b>	2.5	0.7	<0.5
WR-457A		09/17/09	1.9	0.5	5.1	4.2	<0.5	<b>12.1</b>	3.3	1.1	<0.5
WR-457A		03/10/10	2.4	0.6	5.2	2.9	<0.5	<b>13.2</b>	3.9	1.1	<0.5
WR-457A		09/15/10	2.1	0.6	4.5	2.2	<0.5	<b>13.0</b>	3.5	1.1	<0.5
WR-457A		03/10/11	1.7	0.6	3.6	2.2	<0.5	<b>11.4</b>	3.2	0.8	<0.5
WR-457A		09/27/11	1.1	<0.5	2.2	1.3	<0.5	<b>6.3</b>	1.7	0.6	<0.5
WR-457A		12/14/11	1.2	<0.5	2.2	4.4	<0.5	<b>7.6</b>	1.9	1.0	<0.5
WR-457A	HS-295 ft	02/14/12	<0.5	<0.5	<0.5	4.4	<0.5	2.2	<0.5	1.5	<0.5
WR-457A	HS-321 ft	02/14/12	1.0	<0.5	1.9	4.4	<0.5	<b>7.4</b>	1.7	1.4	<0.5
WR-457A	HS-347 ft	02/14/12	1.0	<0.5	1.9	4.5	<0.5	<b>7.6</b>	1.7	1.4	<0.5
WR-457A	HS-373 ft	02/14/12	1.1	<0.5	2.1	4.6	<0.5	<b>7.7</b>	1.8	1.4	<0.5
WR-457A	HS-399 ft	02/14/12	1.1	<0.5	2.0	4.6	<0.5	<b>7.3</b>	1.7	1.4	<0.5
WR-457A		03/20/12	0.8	<0.5	1.5	1.5	<0.5	4.7	1.2	0.5	<0.5
WR-457A		09/27/12	0.8	<0.5	1.7	4.7	<0.5	<b>6.5</b>	1.4	1.4	<0.5
WR-457A		03/13/13	0.7	<0.5	1.4	3.7	<0.5	<b>6.4</b>	1.3	1.2	<0.5
WR-457A		09/26/13	0.5	<0.5	1.0	4.8	<0.5	<b>5.0</b>	0.8	1.1	<0.5
WR-457A		03/13/14	<0.5	<0.5	0.9	2.9	<0.5	4.0	0.8	0.9	<0.5
WR-457A		09/25/14	0.6	<0.5	0.8	4.6	<0.5	<b>6.0</b>	1.0	1.2	<0.5
WR-457A		03/12/15	<0.5	<0.5	0.6	3.3	<0.5	<b>5.4</b>	0.8	1.2	<0.5
WR-457A		09/28/15	<0.5	<0.5	<0.5	0.9	<0.5	1.6	<0.5	<0.5	<0.5
WR-457A		03/10/16	<0.5	<0.5	<0.5	4.6	<0.5	1.4	<0.5	1.1	<0.5
WR-457A	D	03/10/16	<0.5	<0.5	<0.5	3.4	<0.5	1.4	<0.5	0.9	<0.5
WR-457A		09/15/16	<0.5	<0.5	<0.5	5.4	<0.5	3.0	<0.5	1.3	<0.5
WR-457A		03/09/17	<0.5	<0.5	<0.5	5.6	<0.5	2.9	<0.5	1.3	<0.5
WR-457A		09/19/17	<0.5	<0.5	<0.5	5.5	<0.5	1.1	<0.5	0.7	<0.5
WR-457A		03/13/18	<0.5	<0.5	<0.5	3.8	<0.5	2.2	<0.5	1.0	<0.5
WR-457A	D	03/13/18	<0.5	<0.5	<0.5	3.8	<0.5	2.3	<0.5	1.0	<0.5
WR-457A		09/19/18	<0.5	<0.5	<0.5	6.2	<0.5	2.8	<0.5	1.3	<0.5
WR-457A		03/28/19	<0.5	<0.5	<0.5	3.4	<0.5	2.7	<0.5	0.9	<0.5
WR-457A	D	03/28/19	<0.5	<0.5	<0.5	4.1	<0.5	3.2	<0.5	1.1	<0.5
WR-457A		09/19/19	<0.5	<0.5	<0.5	5.4	<0.5	3.1	<0.5	1.1	<0.5
WR-458A		1/25/2005*	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		02/16/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		06/28/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A	D	06/28/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		12/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/08/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		06/21/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
WR-458A	D	06/21/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/13/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		12/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/07/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/10/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/17/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/11/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/16/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/09/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/14/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/09/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A	D	03/09/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/26/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/14/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		09/25/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-458A		03/12/13	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	0.8	<0.5	<0.5
WR-458A		09/24/13	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-458A		03/12/14	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.5	<0.5	<0.5
WR-458A		09/23/14	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	0.6	<0.5	<0.5
WR-458A		03/11/15	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.6	<0.5	<0.5
WR-458A		09/23/15	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	<0.5
WR-458A		03/09/16	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.6	<0.5	<0.5
WR-458A		09/14/16	<0.5	<0.5	0.6	<0.5	<0.5	0.6	0.7	<0.5	<0.5
WR-458A		03/08/17	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.6	<0.5	<0.5
WR-458A		09/13/17	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	0.6	<0.5	<0.5
WR-458A		03/08/18	<0.5	<0.5	0.7	<0.5	<0.5	0.8	0.5	<0.5	<0.5
WR-458A		09/18/18	1.1	<0.5	1.6	<0.5	<0.5	4.0	1.8	<0.5	<0.5
WR-458A		11/06/18	<0.5	<0.5	0.8	<0.5	<0.5	1.3	0.7	<0.5	<0.5
WR-458A		03/27/19	0.6	<0.5	1.1	<0.5	<0.5	2.2	1	<0.5	<0.5
WR-458A		09/19/19	0.6	<0.5	1.5	<0.5	<0.5	1.7	0.9	<0.5	<0.5
WR-459A		1/26/2005*	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		02/16/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		06/28/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		09/13/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		12/05/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/08/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		06/21/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		09/13/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		12/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/07/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		09/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/11/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/12/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/09/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/09/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		09/26/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/13/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		09/24/12	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-459A	D	09/24/12	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-459A		03/12/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		09/24/13	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
WR-459A		03/12/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
WR-459A		09/23/14	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-459A		03/11/15	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
WR-459A		09/23/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/09/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		09/13/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-459A		03/07/17	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
WR-459A		09/13/17	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5
WR-459A		03/08/18	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
WR-459A		09/18/18	<0.5	<0.5	<0.5	0.6	<0.5	2.5	0.5	<0.5	<0.5
WR-459A		11/06/18	<0.5	<0.5	<0.5	0.8	<0.5	1.1	<0.5	<0.5	<0.5
WR-459A	D	11/06/18	<0.5	<0.5	<0.5	1.0	<0.5	1.0	0.5	<0.5	<0.5
WR-459A		03/27/19	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5
WR-459A		09/19/19	<0.5	<0.5	<0.5	0.7	<0.5	1.5	0.6	<0.5	<0.5
WR-600A		04/07/06	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		04/26/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A	D	04/26/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		06/22/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		09/12/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		12/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A	D	12/11/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/05/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A	D	03/05/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		09/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/06/08	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/09/09	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/04/10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/07/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		09/21/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/07/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A	D	03/07/12	<0.5	<1.5	<0.5	<2	<3	<0.5	<0.5	<2	<0.5
WR-600A		03/07/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/10/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/09/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A	D	03/09/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/06/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A	D	03/06/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/06/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A	D	03/06/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
WR-600A		03/27/19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		03/10/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/27/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		12/15/11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		03/08/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/26/12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		03/12/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/25/13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		03/12/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/24/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		03/11/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/29/15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		03/10/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/13/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 4**  
**Groundwater Monitor Wells - Selected VOCs (ug/L)**  
**Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			<b>-</b>	<b>75.0</b>	<b>70.0</b>	<b>-</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>-</b>	<b>2.0</b>
HSL-96		03/08/17	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
HSL-96		09/14/17	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5
HSL-96		03/08/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/20/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		04/02/19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-96		09/26/19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-97		05/11/04	<0.5	<0.5	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5
HSL-97		06/22/04	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5
HSL-97		09/13/04	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5	<0.5
HSL-97		11/16/04	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5
HSL-97		03/16/05	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
HSL-97		06/28/05	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	<0.5
HSL-97		09/12/05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-97		12/06/05	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5	<0.5	<0.5
HSL-97		03/09/06	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5
HSL-97		06/21/06	<0.5	<0.5	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5
HSL-97		09/13/06	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	<0.5
HSL-97		12/14/06	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
HSL-97		03/08/07	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5
HSL-97		09/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	<0.5	<0.5	<0.5
HSL-97		03/11/08	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5
HSL-97		09/18/08	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5
HSL-97		03/12/09	<0.5	<0.5	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5
HSL-97		09/17/09	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	<0.5
HSL-97		03/09/10	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
HSL-97	D	03/09/10	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
HSL-97		09/15/10	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5	<0.5
HSL-97		03/10/11	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	<0.5
HSL-97		09/27/11	<0.5	<0.5	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5
HSL-97		03/08/12	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5
HSL-97		09/26/12	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
HSL-97		03/11/13	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5
HSL-97		09/25/13	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5
HSL-97		03/11/14	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5
HSL-97		09/24/14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-97		03/10/15	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5	<0.5
HSL-97		09/24/15	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5
HSL-97		03/09/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-97		09/14/16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-97		03/07/17	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5	<0.5	<0.5
HSL-97		09/14/17	<0.5	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<0.5	<0.5
HSL-97		03/07/18	<0.5	<0.5	<0.5	<0.5	<0.5	1.5	<0.5	<0.5	<0.5
HSL-97		09/20/18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
HSL-97		03/26/19	<0.5	<0.5	<0.5	<0.5	<0.5	1.8	<0.5	<0.5	<0.5
HSL-97		09/26/19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MISYS		04/25/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MISYS	D	04/25/06	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

