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July 19, 2012

Mr. Anthony Leverock, Supervisor  
Hazardous Waste Permit Unit  
Arizona Department of Environmental Quality  
1110 West Washington Street  
Phoenix, Arizona 85007



**Subject: Combined Semi-Annual Reports  
May 2011 to October 2011 & November 2011 to April 2012  
Page Trowbridge Ranch Landfill – EPA ID No. AZD 980 665 814  
Pinal County, Arizona**

Dear Mr. Leverock,

The University of Arizona (UA) is submitting the attached Combined Semi-Annual Reports for the Page Trowbridge Ranch Landfill (PTRL) for the periods of May to October 2011 and November 2011 to April 2012. This report summarizes groundwater and soil vapor monitoring data, operational data for the soil vapor extraction (SVE) system, and post-closure inspection of the PTSL facility during the reporting periods. The Owner's Certification is included at the end of this letter.

Thank you for your continuing assistance with the PTSL site. If you or other ADEQ staff have any questions or comments, please contact me at (520)621-1790 or [sholland@email.arizona.edu](mailto:sholland@email.arizona.edu).

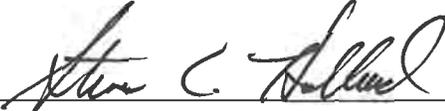
Best regards,

Steven C. Holland CRM ARM  
Assistant VP for Risk Management Services



**OWNER'S CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed:  Date: 7/19/2012

Steven C. Holland, Assistant Vice President  
Department of Risk Management Services  
University of Arizona

Cc: Erik Lohman, ADOA-RMD  
Doug Brown, ADOA-RMD  
Julie Hamilton, AMEC  
Miao Zhang, AMEC  
UA-RMS PTRL File

Enclosure:

Combined Semi-Annual Reports for Page Trowbridge Ranch Landfill



July 18, 2012  
AMEC Project No. 1420112030

Mr. Steven C. Holland, Assistant Vice President  
Department of Risk Management Services  
University of Arizona

**Subject: Combined Semi-Annual Reports  
May 2011 to October 2011 & November 2011 to April 2012  
Page Trowbridge Ranch Landfill  
Pinal County, Arizona**



Dear Mr. Holland,

AMEC Environment & Infrastructure, Inc. (AMEC) is submitting this Combined Semi-Annual Reports for the Page Trowbridge Ranch Landfill (PTRL) to the University of Arizona (UA). This report summarizes groundwater and soil vapor monitoring data, operational data for the soil vapor extraction (SVE) system, and post-closure inspection of the PTRL facility for the periods of May to October 2011 and November 2011 to April 2012.

Monitoring activities during the reporting periods consist of operation of the SVE system, collection of soil vapor samples for analysis, groundwater elevation measurement, collection of groundwater samples for analysis, and post-closure inspection. Figure 1 shows the locations of groundwater and soil vapor monitoring points, as well as the location of the SVE system. Operation of the SVE system and collection of operational data were performed by UA personnel in accordance with the Operation and Maintenance Manual (March 2012). Groundwater and soil vapor monitoring activities were performed by UA personnel in accordance with the Post-Closure Period Expanded Groundwater Detection Monitoring Plan (March 29, 2012). Post-closure inspection was conducted by UA personnel in accordance with the Post-Closure Inspection and Maintenance Plan (March 2012). The operation of the SVE system is described first, followed by summaries of groundwater and soil vapor monitoring data.

## 1.0 OPERATION OF SVE SYSTEM

The SVE system operated during the reporting periods identified above except between October 20, 2011 and March 5, 2012. The SVE system was turned off on October 20, 2011 to facilitate the rebound study, and was restarted on March 5, 2012. During SVE operation, soil vapor well SGS-Well was used for extraction, while well SGD-Well was used for air injection. The SVE system was monitored approximately weekly when it was in operation. The SVE run time is tabulated in Table 1. The percentage of time when the SVE system was in operation (as calculated between monitoring periods) varied between 6% and 43%, mostly as a function of available solar power (there is no other power source at the site). Process flow rates and cumulative volumes are not reported in Table 1 because the pitot tube differential pressure readings from instrumentation located on SGS-Well and SGD-Well process piping (which should be directly correlated with flow) have increased from 2.5 and 0.5 inches water column (in WC) to 6 and 3 in WC, respectively, since February 2010. This increase is unrealistic and will be further investigated during an upcoming site visit. Once the pitot tube assemblies are inspected

(and maintained/replaced as necessary), differential pressure data will be further evaluated to determine if a revised correlation based on an alternative flow measurement method (e.g., a handheld anemometer) can be derived.