D = Duplicate Sample

HS-#### ft - sample was collected by hydrasleeve at depth noted.

\*Sample taken during well development

Values in **bold and shaded** exceed the AWQS

AWQS = State of Arizona Aquifer Water Quality Standard

**Table 4  
Groundwater Monitor Wells - Selected VOCs (ug/L)  
Vincent Mullins Landfill**

Well Name	Notes	Date	1,1-DCA	1,4-DCB	Cis-1,2DCE	DCFA	MC	PCE	TCE	TCFA	VC
<b>AWQS (ug/L) →</b>			-	75.0	70.0	-	5.0	5.0	5.0	-	2.0

<b>1,1-DCA</b>	1,1-dichloroethane		
<b>1,4 DCB</b>	1,4-dichlorobenzene (a.k.a. para-dichlorobenzene)		
<b>PCE</b>	tetrachloroethene		
<b>TCE</b>	trichloroethene		
<b>Cis-1,2DCE</b>	cis-1,2-dichloroethene	<b>MC</b>	methylene chloride (a.k.a. dichloromethane)
<b>TCFA</b>	trichlorofluoromethane	<b>VC</b>	vinyl chloride
<b>DCFA</b>	dichlorodifluoromethane		

**Table 5**  
**Groundwater Monitor Wells - Selected Inorganic Analytes (mg/L)**  
**Vincent Mullins Landfill**

Well Name	Date	Ba	Ca	Na	K	NO <sub>3</sub>	Total Alkalinity	F	SO <sub>4</sub>	Cl	TDS	Cr	Pb	Cd	Mg	Ag	Se	Hg
AWQS (mg/L) →		2				10		4				0.1	0.05	0.005			0.05	0.002
VMW-502A	03/05/07	0.095	46	40	1.6	0.79	158	0.1	28	12	266	<0.02	<0.002	<0.004	4.4	<0.02	<0.005	<0.0005
VMW-502A	03/06/08	0.1	50	41	1.6	1.2	164	0.1	27	13	290	<0.02	<0.002	<0.004	4.7	<0.02	<0.005	<0.0005
VMW-502A	03/06/08	0.1	50	41	1.5	1.2	163	<0.1	27	13	291	<0.02	<0.002	<0.004	4.7	<0.02	<0.005	<0.0005
VMW-502A	03/09/09	0.1	50	41	1.5	1.1	166	0.12	26	13	278	<0.02	<0.002	<0.004	4.8	<0.02	<0.005	<0.0005
VMW-502A	03/09/09	0.1	50	41	1.5	1.1	163	0.12	26	13	275	<0.02	<0.002	<0.004	4.8	<0.02	<0.005	<0.0005
VMW-502A	03/04/10	0.096	48	40	1.5	1.1	277	0.14	29	13	277	<0.02	<0.002	<0.0025	4.6	<0.02	<0.005	<0.0005
VMW-502A	03/04/10	0.097	48	40	1.5	1.1	225	0.13	29	13	225	<0.02	<0.002	<0.025	4.6	<0.02	<0.005	<0.0005
VMW-502A	03/07/11	0.1	52	42	1.5	1.2	169	0.15	29	12	283	<0.02	<0.002	<0.025	4.9	<0.02	<0.005	<0.0005
VMW-502A	03/20/12	0.1	51	41	1.5	1.1	175	0.12	29	12	289	<0.02	<0.001	<0.025	4.8	<0.02	<0.001	<0.0005
VMW-502A	03/12/13	0.12	58	44	1.6	1.3	187	0.13	29	13	306	<0.02	<0.001	<0.001	5.4	<0.02	<0.001	<0.0005
WR-115A	05/17/00	0.0860	39	37	1.4	1.1	116	0.22	54	14	261	<0.02	0.0077	<0.004	4.0	<0.02	<0.005	<0.0005
WR-115A	09/07/00	0.0760	37	35	<2.0	1.1	110	0.22	55	13	240	<0.01	0.0068	<0.0005	3.7	<0.01	<0.003	<0.0002
WR-115A	03/15/01	0.0690	37	36	<2.0	1.0	109	0.25	52	12	245	<0.01	0.0035	<0.0005	3.7	<0.01	<0.005	<0.0005
WR-115A	10/29/01	0.0930	30	40	1.3	0.89	93	0.28	56	11	243	<0.02	<0.002	<0.004	3.0	<0.02	<0.005	<0.0005
WR-115A	03/06/02	0.0920	34	36	1.3	0.97	102	0.25	54	10	178	<0.02	<0.002	<0.004	3.5	<0.02	<0.005	<0.0005
WR-115A	09/16/02	0.0860	35	35	1.2	0.98	101	0.22	58	9	244	<0.02	0.0029	<0.004	3.6	<0.02	<0.005	<0.0005
WR-115A	03/11/03	0.0750	34	33	1.3	0.93	101	0.22	53	7.9	235	<0.02	0.0022	<0.004	3.4	<0.02	<0.005	<0.0005
WR-115A	03/16/04	0.0680	31	33	1.1	0.72	97	0.23	45	6.2	225	<0.02	0.0038	<0.004	3.1	<0.02	<0.005	<0.0005
WR-115A	03/11/08	0.0610	32	34	1.2	1.1	86	0.22	45	9.1	230	<0.02	0.0029	<0.004	3.2	<0.02	<0.005	<0.0005
WR-115A	03/10/09	0.0670	34	35	1.2	1.2	93	0.24	48	9.2	244	<0.02	0.0026	<0.004	3.4	<0.02	<0.005	<0.0005
WR-115A	03/08/10	0.0720	36	37	1.3	1.4	100	0.27	61	11	258	<0.02	0.0074	<0.0025	3.7	<0.02	<0.005	<0.0005
WR-115A	03/08/11	0.0800	42	40	1.4	1.5	111	0.26	57	9.6	251	<0.02	0.0059	<0.0025	4.2	<0.02	<0.005	<0.0005
WR-115A	03/14/12	0.0670	31	39	1.3	0.91	93	0.4	60	9.5	243	<0.02	0.0018	<0.0025	3.2	<0.02	0.0013	<0.0005
WR-115A	03/11/13	0.0780	40	38	1.3	1.2	116	0.23	56	8.6	257	<0.02	0.0072	<0.001	4.0	<0.02	0.0013	<0.0005
WR-115A	03/11/14	0.0794	40.7	38.9	1.33	1.27	118	0.254	53.2	8.39	257	<0.02	0.0167	<0.001	4.1	<0.02	0.0015	<0.0005
WR-115A*	03/10/15	0.0842	43.7	41.7	1.4	1.32	138	0.215	53.4	9.62	265	<0.02	0.0022	<0.001	4.3	<0.02	<0.001	<0.0005
WR-115A*	03/08/16	0.0898	43.8	39.2	1.38	1.4	137	0.188	53.7	10.5	271	<0.02	<0.001	<0.001	4.3	<0.02	0.0015	<0.0005
WR-115A*	03/07/17	0.0854	44.9	40.6	1.47	1.46	133	0.267	55	10.5	266	<0.02	<0.001	<0.001	4.4	<0.02	<0.001	<0.0005
WR-115A*	03/07/18	0.0821	40.3	38.9	1.33	1.28	130	0.232	48.6	9.17	263	<0.02	<0.001	<0.001	4.04	<0.02	0.0016	<0.0005
WR-115A*	03/26/19	<0.1	36.2	36.5	1.31	1.15	124	0.238	47.4	8.53	246	<0.02	<0.001	<0.001	3.63	<0.02	0.0011	<0.0005
WR-116A	03/15/00	0.077	35	34	1.3	1.0	114	0.26	47	13	248	<0.02	0.003	<0.004	3.7	<0.02	<0.005	<0.0005
WR-116A	09/07/00	0.079	35	34	<2.0	1.1	116	0.31	49	13	233	<0.01	0.0029	<0.0005	3.7	<0.01	<0.003	<0.0005
WR-116A	03/15/01	0.07	36	35	<2.0	1.2	112	0.28	49	12	246	<0.01	0.0043	<0.0005	3.2	<0.01	<0.005	<0.0005
WR-116A	10/29/01	0.095	41	39	1.4	1.2	113	0.19	53	13	261	<0.02	0.0044	<0.004	4.2	<0.02	<0.005	<0.0005
WR-116A	03/06/02	0.085	39	36	1.3	1.3	118	0.23	50	13	263	<0.02	0.0021	<0.004	4.0	<0.02	<0.005	<0.0005
WR-116A	09/16/02	0.093	41	36	1.4	1.3	119	0.22	56	14	266	<0.02	0.0037	<0.004	4.2	<0.02	<0.005	<0.0005

**Table 5**  
**Groundwater Monitor Wells - Selected Inorganic Analytes (mg/L)**  
**Vincent Mullins Landfill**

Well Name	Date	Ba	Ca	Na	K	NO <sub>3</sub>	Total Alkalinity	F	SO <sub>4</sub>	Cl	TDS	Cr	Pb	Cd	Mg	Ag	Se	Hg
AWQS (mg/L) →		2				10		4				0.1	0.05	0.005			0.05	0.002
WR-116A	03/11/03	0.084	40	35	1.4	1.2	122	0.22	52	14	265	<0.02	<0.002	<0.004	4.1	<0.02	<0.005	<0.0005
WR-116A	03/16/04	0.093	39	35	1.3	1.4	122	0.22	52	13	269	<0.02	0.0024	<0.004	4.1	<0.02	<0.005	<0.0005
WR-116A	05/31/05	0.094	42	37	1.4	1.2	122	0.2	52	14	260	<0.02	<0.002	<0.004	4.3	<0.02	<0.005	<0.0005
WR-116A	03/07/06	0.094	48	38	1.5	1.2	118	0.24	55	15	258	<0.02	0.0021	<0.004	4.8	<0.02	<0.005	<0.0005
WR-116A	03/06/07	0.1	45	40	1.5	1.2	126	0.22	54	15	265	<0.02	<0.002	<0.004	4.7	<0.02	<0.005	<0.0005
WR-116A	03/11/08	0.11	47	40	1.4	1.5	132	0.2	53	14	285	<0.02	<0.002	<0.004	4.9	<0.02	<0.005	<0.0005
WR-116A	03/11/08	0.12	48	42	1.5	1.5	124	0.2	53	14	268	<0.02	0.011	<0.004	5.1	<0.02	<0.005	<0.0005
WR-116A	03/12/09	0.12	51	42	1.4	1.7	144	0.26	50	13	316	<0.02	0.0028	<0.004	5.4	<0.02	<0.005	<0.0005
WR-116A	03/09/10	0.12	50	43	1.5	1.9	151	0.26	56	13	308	<0.02	<0.002	<0.0025	5.4	<0.02	<0.005	<0.0005
WR-116A	03/09/11	0.14	56	46	1.6	1.8	153	0.26	54	14	303	<0.02	0.0065	<0.0025	5.8	<0.02	<0.005	<0.0005
WR-116A	03/20/12	0.15	62	45	1.6	1.7	156	0.25	55	14	314	<0.02	0.01	<0.0025	5.8	<0.02	<0.001	<0.0005
WR-116A	03/13/13	0.13	58	46	1.6	2	162	0.25	53	13	320	<0.02	0.0019	<0.001	6.1	<0.02	0.0015	<0.0005
WR-116A	03/13/13	0.13	57	45	1.6	1.9	163	0.25	53	13	321	<0.02	0.002	<0.001	6.0	<0.02	0.0013	<0.0005
WR-116A	03/13/14	0.126	53.5	44.4	1.54	1.78	152	0.258	55.8	14.1	306	<0.02	0.0117	<0.001	5.7	<0.02	<0.001	<0.0005
WR-116A	03/13/14	0.118	52	42.8	1.49	1.78	152	0.252	55.7	14.3	303	<0.02	0.0033	<0.001	5.6	<0.02	0.0011	<0.0005
WR-116A*	03/12/15	0.125	55.5	44.9	1.57	2.04	171	0.256	55.6	13.5	312	<0.02	<0.001	<0.001	5.9	<0.02	<0.001	<0.0005
WR-116A*	03/10/16	0.283	115	68.4	2.36	5.07	427	0.171	43.2	7.99	546	<0.02	0.003	<0.001	12.7	<0.02	0.0011	<0.0005
WR-116A*	05/03/16	0.281	115	69	2.42	4.84	412	0.156	45	9	533	<0.02	<0.001	<0.001	12.5	<0.02	<0.001	<0.0005
WR-116A	03/09/17	0.222	91.8	59.2	2.1	3.48	307	0.307	45.3	9.62	421	<0.02	0.0061	<0.001	10.1	<0.02	<0.001	<0.0005
WR-116A*	03/09/17	0.22	91.2	58.2	2.08	3.44	301	0.293	45.3	9.68	434	<0.02	<0.001	<0.001	10.1	<0.02	<0.001	<0.0005
WR-116A*	03/13/18	0.198	79.9	54.9	1.97	3.6	258	0.281	52	10.8	410	<0.02	<0.001	<0.001	8.9	<0.02	0.0016	<0.0005
WR-116A*	03/28/19	0.160	65.1	48.5	1.8	3.03	216	0.408	59.9	12.3	358	<0.02	<0.001	<0.001	7.09	<0.02	0.0011	<0.0005
WR-117A	03/15/00	0.073	29	34	1.3	0.57	110	0.21	30	11	212	<0.02	0.0033	<0.004	3.1	<0.02	<0.005	<0.0005
WR-117A	09/07/00	0.059	27	32	<2.0	0.59	109	0.22	32	11	191	<0.01	0.0055	<0.0005	2.9	<0.01	<0.003	<0.0002
WR-117A	03/15/01	0.056	30	35	<2.0	0.67	110	0.23	31	11	210	<0.01	0.01	<0.0005	3.2	<0.01	<0.005	<0.0005
WR-117A	10/29/01	0.079	29	37	1.3	0.52	106	0.2	32	11	220	<0.02	<0.002	<0.004	3.0	<0.02	<0.005	<0.0005
WR-117A	03/06/02	0.067	28	33	1.2	0.68	106	0.21	32	10	217	<0.02	0.0033	<0.004	3.0	<0.02	<0.005	<0.0005
WR-117A	09/16/02	0.072	31	34	1.3	0.73	108	0.2	35	10	215	<0.02	0.0029	<0.004	3.3	<0.02	<0.005	<0.0005
WR-117A	03/11/03	0.063	29	34	1.4	0.77	109	0.19	33	11	212	<0.02	<0.002	<0.004	3.1	<0.02	<0.005	<0.0005
WR-117A	03/22/04	0.08	30	35	1.3	0.87	108	0.22	35	11	211	<0.02	0.005	<0.004	3.4	<0.02	<0.005	<0.0005
WR-117A	05/31/05	0.075	32	36	1.3	0.94	104	0.18	37	12	221	<0.02	<0.002	<0.004	3.5	<0.02	<0.005	<0.0005
WR-117A	03/07/06	0.079	32	35	1.3	1	121	0.21	40	12	228	<0.02	0.0044	<0.004	3.6	<0.02	<0.005	<0.0005
WR-117A	03/06/07	0.081	33	37	1.3	0.93	119	0.19	40	12	205	<0.02	0.0029	<0.004	3.7	<0.02	<0.005	<0.0005
WR-117A	03/10/08	0.08	33	38	1.4	0.88	101	0.18	40	12	222	<0.02	<0.002	<0.004	3.8	<0.02	<0.005	<0.0005
WR-117A	03/10/09	0.081	34	39	1.4	0.85	104	0.22	40	12	245	<0.02	<0.002	<0.004	3.8	<0.02	<0.005	<0.0005
WR-117A	03/08/10	0.08	34	38	1.3	0.87	108	0.25	44	13	243	<0.02	0.0061	<0.0025	3.8	<0.02	<0.005	<0.0005
WR-117A	03/08/11	0.088	36	39	1.4	0.88	107	0.24	42	13	232	<0.02	0.0075	<0.0025	3.9	<0.02	<0.005	<0.0005