SVE process samples were collected from the SVE system at sample ports before the treatment vessels (influent), between the two treatment vessels (between-vessel), and after the treatment vessels (effluent) in May, June, July, August, and October 2011, as well as March and April 2012. These soil vapor samples were submitted to Turner Laboratory, an Arizona Department of Health Services-certified laboratory in Tucson, Arizona for analysis of volatile organic compounds (VOCs) using EPA Method TO-15. Laboratory reports for these soil vapor samples are included in Attachments 1 through 7. Chain of Custody forms are at the end of each laboratory report. Analytical results for the influent and effluent samples are presented in Table 2. The results for between-vessel samples are in the laboratory reports.

## **2.0 SOIL VAPOR MONITORING ACTIVITIES AND RESULTS**

The soil vapor monitoring network consists of two groundwater monitoring wells (MW-2 and MW-5) and six soil vapor monitoring points: SGS-Well, SGD-Well, SGS-SP, SGD-SP, SGD-MP, and SGD-DP, as shown on Figure 1. Groundwater monitoring wells MW-2 and MW-5 are equipped with down-hole inflatable packers that, when inflated, isolate the screen interval above the water table and thus allow soil vapor samples to be collected from these wells.

Semi-annual soil vapor monitoring was performed on October 18, 2011 and April 18, 2012, when the SVE system was in operation. During each event, soil vapor samples were collected from MW-2, MW-5, SGS-SP, SGD-SP, SGD-MP, and SGD-DP. Soil vapor at SGS-Well is monitored with samples collected at the SVE influent. SGD-well was being used for air injection, and therefore was not sampled. The soil vapor samples were submitted to Turner Laboratory for analysis of VOCs using EPA Method TO-15. Laboratory reports for these soil vapor samples are included in Attachments 8 and 9. Chain of Custody forms are at the end of each laboratory report. The analytical results for the soil vapor samples collected during the reporting period are tabulated in Table 3 and graphically presented in Figures 4a through 4t. Table 3 and Figures 4a through 4t also include soil vapor samples collected between October 18, 2011 and April 18, 2012 for the rebound study. These data will be interpreted in a separate report and therefore are not discussed in this report.

Table 4 presents site threshold concentrations for additional actions for seven VOCs. These thresholds were developed to prompt additional actions to investigate whether groundwater quality may be impacted by releases from the landfill. The detected concentrations of VOCs in soil vapor samples collected on October 18, 2011 and April 18, 2012, as well as in the SVE influent, are compared to site thresholds. None of the VOCs was detected at concentrations higher than site thresholds except for chloroform. The chloroform concentration in samples collected on April 18, 2012 from monitoring point SGD-MP are  $210 \text{ mg/m}^3$ , which is higher than its threshold of  $140 \text{ mg/m}^3$ . However, the detected concentration is within the range of historical data. The Mann-Kendall test, which is a non-parametric statistical test for trend, is used to assess whether a statistically significant upward trend in chloroform concentration is present, which would be an indication of releases in the landfill. The data used in the Mann-Kendall test

include chloroform concentrations in samples collected from SGD-MP during SVE operation between November 2009 and April 2012. The Mann-Kendall test was performed using the Kendall program developed by the U.S. Geological Survey (USGS)<sup>1</sup>. The input and output files for the Kendall program are presented in Table 5. The Mann-Kendall test result indicated that the confidence level that an upward trend is present is:  $1 - \frac{0.5480}{2} = 72.6\%$ . Therefore, there is no statistically significant upward trend at 95% confidence level, and no further action is necessary.

### 3.0 GROUNDWATER MONITORING ACTIVITIES AND RESULTS

The groundwater monitoring network consists of four groundwater monitoring wells, MW-2, MW-3, MW-4, and MW-5, as shown on Figure 1. On October 18, 2011 and April 18, 2012, groundwater elevations were measured at each well, and groundwater samples were collected from each well. The samples were sent to Turner Laboratory for the following analyses:

- Sodium and manganese by EPA Method 200.7
- Chloride and sulfate by EPA Method 300.0
- VOCs by EPA Method 524.2
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C
- Organochlorine pesticides by EPA Method 8081

The groundwater sampling logs are included in Attachment 10. The laboratory reports for the groundwater samples are included in Attachments 11 and 12. The Chain of Custody forms are at the end of the laboratory reports.