**Table 5**  
**Groundwater Monitor Wells - Selected Inorganic Analytes (mg/L)**  
**Vincent Mullins Landfill**

Well Name	Date	Ba	Ca	Na	K	NO <sub>3</sub>	Total Alkalinity	F	SO <sub>4</sub>	Cl	TDS	Cr	Pb	Cd	Mg	Ag	Se	Hg
AWQS (mg/L) →		2				10		4				0.1	0.05	0.005			0.05	0.002
WR-117A	03/14/12	0.11	38	39	1.4	0.77	114	0.21	45	13	248	<0.02	0.029	<0.0025	4.0	<0.02	0.001	<0.0005
WR-117A	03/11/13	0.079	38	38	1.4	0.82	116	0.18	41	12	248	<0.02	0.028	<0.001	4.2	<0.02	<0.001	<0.0005
WR-117A	03/11/14	0.0794	38.8	39.8	1.42	1.21	128	0.227	39.1	12.9	252	<0.02	0.0043	<0.001	4.5	<0.02	<0.001	<0.0005
WR-117A*	03/10/15	0.0907	40.5	40.9	1.45	1.92	138	0.202	38.1	14.3	250	<0.02	<0.001	<0.001	4.6	<0.02	<0.001	<0.0005
WR-117A*	03/08/16	0.0958	41.2	40.7	1.48	2.07	146	0.169	38.6	13.4	264	<0.02	<0.001	<0.001	4.7	<0.02	0.0011	<0.0005
WR-117A*	03/08/17	0.109	51.8	45.1	1.67	3.91	159	0.251	40.2	15.6	300	<0.02	<0.001	<0.001	5.92	<0.02	<0.001	<0.0005
WR-117A*	03/07/18	0.12	49.9	44.2	1.59	3.95	164	0.235	39.9	15.5	300	<0.02	<0.001	<0.001	5.69	<0.02	0.0014	<0.0005
WR-117A*	03/28/19	0.128	56	49.4	1.77	4.01	195	0.265	48.2	13.7	333	<0.02	<0.001	<0.001	6.7	<0.02	<0.001	<0.0005
WR-118A	03/15/00	0.071	32	33	1.9	0.74	98	0.14	22	30	221	<0.02	0.0095	<0.004	3.2	<0.02	<0.005	<0.0005
WR-118A	09/07/00	0.047	32	34	<2.0	0.78	98	0.2	23	32	213	<0.01	0.0084	<0.0005	3.0	<0.01	<0.003	<0.0002
WR-118A	03/15/01	0.038	33	35	<2.0	0.92	95	0.14	22	34	221	<0.01	0.0034	<0.0005	3.0	<0.01	<0.005	<0.0005
WR-118A	10/29/01	0.056	38	41	1.7	0.73	103	0.14	24	42	259	<0.02	<0.002	<0.004	3.4	<0.02	<0.005	<0.0005
WR-118A	03/06/02	0.038	30	33	1.3	0.63	96	0.15	23	27	145	<0.02	<0.002	<0.004	2.6	<0.02	<0.005	<0.0005
WR-118A	09/11/02	0.038	30	32	1.4	0.52	98	0.13	26	22	209	<0.02	<0.002	<0.004	2.6	<0.02	<0.005	<0.0005
WR-118A	03/11/03	0.031	30	32	1.5	0.51	99	0.12	25	18	203	<0.02	0.0021	<0.004	2.5	<0.02	<0.005	<0.0005
WR-118A	03/22/04	0.035	29	31	1.3	0.53	101	0.14	26	16	191	<0.02	0.0081	<0.004	2.4	<0.02	<0.005	<0.0005
WR-118A	03/16/05	0.028	30	31	1.4	0.48	106	0.12	27	13	215	<0.02	0.0043	<0.004	2.4	<0.02	<0.005	<0.0005
WR-118A	03/07/06	0.031	30	32	1.4	0.38	97	0.14	29	14	188	<0.02	0.006	<0.004	2.6	<0.02	<0.005	<0.0005
WR-118A	03/06/07	0.028	32	34	1.4	0.39	115	0.13	28	14	196	<0.02	<0.002	<0.004	2.7	<0.02	<0.005	<0.0005
WR-118A	03/10/08	0.028	30	32	1.4	0.3	94	0.12	27	10	188	<0.02	0.018	<0.004	2.5	<0.02	<0.005	<0.0005
WR-118A	03/11/09	0.029	30	32	1.3	0.31	93	0.15	27	9.9	204	<0.02	0.015	<0.004	2.5	<0.02	<0.005	<0.0005
WR-118A	03/11/09	0.024	30	32	1.3	0.31	94	0.15	27	9.9	201	<0.02	0.0029	<0.004	2.5	<0.02	<0.005	<0.0005
WR-118A	03/08/10	0.03	29	32	1.3	<0.25	96	0.17	28	10	201	<0.02	0.026	<0.0025	2.3	<0.02	<0.005	<0.0005
WR-118A	03/08/11	0.031	32	33	1.3	0.29	100	0.18	27	9.7	189	<0.02	0.041	<0.0025	2.5	<0.02	<0.005	<0.0005
WR-118A	03/14/12	0.092	59	30	1.5	<0.25	104	<0.1	16	63	323	<0.02	0.0017	<0.0025	4.6	<0.02	<0.001	<0.0005
WR-118A	03/11/13	0.038	24	29	1.2	<0.25	81	0.24	27	11	171	<0.02	0.0083	<0.001	2.1	<0.02	<0.001	<0.0005
WR-118A	03/11/14	0.0336	23.4	31.9	1.28	<0.25	87.9	0.238	25.8	10.3	174	<0.02	0.0036	<0.001	2.0	<0.02	<0.001	<0.0005
WR-118A*	03/10/15	0.0336	25.7	33.3	1.36	<0.25	101	0.174	26.3	10.1	180	<0.02	<0.001	<0.001	2.1	<0.02	<0.001	<0.0005
WR-118A*	03/08/16	0.0327	26.4	32.6	1.37	<0.25	104	0.158	28	10.9	185	<0.02	<0.001	<0.001	2.3	<0.02	<0.001	<0.0005
WR-118A*	03/07/17	0.0313	28.4	33.5	1.44	0.326	99.9	0.211	28.3	11.8	190	<0.02	<0.001	<0.001	2.41	<0.02	<0.001	<0.0005
WR-118A*	03/07/18	0.0317	28.4	33	1.36	0.466	103	0.175	26.3	12	198	<0.02	<0.001	<0.001	2.52	<0.02	<0.001	<0.0005
WR-118A*	03/26/19	0.0314	27.6	32.5	1.42	0.558	104	0.171	28	12.5	197	<0.02	<0.001	<0.001	2.47	<0.02	<0.001	<0.0005
WR-186A	04/08/04	0.081	19	43	1.5	0.87	134	<0.1	26	3.3	209	<0.02	0.0052	<0.004	3.4	<0.02	<0.005	NA
WR-186A	03/15/05	0.099	50	40	1.6	19	124	<0.1	30	12	337	<0.02	0.0067	<0.004	5.5	<0.02	<0.005	<0.0005
WR-186A	06/27/06	0.12	51	42	1.7	11	136	0.1	39	6.8	315	<0.02	0.0041	<0.004	5.6	<0.02	<0.005	<0.0005
WR-186A	03/05/07	0.11	50	42	1.7	11	134	<0.1	40	6.8	292	<0.02	0.004	<0.004	5.5	<0.02	<0.005	<0.0005

**Table 5**  
**Groundwater Monitor Wells - Selected Inorganic Analytes (mg/L)**  
**Vincent Mullins Landfill**

Well Name	Date	Ba	Ca	Na	K	NO <sub>3</sub>	Total Alkalinity	F	SO <sub>4</sub>	Cl	TDS	Cr	Pb	Cd	Mg	Ag	Se	Hg
AWQS (mg/L) →		2				10		4				0.1	0.05	0.005			0.05	0.002
WR-186A	03/04/08	0.11	49	44	1.7	8.6	128	<0.1	41	7.1	309	<0.02	0.0034	<0.004	5.6	<0.02	<0.005	<0.0005
WR-186A	03/09/09	0.1	49	45	1.6	9.5	136	0.13	40	8.3	309	<0.02	<0.002	<0.004	5.7	<0.02	<0.005	<0.0005
WR-186A	03/10/10	0.11	51	43	1.6	9.6	149	0.12	46	9	332	<0.02	<0.002	<0.0025	5.8	<0.02	<0.005	<0.0005
WR-186A	03/14/11	0.13	60	49	1.9	14	139	0.15	44	15	357	<0.02	<0.002	<0.0025	7.1	<0.02	<0.005	<0.0005
WR-186A	03/13/12	0.13	57	47	1.9	11	154	0.14	45	13	341	<0.02	0.0022	<0.0025	6.9	<0.02	<0.001	<0.0005
WR-186A	03/14/13	0.13	58	44	1.7	4	177	0.14	44	7.5	322	<0.02	<0.001	<0.001	6.4	<0.02	0.0013	<0.0005
WR-439A	09/11/02	0.064	34	33	1.7	0.61	116	0.11	35	11	226	<0.02	0.0077	<0.004	3.2	<0.02	<0.005	<0.0005
WR-439A	03/11/03	0.055	34	32	1.6	0.59	115	0.11	34	11	231	<0.02	0.008	<0.004	3.0	<0.02	<0.005	<0.0005
WR-439A	03/16/04	0.12	37	35	3.2	0.57	116	0.12	33	12	238	<0.02	0.0085	<0.004	4.8	<0.02	<0.005	<0.0005
WR-439A	03/15/05	0.059	37	34	1.6	0.6	115	0.1	34	13	239	<0.02	0.0058	<0.004	3.3	<0.02	<0.005	<0.0005
WR-439A	03/07/06	0.064	34	34	1.6	0.64	101	0.13	35	14	222	<0.02	0.0096	<0.004	3.3	<0.02	<0.005	<0.0005
WR-439A	03/07/06	0.061	35	34	1.6	0.64	106	0.13	35	14	207	<0.02	0.012	<0.004	3.3	<0.02	<0.005	<0.0005
WR-439A	03/05/07	0.049	33	34	1.4	0.6	95	0.12	33	14	212	<0.02	<0.002	<0.004	3.0	<0.02	<0.005	<0.0005
WR-439A	03/06/08	0.054	34	35	1.4	0.71	99	0.1	33	15	223	<0.02	0.0024	<0.004	3.1	<0.02	<0.005	<0.0005
WR-439A	03/10/09	0.053	34	34	1.4	0.75	98	0.14	32	16	237	<0.02	0.0041	<0.004	3.1	<0.02	<0.005	<0.0005
WR-439A	03/04/10	0.049	32	33	1.3	0.87	96	0.14	34	16	269	<0.02	<0.002	<0.0025	3.0	<0.02	<0.005	<0.0005
WR-439A	03/07/11	0.051	34	35	1.4	0.96	98	0.17	33	16	207	<0.02	0.0025	<0.0025	3.0	<0.02	<0.005	<0.0005
WR-439A	03/07/11	0.052	34	35	1.4	0.97	95	0.2	32	16	207	<0.02	<0.002	<0.0025	3.0	<0.02	<0.005	<0.0005
WR-439A	03/08/12	0.051	32	33	1.3	1	97	0.15	32	15	210	<0.02	0.0025	<0.0025	2.8	<0.02	<0.001	<0.0005
WR-439A	03/07/13	0.047	31	32	1.2	1.1	89	0.13	31	16	211	<0.02	0.0019	<0.001	2.8	<0.02	<0.001	<0.0005
WR-453A	03/22/04	0.28	118	67	2.6	3.6	435	0.13	27	4.5	525	<0.02	0.0021	<0.004	13.0	<0.02	<0.005	<0.0005
WR-453A	03/15/05	0.27	124	66	2.4	2.8	447	0.11	25	4.5	552	<0.02	0.0065	<0.004	13.0	<0.02	<0.005	<0.0005
WR-453A	03/09/06	0.24	102	60	2.1	NA	382	NA	NA	NA	514	<0.02	<0.002	<0.004	11.0	<0.02	<0.005	<0.0005
WR-453A	03/09/06	0.24	104	60	2.2	NA	369	NA	NA	NA	510	<0.02	<0.002	<0.004	11.0	<0.02	<0.005	<0.0005
WR-453A	03/08/07	0.24	102	63	2.2	2.5	330	0.12	36	12	471	<0.02	<0.002	<0.004	11.0	<0.02	<0.005	<0.0005
WR-453A	03/12/08	0.23	95	61	2.1	2.2	284	0.11	36	24	434	<0.02	<0.002	<0.004	10.0	<0.02	<0.005	<0.0005
WR-453A	03/16/09	0.23	93	59	2	1.7	254	0.19	42	37	476	<0.02	<0.002	<0.004	10.0	<0.02	<0.005	<0.0005
WR-453A	03/10/10	0.24	96	59	2.1	1.8	280	0.15	52	44	481	<0.02	<0.002	<0.0025	11.0	<0.02	<0.005	<0.0005
WR-453A	03/10/11	0.24	103	62	2.2	1.7	253	0.18	57	52	484	<0.02	0.0026	<0.0025	11.0	<0.02	<0.005	<0.0005
WR-453A	03/20/12	0.2	96	56	2	2.2	249	0.16	57	44	475	<0.02	<0.001	<0.0025	10.0	<0.02	<0.001	<0.0005
WR-453A	03/13/13	0.19	101	57	2.1	2.5	234	0.17	62	56	493	<0.02	<0.001	<0.001	11.0	<0.02	0.0011	<0.0005
WR-453A	03/13/14	0.183	105	57.1	2.13	2.36	251	0.173	63.3	57.9	497	<0.02	<0.001	<0.001	11.3	<0.02	<0.001	<0.0005
WR-453A	03/12/15	0.182	104	55.6	2.15	2.08	278	0.176	61.9	51.8	483	<0.02	<0.001	<0.001	11.5	<0.02	<0.001	<0.0005
WR-453A	03/12/15	0.178	103	55.2	2.21	2.11	270	0.171	61.8	52	483	<0.02	0.0079	<0.001	11.3	<0.02	0.0019	<0.0005
WR-453A	03/10/16	0.172	98.9	50.6	2.08	1.82	263	0.119	62.8	46.4	477	<0.02	<0.001	<0.001	10.6	<0.02	0.0011	<0.0005
WR-453A	03/09/17	0.201	109	50.2	2.24	2.31	255	0.215	71.2	49.1	494	<0.02	<0.001	<0.001	11.6	<0.02	<0.001	<0.0005