Groundwater elevation measurements are summarized in Table 6, and are graphically presented on Figures 2 and 3. These data indicate that groundwater flow direction is toward the southwest. Analytical results for the groundwater samples are presented in Table 7. These results are compared to the alert levels for inorganic and organic constituents in Tables 8 and 9, respectively. None of the compounds was detected at concentrations higher than their alert levels.

### 4.0 POST-CLOSURE INSPECTION

Post-closure inspection was conducted on February 22, 2012. Two maintenance items were identified during the inspection. The inspection and maintenance/repair reports are included in Attachment 13.

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<sup>1</sup> USGS, 2006, Computer Program for the Kendall Family of Trend Tests, Scientific Investigation Report 2005-5275, <http://pubs.usgs.gov/sir/2005/5275/>

University of Arizona  
Combined Semi-Annual Reports  
AMEC Project No. 1420112030  
July 18, 2012

If you have any questions or comments, please contact Miao Zhang at (206)838-8462 or [miao.zhang@amec.com](mailto:miao.zhang@amec.com).

Sincerely,  
**AMEC Environment & Infrastructure, Inc.**



Miao Zhang, PE  
Senior Engineer  
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Enclosures:

- Table 1 – Summary of Operation of the SVE System
- Table 2 – Analytical Results for Soil Vapor Samples from SVE System
- Table 3 – Analytical Results for Soil Vapor Samples at Soil Vapor Monitoring Points
- Table 4 – Thresholds for Additional Actions for Soil Vapor Samples
- Table 5 – Input and Output Files for USGS Kendall Program
- Table 6 – Groundwater Elevations
- Table 7 – Analytical Results for Groundwater Samples
- Table 8 – Alert Levels for Inorganic Constituents in Groundwater Samples
- Table 9 – Alert Levels for Organic Constituents in Groundwater Samples

- Figure 1 – Groundwater and Soil Vapor Monitoring Points
- Figure 2 – Groundwater Elevations – October 18, 2011
- Figure 3 – Groundwater Elevations – April 18, 2012
- Figures 4a-4t – Soil Vapor VOC Concentration Trends

- Attachment 1 – Laboratory Reports for May 2011 SVE Process Samples (CD only)
- Attachment 2 – Laboratory Reports for June 2011 SVE Process Samples (CD only)
- Attachment 3 – Laboratory Reports for July 2011 SVE Process Samples (CD only)
- Attachment 4 – Laboratory Reports for August 2011 SVE Process Samples (CD only)
- Attachment 5 – Laboratory Reports for October 2011 SVE Process Samples (CD only)
- Attachment 6 – Laboratory Reports for March 2012 SVE Process Samples (CD only)
- Attachment 7 – Laboratory Reports for April 2012 SVE Process Samples (CD only)
- Attachment 8 – Laboratory Reports for October 2011 Soil Vapor Samples (CD only)
- Attachment 9 – Laboratory Reports for April 2012 Soil Vapor Samples (CD only)
- Attachment 10 – Groundwater Sample Logs (CD only)
- Attachment 11 – Laboratory Reports for October 2011 Groundwater Samples (CD only)
- Attachment 12 – Laboratory Reports for April 2012 Groundwater Samples (CD only)
- Attachment 13 – Post-Closure Inspection and Maintenance/Repair Reports (CD only)

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**TABLES**

TABLE 2

**ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES FROM SVE SYSTEM**  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per cubic meter (mg/m<sup>3</sup>)