**Table 5**  
**Groundwater Monitor Wells - Selected Inorganic Analytes (mg/L)**  
**Vincent Mullins Landfill**

Well Name	Date	Ba	Ca	Na	K	NO <sub>3</sub>	Total Alkalinity	F	SO <sub>4</sub>	Cl	TDS	Cr	Pb	Cd	Mg	Ag	Se	Hg
AWQS (mg/L) →		2				10		4				0.1	0.05	0.005			0.05	0.002
WR-453A	03/13/18	0.182	106	45	2.18	2.82	278	0.194	65.4	31.7	483	<0.02	<0.001	<0.001	11.4	<0.02	<0.001	<0.0005
WR-453A	03/27/19	0.156	91.8	43.4	2.01	3.00	251	0.22	60.1	30.2	499	<0.02	0.00179	<0.001	9.95	<0.02	<0.001	<0.0005
WR-456A	02/17/05	0.095	36	37	1.9	0.92	111	0.2	46	12	240	<0.02	0.0074	<0.004	4.0	<0.02	<0.005	<0.0005
WR-456A	03/08/06	0.089	37	38	1.4	1.1	108	0.22	54	14	242	<0.02	<0.002	<0.004	3.9	<0.02	<0.005	<0.0005
WR-456A	03/08/06	0.088	37	37	1.4	1.1	107	0.21	53	14	247	<0.02	0.003	<0.004	3.8	<0.02	<0.005	<0.0005
WR-456A	03/07/07	0.092	38	39	1.4	0.98	106	0.19	50	13	258	<0.02	<0.002	<0.004	4.0	<0.02	<0.005	<0.0005
WR-456A	03/07/07	0.092	38	39	1.4	0.98	104	0.19	50	13	234	<0.02	<0.002	<0.004	4.1	<0.02	<0.005	<0.0005
WR-456A	03/10/08	0.088	37	37	1.3	1	101	0.18	51	13	235	<0.02	<0.002	<0.004	3.9	<0.02	<0.005	<0.0005
WR-456A	03/11/09	0.085	37	36	1.3	1	99	0.21	52	12	258	<0.02	<0.002	<0.004	4.0	<0.02	<0.005	<0.0005
WR-456A	03/08/10	0.072	33	33	1.2	1	98	0.22	54	9.7	243	<0.02	<0.002	<0.0025	3.4	<0.02	<0.005	<0.0005
WR-456A	03/08/11	0.077	36	37	1.3	1	99	0.21	52	10	236	<0.02	0.0049	<0.0025	3.7	<0.02	<0.005	<0.0005
WR-456A	03/13/12	0.083	35	36	1.3	1.1	107	0.22	53	11	245	<0.02	<0.001	<0.0025	3.6	<0.02	<0.001	<0.0005
WR-456A	03/07/13	0.094	38	38	1.4	1.1	103	0.2	54	11	252	<0.02	0.0013	<0.001	4.0	<0.02	<0.001	<0.0005
WR-456A	03/07/13	0.096	38	39	1.4	1.1	102	0.2	54	11	250	<0.02	<0.001	<0.001	4.1	<0.02	0.001	<0.0005
WR-456A	03/10/14	0.0908	36.6	37.9	1.35	1.13	103	0.268	53.8	11.1	244	<0.02	0.001	<0.001	3.9	<0.02	0.0012	<0.0005
WR-456A	03/10/14	0.0876	35.3	36.2	1.3	1.14	103	0.265	54	11	247	<0.02	<0.001	<0.001	3.8	<0.02	0.0011	<0.0005
WR-456A	03/09/15	0.0966	37.3	38.5	1.39	1.06	117	0.196	57.9	13	248	<0.02	0.0037	<0.001	3.9	<0.02	0.001	<0.0005
WR-456A	03/07/16	0.0951	36.4	37.9	1.38	0.963	116	0.186	52.2	11.3	247	<0.02	0.0031	<0.001	3.9	<0.02	0.0015	<0.0005
WR-456A	03/06/17	0.0928	37.4	37.8	1.4	0.969	112	0.276	53.1	11.6	253	<0.02	0.0015	<0.001	3.91	<0.02	<0.001	<0.0005
WR-456A	03/06/18	0.0911	35.5	37.1	1.36	0.948	110	0.266	50.6	11.5	254	<0.02	<0.001	<0.001	3.76	<0.02	0.0011	<0.0005
WR-456A	03/26/19	0.0859	34	35.6	1.36	0.958	112	0.308	54.6	11.9	252	<0.02	<0.001	<0.001	3.62	<0.02	<0.001	<0.0005
WR-457A	02/17/05	0.2	91	56	2.3	1.7	330	0.14	27	5.3	412	<0.02	0.0067	<0.004	9.5	<0.02	<0.005	<0.0005
WR-457A	03/09/06	0.2	94	53	2	NA	334	NA	NA	NA	458	<0.02	0.0041	<0.004	9.9	<0.02	<0.005	<0.0005
WR-457A	03/08/07	0.21	97	58	2.1	2.4	314	0.13	32	6.4	424	<0.02	0.0027	<0.004	10.0	<0.02	<0.005	<0.0005
WR-457A	03/12/08	0.21	91	56	2	2.1	301	0.12	27	5	410	<0.02	0.0048	<0.004	9.7	<0.02	<0.005	<0.0005
WR-457A	03/16/09	0.22	101	59	2.1	2.4	319	0.2	27	4.3	470	<0.02	0.0028	<0.004	11.0	<0.02	<0.005	<0.0005
WR-457A	03/10/10	0.19	83	52	1.9	2.5	283	0.21	38	7.3	416	<0.02	0.0028	<0.0025	8.9	<0.02	<0.005	<0.0005
WR-457A	03/10/11	0.21	89	55	2	2.6	279	0.25	34	6.4	401	<0.02	0.0066	<0.0025	9.4	<0.02	<0.005	<0.0005
WR-457A	03/20/12	0.18	74	48	1.8	2.4	245	0.2	39	7.5	373	<0.02	0.0015	<0.0025	7.8	<0.02	<0.001	<0.0005
WR-457A	03/13/13	0.18	80	48	1.8	3.1	242	0.2	31	11	379	<0.02	0.0026	<0.001	8.3	<0.02	<0.001	<0.0005
WR-457A	03/13/14	0.178	78.6	47.5	1.82	3.34	215	0.212	40.4	32.8	392	<0.02	0.002	<0.001	8.3	<0.02	<0.001	<0.0005
WR-457A	03/12/15	0.205	82.3	47.7	1.94	3.02	236	0.191	44.4	32.5	419	<0.02	0.0166	<0.001	9.1	<0.02	<0.001	<0.0005
WR-457A	03/10/16	0.18	94.5	33.4	2.07	3.24	217	0.142	51.7	46.8	422	<0.02	<0.001	<0.001	9.9	<0.02	<0.001	<0.0005
WR-457A	03/10/16	0.178	92.4	33	2.02	3.24	215	0.141	51.7	46.9	417	<0.02	<0.001	<0.001	10.0	<0.02	<0.001	<0.0005
WR-457A	03/09/17	0.195	89.3	31.4	1.95	3.11	219	0.242	37.5	27.7	370	<0.02	<0.001	<0.001	9.79	<0.02	<0.001	<0.0005
WR-457A	03/13/18	0.21	91.5	29	1.99	3.5	217	0.212	48.7	25.7	403	<0.02	0.0012	<0.001	10.2	<0.02	<0.001	<0.0005