Analyte	Influent to Treatment Vessels										Effluent from Treatment Vessels									
	5/18/2011	6/9/2011	7/7/2011	8/9/2011	10/4/2011	3/8/2012	4/2/2012	5/18/2011	6/9/2011	7/7/2011	8/9/2011	10/7/2011	3/8/2012	4/2/2012						
1,1,1-Trichloroethane	6.7E-01	9.6E-01	1.1E+00	1.3E+00	5.7E-01	1.5E+00	4.4E-01	1.7E-01	3.5E-01	3.4E-01	2.4E-01	7.4E-03	8.0E-03	4.7E-01						
1,1,2,2-Tetrachloroethane	8.5E-01	1.2E+00	1.4E+00	1.6E+00	7.1E-01	1.9E+00	6.8E-01	1.7E-01	4.4E-01	4.2E-01	3.1E-01	9.4E-03	1.1E-02	5.9E-01						
1,1,2-Trichloroethane	6.7E-01	9.6E-01	1.1E+00	1.3E+00	5.7E-01	1.5E+00	4.4E-01	1.7E-01	3.5E-01	3.4E-01	2.4E-01	7.4E-03	8.0E-03	4.7E-01						
1,1,1,2-Trichlorotrifluoroethane (Freon 113)	1.2E+01	9.2E+00	1.0E+01	8.2E+00	7.2E+00	1.1E+01	1.1E+01	2.6E+00	2.3E+00	1.1E+00	4.0E-01	1.0E-02	1.2E-02	6.6E-01						
1,1-Dichloroethane	5.5E-01	7.1E-01	8.3E-01	9.7E-01	4.2E-01	1.1E+00	4.4E-01	1.9E-01	2.6E-01	2.5E-01	1.8E-01	5.5E-03	6.0E-03	3.5E-01						
1,1-Dichloroethane	1.5E+00	7.2E-01	9.9E-01	9.9E-01	5.6E-01	1.1E+00	1.0E+00	7.9E-01	6.8E-01	5.1E-01	2.4E-01	5.4E-03	6.0E-03	3.4E-01						
1,1-Difluoroethane	---	---	---	---	---	2.9E+00	---	---	---	---	---	---	1.7E-02	---						
1,2,4-Trichlorobenzene	3.7E+00	5.2E+00	6.1E+00	7.1E+00	3.1E+00	8.0E+00	2.9E+00	9.2E-01	1.9E+00	1.8E+00	1.3E+00	4.0E-02	4.7E-02	2.5E+00						
1,2,4-Trimethylbenzene	6.1E-01	8.7E-01	1.0E+00	1.2E+00	5.1E-01	1.3E+00	4.9E-01	1.5E-01	3.2E-01	3.0E-01	2.2E-01	6.7E-03	7.0E-03	4.2E-01						
1,2-Dibromoethane (EDB)	9.5E-01	1.4E+00	1.6E+00	1.8E+00	8.0E-01	2.1E+00	7.6E-01	2.4E-01	5.0E-01	4.8E-01	3.4E-01	1.0E-02	1.2E-02	6.6E-01						
1,2-Dichlorobenzene	7.4E-01	1.1E+00	1.2E+00	1.4E+00	6.2E-01	1.6E+00	6.0E-01	1.8E-01	3.9E-01	3.7E-01	2.7E-01	8.2E-03	9.0E-03	5.1E-01						
1,2-Dichloroethane	3.6E+00	3.0E+00	3.3E+00	2.7E+00	2.2E+00	5.9E+00	5.1E+00	1.2E+01	2.6E-01	2.8E-01	1.8E-01	5.5E-03	6.0E-03	3.5E-01						
1,2-Dichloropropane	7.6E-01	8.2E-01	9.5E-01	1.1E+00	5.0E-01	1.3E+00	8.9E-01	1.4E-01	3.0E-01	2.9E-01	2.1E-01	6.3E-03	7.0E-03	4.0E-01						
1,3,5-Trimethylbenzene	6.1E-01	8.7E-01	1.0E+00	1.2E+00	5.1E-01	1.3E+00	4.9E-01	1.5E-01	3.2E-01	3.0E-01	2.2E-01	6.7E-03	7.0E-03	4.2E-01						
1,3-Butadiene	2.7E-01	3.9E-01	4.5E-01	5.3E-01	2.3E-01	6.0E-01	2.2E-01	6.8E-02	1.4E-01	1.4E-01	9.9E-02	3.0E-03	3.0E-03	1.9E-01						
1,3-Dichlorobenzene	7.4E-01	1.1E+00	1.2E+00	1.4E+00	6.2E-01	1.6E+00	6.0E-01	1.8E-01	3.9E-01	3.7E-01	2.7E-01	8.2E-03	9.0E-03	5.1E-01						
1,4-Dichlorobenzene	7.4E-01	1.1E+00	1.2E+00	1.4E+00	6.2E-01	1.6E+00	6.0E-01	1.8E-01	3.9E-01	3.7E-01	2.7E-01	8.2E-03	9.0E-03	5.1E-01						
1,4-Dioxane	1.8E+00	2.5E+00	3.0E+00	3.4E+00	1.5E+00	4.4E+00	1.4E+00	1.4E+00	9.3E-01	8.9E-01	6.9E-01	2.0E-02	2.3E-02	1.4E+00						
2,2,4-Trimethylpentane	5.8E-01	8.2E-01	9.6E-01	1.1E+00	4.8E-01	1.3E+00	4.4E+00	1.4E-01	3.0E-01	2.9E-01	2.1E-01	6.4E-03	7.0E-03	4.0E-01						
2-Butanone (MEK)	1.4E+00	2.1E+00	2.4E+00	2.8E+00	1.2E+00	3.2E+00	1.2E+00	3.6E-01	7.6E-01	7.3E-01	5.3E-01	1.6E-02	1.8E-02	1.0E+00						
2-Hexanone	2.0E+00	2.9E+00	3.4E+00	3.9E+00	1.7E+00	4.4E+00	1.7E+00	5.1E-01	1.0E+00	1.0E+00	7.9E-01	2.2E-02	2.6E-02	1.4E+00						
2-Propanol	1.2E+00	1.7E+00	2.1E+00	2.4E+00	1.0E+00	2.7E+00	9.7E-01	3.0E-01	6.3E-01	6.1E-01	4.4E-01	1.3E-02	1.5E-02	8.4E-01						
3-Chloropropene	1.5E+00	2.2E+00	2.6E+00	3.0E+00	1.3E+00	3.4E+00	1.2E+00	3.9E-01	8.1E-01	7.8E-01	5.6E-01	1.7E-02	2.0E-02	1.1E+00						
4-Ethyltoluene	6.1E-01	8.7E-01	1.0E+00	1.2E+00	5.1E-01	1.3E+00	4.9E-01	1.5E-01	3.2E-01	3.0E-01	2.2E-01	6.7E-03	7.0E-03	4.2E-01						
4-Methyl-2-pentanone (MIBK)	5.0E-01	7.2E-01	8.4E-01	9.8E-01	4.3E-01	1.1E+00	4.0E-01	1.3E-01	2.8E-01	2.6E-01	1.8E-01	5.6E-03	6.0E-03	3.5E-01						
Acetone	6.4E-01	9.1E-01	1.1E+00	1.2E+00	5.4E-01	1.4E+00	4.6E-01	1.4E-01	3.0E-01	2.9E-01	2.1E-01	7.1E-02	8.1E-02	1.8E+00						
Benzene	3.9E-01	5.6E-01	6.5E-01	7.7E-01	3.3E-01	8.7E-01	3.2E-01	9.9E-02	2.1E-01	2.0E-01	1.4E-01	4.4E-03	5.0E-03	2.7E-01						
Bromodichloromethane	8.3E-01	1.2E+00	1.4E+00	1.6E+00	7.0E-01	1.8E+00	6.6E-01	2.1E-01	4.3E-01	4.2E-01	3.0E-01	1.4E-02	1.6E-02	8.8E-01						
Bromoform	1.3E+00	1.8E+00	2.1E+00	2.5E+00	1.1E+00	2.8E+00	1.0E+00	3.2E-01	6.7E-01	6.4E-01	4.6E-01	1.4E-02	1.6E-02	5.7E-01						