**Table 5**  
**Groundwater Monitor Wells - Selected Inorganic Analytes (mg/L)**  
**Vincent Mullins Landfill**

Well Name	Date	Ba	Ca	Na	K	NO <sub>3</sub>	Total Alkalinity	F	SO <sub>4</sub>	Cl	TDS	Cr	Pb	Cd	Mg	Ag	Se	Hg
AWQS (mg/L) →		2				10		4				0.1	0.05	0.005			0.05	0.002
WR-457A	03/13/18	0.21	90.9	28.5	1.97	3.51	220	0.212	48.7	25.6	398	<0.02	0.0016	<0.001	10.1	<0.02	<0.001	<0.0005
WR-457A	03/28/19	0.198	87.7	27.5	1.92	3.39	232	0.252	50.9	21.7	395	<0.02	<0.001	<0.001	9.49	<0.02	<0.001	<0.0005
WR-458A	02/16/05	0.56	31	28	1.2	0.29	115	0.13	28	8.8	196	<0.02	0.0024	<0.004	2.9	<0.02	<0.005	<0.0005
WR-458A	03/08/06	0.063	32	30	1.2	1.1	108	0.15	31	9.8	206	<0.02	<0.002	<0.004	3.0	<0.02	<0.005	<0.0005
WR-458A	03/07/07	0.066	33	32	1.3	0.44	102	0.14	28	9	225	<0.02	<0.002	<0.004	3.2	<0.02	<0.005	<0.0005
WR-458A	03/10/08	0.063	32	31	1.2	0.46	107	0.12	28	8.8	191	<0.02	<0.002	<0.004	3.1	<0.02	<0.005	<0.0005
WR-458A	03/11/09	0.063	32	30	1.2	0.5	105	0.17	27	8.8	216	<0.02	<0.002	<0.004	3.2	<0.02	<0.005	<0.0005
WR-458A	03/09/10	0.068	34	32	1.3	0.62	119	0.18	29	9.4	219	<0.02	<0.002	<0.0025	3.2	<0.02	<0.005	<0.0005
WR-458A	03/09/11	0.071	38	34	1.3	0.64	121	0.19	28	9.1	220	<0.02	<0.002	<0.0025	3.5	<0.02	<0.005	<0.0005
WR-458A	03/09/11	0.071	38	34	1.3	0.64	124	0.17	28	9.1	216	<0.02	<0.002	<0.0025	3.5	<0.02	<0.005	<0.0005
WR-458A	03/14/12	0.078	39	34	1.4	0.72	129	0.15	29	9.3	237	<0.02	0.001	<0.0025	3.6	<0.02	<0.001	<0.0005
WR-458A	03/12/13	0.084	42	34	1.4	0.75	134	0.17	29	9.5	238	<0.02	<0.001	<0.001	3.8	<0.02	<0.001	<0.0005
WR-459A	02/16/05	0.064	34	31	1.7	0.92	112	0.15	28	11	197	<0.02	<0.002	<0.004	2.9	<0.02	<0.005	<0.0005
WR-459A	03/08/06	0.072	34	32	1.3	1.6	109	0.16	31	13	214	<0.02	0.0035	<0.004	3.0	<0.02	<0.005	<0.0005
WR-459A	03/07/07	0.077	36	34	1.4	1.4	102	0.14	29	12	226	<0.02	<0.002	<0.004	3.2	<0.02	<0.005	<0.0005
WR-459A	03/11/08	0.07	34	31	1.2	1.4	106	0.13	29	11	220	<0.02	<0.002	<0.004	2.9	<0.02	<0.005	<0.0005
WR-459A	03/12/09	0.068	35	31	1.2	1.2	104	0.18	29	11	234	<0.02	<0.002	<0.004	3.0	<0.02	<0.005	<0.0005
WR-459A	03/09/10	0.068	34	32	1.3	1.2	110	0.18	32	12	223	<0.02	<0.002	<0.0025	3.2	<0.02	<0.005	<0.0005
WR-459A	03/09/11	0.072	38	33	1.3	1.4	118	0.2	30	11	222	<0.02	<0.002	<0.0025	3.1	<0.02	<0.005	<0.0005
WR-459A	03/13/12	0.079	38	33	1.3	1.2	120	0.18	30	10	223	<0.02	<0.001	<0.0025	3.2	<0.02	<0.001	<0.0005
WR-459A	03/12/13	0.08	39	33	1.3	1.2	117	0.18	30	10	228	<0.02	0.0013	<0.001	3.2	<0.02	<0.001	<0.0005
WR-600A	06/22/06	NA	NA	NA	NA	1.4	NA	0.18	68	16	NA	NA	NA	NA	NA	NA	NA	NA
WR-600A	03/05/07	0.067	50	41	1.6	1.4	120	0.18	67	14	278	<0.02	<0.002	<0.004	3.3	<0.02	<0.005	<0.0005
WR-600A	03/05/07	0.068	50	41	1.5	1.3	117	0.18	67	14	276	<0.02	<0.002	<0.004	3.3	<0.02	<0.005	<0.0005
WR-600A	03/06/08	0.065	48	40	1.5	1.4	115	0.16	64	12	279	<0.02	0.014	<0.004	3.2	<0.02	<0.005	<0.0005
WR-600A	03/09/09	0.061	47	39	1.5	1.4	122	0.2	58	11	275	<0.02	<0.002	<0.004	3.1	<0.02	<0.005	<0.0005