Bromomethane	4.8E-01	6.8E-01	8.0E-01	9.3E-01	4.0E-01	1.0E+00	3.8E-01	1.2E-01	2.8E-01	2.4E-01	1.7E-01	5.3E-03	6.1E-02	3.3E-01						
Carbon disulfide	3.8E-01	5.2E+00	6.0E+00	7.0E+00	3.0E+00	8.0E+00	3.1E-01	9.6E-02	8.0E-01	7.7E-01	5.6E-01	5.8E-02	2.0E-02	2.7E-01						
Carbon tetrachloride	1.2E+01	8.8E+00	7.0E+00	6.2E+00	6.3E+00	9.1E+00	1.1E+00	9.1E-01	8.8E-01	4.7E-01	3.0E-01	8.6E-03	9.0E-03	5.4E-01						
Chlorobenzene	5.7E-01	8.1E-01	9.4E-01	1.1E+00	4.8E-01	1.2E+00	4.6E-01	1.4E-01	3.0E-01	2.8E-01	2.1E-01	6.3E-03	7.0E-03	3.9E-01						
Chloroethane	1.3E+00	1.9E+00	2.2E+00	2.5E+00	1.1E+00	2.9E+00	1.0E+00	3.3E-01	6.8E-01	6.5E-01	4.7E-01	1.4E-02	1.6E-02	9.0E-01						
Chloroform	3.3E+02	2.5E+02	2.9E+02	2.3E+02	1.7E+02	4.1E+02	3.5E+02	1.1E+02	1.1E+02	8.0E+01	4.1E+01	6.7E-03	7.0E-03	1.2E+00						
Chloromethane	1.0E+00	1.4E+00	1.7E+00	2.0E+00	8.6E-01	5.6E+00	8.2E-01	2.6E-01	5.3E-01	5.1E-01	3.7E-01	1.1E-02	3.2E-02	7.1E-01						
cis-1,2-Dichloroethane	4.9E-01	7.0E-01	8.1E-01	9.5E-01	4.1E-01	1.1E+00	3.9E-01	1.2E-01	2.6E-01	2.4E-01	1.8E-01	5.4E-03	6.0E-03	3.4E-01						
cis-1,3-Dichloropropene	5.6E-01	8.0E-01	9.3E-01	1.1E+00	4.9E-01	1.2E+00	4.5E-01	1.4E-01	2.9E-01	2.8E-01	2.0E-01	6.2E-03	7.0E-03	3.9E-01						
Cyclohexane	4.2E-01	6.1E-01	7.0E-01	8.3E-01	3.6E-01	9.3E-01	3.4E-01	1.1E-01	2.2E-01	2.1E-01	1.5E-01	4.7E-03	5.0E-03	2.9E-01						
Dibromochloromethane	1.0E+00	1.5E+00	1.7E+00	2.0E+00	8.8E-01	5.6E+00	8.4E-01	2.6E-01	5.3E-01	5.1E-01	3.7E-01	1.2E-02	1.3E-02	7.9E-01						
Dichlorodifluoromethane (Freon 12)	4.8E+00	3.2E+00	3.0E+00	2.4E+00	2.2E+00	3.7E+00	4.6E+00	3.0E+00	2.6E+00	2.2E+00	2.7E+00	1.8E+00	1.8E+00	3.2E+00						
Dichlorotetrafluoroethane (Freon 114)	8.6E-01	1.2E+00	1.4E+00	1.7E+00	7.3E-01	1.9E+00	6.9E-01	2.2E-01	4.9E-01	4.3E-01	3.1E-01	9.5E-03	1.1E-02	6.0E-01						
Ethanol	9.3E-01	1.3E+00	1.5E+00	1.8E+00	7.5E-01	2.0E+00	7.5E-01	2.3E-01	4.9E-01	4.7E-01	3.4E-01	1.0E-02	1.2E-02	6.4E-01						
Ethylbenzene	5.4E-01	7.7E-01	8.9E-01	1.0E+00	7.2E-01	1.2E+00	4.3E-01	1.3E-01	2.8E-01	2.7E-01	1.9E-01	5.9E-03	6.0E-03	3.7E-01						
Heptane	5.1E-01	7.2E-01	8.4E-01	9.8E-01	4.3E-01	1.1E+00	4.0E-01	1.3E-01	2.6E-01	2.5E-01	1.8E-01	5.6E-03	6.0E-03	3.5E-01						