WR-600A	03/04/10	0.059	44	38	1.4	1.5	121	0.27	58	11	279	<0.02	<0.002	<0.0025	2.9	<0.02	<0.005	<0.0005
WR-600A	03/07/11	0.058	46	40	1.5	1.5	123	0.22	51	10	253	<0.02	<0.002	<0.0025	3.0	<0.02	<0.005	<0.0005
WR-600A	03/07/12	0.058	42	38	1.4	1.3	127	0.22	45	9.6	250	<0.02	<0.001	<0.0025	2.8	<0.02	0.0014	<0.0005
WR-600A	03/07/12	0.0533	40.3	38	1.55	1.26	137	<0.5	44.8	9.5	268	<0.01	<0.01	<0.005	2.5	<0.02	<0.02	<0.0001
WR-600A	03/07/13	0.058	43	37	1.4	1.2	122	0.17	42	8.7	249	<0.02	<0.001	<0.001	2.9	<0.02	0.0014	<0.0005
HSL-96	03/10/11	0.089	54	56	2.5	9.2	124	0.37	60	29	343	<0.02	<.002	<.0025	6.0	<0.02	<.005	<.0005
HSL-96	03/08/12	0.14	70	52	2	15	157	0.26	52	28	400	<0.02	0.002	<.0025	7.6	<0.02	0.002	<.0005
HSL-96	03/12/13	0.13	68	48	1.8	10	150	0.25	47	29	383	<0.02	<0.001	<0.001	7.4	<0.02	0.0023	<.0005

**Table 5**  
**Groundwater Monitor Wells - Selected Inorganic Analytes (mg/L)**  
**Vincent Mullins Landfill**

Well Name	Date	Ba	Ca	Na	K	NO <sub>3</sub>	Total Alkalinity	F	SO <sub>4</sub>	Cl	TDS	Cr	Pb	Cd	Mg	Ag	Se	Hg
<b>AWQS (mg/L) →</b>		<b>2</b>				<b>10</b>		<b>4</b>				<b>0.1</b>	<b>0.05</b>	<b>0.005</b>			<b>0.05</b>	<b>0.002</b>
HSL-97	05/11/04	0.072	44	39	1.4	1.8	148	0.16	39	13	263	<0.02	0.0034	<0.004	3.6	<0.02	<0.005	<0.0005
HSL-97	06/22/04	0.072	46	39	1.4	1.9	149	0.15	38	13	291	<0.02	0.0026	<0.004	3.7	<0.02	<0.005	<0.0005
HSL-97	03/16/05	0.057	38	35	1.3	1.4	125	0.14	42	13	255	<0.02	0.0071	<0.004	2.9	<0.02	<0.005	<0.0005
HSL-97	03/09/06	0.081	48	41	1.5	NA	135	NA	NA	NA	280	<0.02	0.0041	<0.004	4.1	<0.02	<0.005	<0.0005
HSL-97	06/21/06	NA	NA	NA	NA	2.2	NA	0.13	41	14	NA	NA	NA	NA	NA	NA	NA	NA
HSL-97	03/08/07	0.083	49	43	1.5	2.1	130	0.13	44	14	265	<0.02	0.002	<0.004	4.2	<0.02	<0.005	<0.0005
HSL-97	03/11/08	0.61	40	38	1.3	1.6	112	0.14	41	13	232	<0.02	<0.002	<0.004	3.1	<0.02	<0.005	<0.0005
HSL-97	03/09/10	0.07	35	31	1.3	0.88	110	0.21	36	11	219	<0.02	<0.002	<0.0025	2.9	<0.02	<0.005	<0.0005
HSL-97	03/09/10	0.051	34	34	1.3	0.84	109	0.2	35	11	225	<0.02	<0.002	<0.0025	2.3	<0.02	<0.005	<0.0005
HSL-97	03/10/11	0.077	42	40	1.5	1.3	112	0.19	39	11	239	<0.02	0.0063	<.0025	3.2	<0.02	<.005	<.0005
HSL-97	03/08/12	0.085	48	41	1.5	2.7	141	0.16	44	14	282	<0.02	0.001	<.0025	4.1	<0.02	<.001	<.0005
HSL-97	03/11/13	0.048	35	33	1.3	0.92	107	0.15	35	10	227	<0.02	<0.001	<.001	2.2	<0.02	<.001	<.0005
HSL-97	03/11/14	0.0488	34.8	33.9	1.3	0.826	109	0.192	33.9	9.94	216	<0.02	0.0047	<.001	2.2	<0.02	<.001	<.0005

\*Lead sample was field filter for wells WR-115A, WR-116A, WR-117A and WR-118A. Approved by ADEQ Solid Waste by letter dated 3/27/2014.

NA = Not analyzed

Values in **bold and shaded** exceed the AWQS

<b>Ba</b>	barium	<b>NO<sub>3</sub></b>	nitrate	<b>TDS</b>	total dissolved solids	<b>Mg</b>	magnesium
<b>Ca</b>	calcium	<b>F</b>	fluoride	<b>Cr</b>	chromium	<b>Ag</b>	silver
<b>Na</b>	sodium	<b>SO<sub>4</sub></b>	sulfate	<b>Pb</b>	lead	<b>Se</b>	selenium
<b>K</b>	potassium	<b>Cl</b>	chloride	<b>Cd</b>	cadmium	<b>Hg</b>	mercury