TABLE 2

**ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES FROM SVE SYSTEM**

Combined Semi-Annual Reports  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona

Concentrations shown in milligrams per cubic meter (mg/m<sup>3</sup>)

Analyte	Influent to Treatment Vessels										Effluent from Treatment Vessels									
	5/18/2011	6/9/2011	7/7/2011	8/9/2011	10/4/2011	3/8/2012	4/2/2012	5/18/2011	6/9/2011	7/7/2011	8/9/2011	10/7/2011	3/8/2012	4/2/2012						
Hexachlorobutadiene	5.3E+00 U	7.5E+00 U	8.7E+00 U	1.0E+01 U	4.4E+00 U	1.2E+01 U	4.2E+00 U	1.3E+00 U	2.8E+00 U	2.6E+00 U	1.9E+00 U	5.8E-02 U	6.7E-02 U	3.6E+00 U						
Hexane	4.4E-01 U	6.2E-01 U	7.2E-01 U	8.4E-01 U	3.7E-01 U	9.6E-01 U	3.5E-01 U	1.1E-01 U	2.3E-01 U	2.2E-01 U	1.6E-01 U	4.8E-03 U	5.0E-03 U	3.0E-01 U						
Isopropylbenzene	6.1E-01 U	8.7E-01 U	1.0E+00 U	1.2E+00 U	5.1E-01 U	1.3E+00 U	4.9E-01 U	1.5E-01 U	3.2E-01 U	3.0E-01 U	2.2E-01 U	6.7E-03 U	7.0E-03 U	4.2E-01 U						
m,p-Xylene	5.4E-01 U	7.7E-01 U	8.9E-01 U	1.0E+00 U	7.8E-01 U	1.2E+00 U	4.3E-01 U	1.3E-01 U	2.8E-01 U	2.7E-01 U	1.9E-01 U	6.0E-03 U	6.0E-03 U	3.7E-01 U						
Methyl tert-butyl ether	4.4E-01 U	6.4E-01 U	7.4E-01 U	8.6E-01 U	3.7E-01 U	9.8E-01 U	3.6E-01 U	1.1E-01 U	2.3E-01 U	2.2E-01 U	1.6E-01 U	4.9E-03 U	5.0E-03 U	3.1E-01 U						
Methylene chloride	1.6E+00	1.8E+00	1.5E+00	1.1E+00	1.1E+00	9.4E+00 U	1.4E+00	7.3E-01 U	8.6E-01 U	7.4E-01 U	1.3E+00	5.5E-03 U	5.4E-02 U	1.5E+00						
n-Propylbenzene	6.1E-01 U	8.7E-01 U	1.0E+00 U	1.2E+00 U	5.1E-01 U	1.3E+00 U	4.9E-01 U	1.5E-01 U	3.2E-01 U	3.0E-01 U	2.2E-01 U	6.7E-03 U	7.0E-03 U	4.2E-01 U						
o-Xylene	5.4E-01 U	7.7E-01 U	8.9E-01 U	1.0E+00 U	4.5E-01 U	1.2E+00 U	4.3E-01 U	1.3E-01 U	2.8E-01 U	2.7E-01 U	1.9E-01 U	5.9E-03 U	6.0E-03 U	3.7E-01 U						
Styrene	5.3E-01 U	7.5E-01 U	8.7E-01 U	1.0E+00 U	4.4E-01 U	1.2E+00 U	4.2E-01 U	1.3E-01 U	2.7E-01 U	2.6E-01 U	1.9E-01 U	5.8E-03 U	6.0E-03 U	3.6E-01 U						
Tetrachloroethene	3.8E+00	2.1E+00	2.8E+00	1.9E+00	1.6E+00	6.4E+00	5.7E+00	2.1E-01 U	4.4E-01 U	4.2E-01 U	3.0E-01 U	9.2E-03 U	1.1E-02 U	5.8E-01 U						
Tetrahydrofuran	3.6E-01 U	5.2E-01 U	6.0E-01 U	7.1E-01 U	3.1E-01 U	8.0E-01 U	2.9E-01 U	9.1E-02 U	1.9E-01 U	1.8E-01 U	1.3E-01 U	4.0E-03 U	4.0E-03 U	2.5E-01 U						
Toluene	4.6E-01 U	6.6E-01 U	7.7E-01 U	9.0E-01 U	3.9E-01 U	1.0E+00 U	3.7E-01 U	1.2E-01 U	2.4E-01 U	2.3E-01 U	1.7E-01 U	7.0E-03 U	7.0E-03 U	3.2E-01 U						
trans-1,2-Dichloroethene	4.9E-01 U	7.0E-01 U	8.1E-01 U	9.5E-01 U	4.1E-01 U	1.1E+00 U	3.9E-01 U	1.2E-01 U	2.6E-01 U	2.4E-01 U	1.8E-01 U	5.4E-03 U	6.0E-03 U	3.4E-01 U						
trans-1,3-Dichloropropene	5.6E-01 U	8.0E-01 U	9.3E-01 U	1.1E+00 U	4.7E-01 U	1.2E+00 U	4.5E-01 U	1.4E-01 U	2.9E-01 U	2.8E-01 U	2.0E-01 U	6.2E-03 U	7.0E-03 U	3.9E-01 U						
Trichloroethene	8.5E+00	5.7E+00	6.5E+00	5.1E+00	3.9E+00	1.1E+01	1.0E+01	1.7E-01 U	3.5E-01 U	3.3E-01 U	2.4E-01 U	7.3E-03 U	8.0E-03 U	4.6E-01 U						
Trichlorofluoromethane (Freon 11)	1.7E+02	1.3E+02	1.6E+02	1.0E+02	8.4E+01	1.2E+02 J	1.4E+02	7.3E+01	5.2E+01	1.8E+01	7.7E+01	7.7E-03 U	8.0E-03 U	2.8E+02						
Vinyl chloride	3.2E-01 U	4.5E-01 U	5.2E-01 U	6.1E-01 U	2.6E-01 U	6.9E-01 U	2.5E-01 U	7.9E-02 U	1.6E-01 U	1.6E-01 U	1.1E-01 U	3.5E-03 U	4.0E-03 U	2.2E-01 U						

Notes

- Data qualifiers are as follows:  
 -- = no data available.  
 J = reported result is the estimated concentration.  
 U = analyte not detected at reporting limit indicated.
- Volatile organic compounds (VOCs) analyzed by EPA Method TO-15.

Abbreviations

- EDB = ethylene dibromide  
 EPA = US Environmental Protection Agency  
 MEK = methyl ethyl ketone  
 MIBK = methyl isobutyl ketone

TABLE 3

ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES AT SOIL VAPOR MONITORING POINTS 1,2,3,4,5  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per cubic meter (mg/m3)

Analyte	Sample Date	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-Well	SGS-Well-DUP	SGS-Well	SGS-Well-DUP	SGS-Well	SGS-Well-DUP
1,1,1-Trichloroethane	10/18/2011	3.9E-02	4.7E-02	1.6E-01	3.7/2012	3/12/2012	3/29/2012	4/18/2012	4/18/2012	11/3/2011	3/5/2012	3/5/2012	3/8/2012	3/8/2012	3/8/2012	3/8/2012
1,1,1-Trichloroethane	3.9E-02	4.7E-02	1.6E-01	3.7E-02	3.8E-02	2.0E-02	2.0E-02	3.2E-02	3.2E-02	9.2E-01	1.3E+00	1.3E+00	1.9E+00	1.9E+00	1.9E+00	1.9E+00
1,1,2,2-Tetrachloroethane	4.9E-02	5.9E-02	1.1E-01	4.7E-02	2.4E-02	2.4E-02	4.0E-02	4.0E-02	4.0E-02	1.2E+00	1.6E+00	1.6E+00	2.4E+00	2.4E+00	2.4E+00	2.4E+00
1,1,2-Trichloroethane	3.9E-02	4.7E-02	1.1E-01	3.8E-02	2.0E-02	2.0E-02	3.2E-02	3.2E-02	3.2E-02	9.2E-01	1.3E+00	1.3E+00	1.9E+00	1.9E+00	1.9E+00	1.9E+00
1,1,2-Trichloroethane (Freon 113)	1.0E-01	6.8E-01	2.5E+00	4.6E+00	1.2E-01	6.5E-02	9.3E-02	9.3E-02	9.3E-02	5.4E+00	7.4E+00	7.4E+00	1.1E+01	1.1E+01	1.1E+01	1.1E+01
1,1-Dichloroethane	2.9E-02	3.5E-02	1.3E-01	2.8E-02	1.4E-02	1.4E-02	2.4E-02	2.4E-02	2.4E-02	6.8E-01	9.7E-01	9.7E-01	1.4E+00	1.4E+00	1.4E+00	1.4E+00
1,1-Dichloroethane	8.7E-02	1.1E-01	2.8E-01	5.8E-02	4.4E-02	4.4E-02	5.9E-02	5.9E-02	5.9E-02	6.7E-01	2.8E-02	2.8E-02	4.4E+00	4.4E+00	4.4E+00	4.4E+00
1,1-Difluoroethane	2.1E-01	2.5E-01	1.4E+00	4.9E-01	1.1E-01	1.1E-01	1.7E-01	1.7E-01	1.7E-01	5.0E+00	1.6E-01	1.6E-01	3.8E+00	3.8E+00	3.8E+00	3.8E+00
1,2,4-Trichlorobenzene	3.5E-02	4.2E-02	1.3E-01	3.4E-02	1.8E-02	1.8E-02	2.9E-02	2.9E-02	2.9E-02	8.2E-01	1.2E+00	1.2E+00	1.7E+00	1.7E+00	1.7E+00	1.7E+00
1,2,4-Trimethylbenzene	5.5E-02	6.6E-02	2.3E-01	5.3E-02	2.8E-02	2.8E-02	4.5E-02	4.5E-02	4.5E-02	1.3E+00	1.8E+00	1.8E+00	2.7E+00	2.7E+00	2.7E+00	2.7E+00
1,2-Dibromochloroethane (EDB)	4.3E-02	5.1E-02	1.0E-01	4.1E-02	2.2E-02	2.2E-02	3.5E-02	3.5E-02	3.5E-02	1.0E+00	1.4E+00	1.4E+00	2.1E+00	2.1E+00	2.1E+00	2.1E+00
1,2-Dichlorobenzene	5.9E-02	6.4E-02	1.1E-01	7.2E-02	5.0E-02	5.0E-02	5.7E-02	5.7E-02	5.7E-02	3.0E+00	3.0E+00	3.0E+00	5.4E+00	5.4E+00	5.4E+00	5.4E+00
1,2-Dichloroethane	3.3E-02	4.0E-02	1.3E-01	3.2E-02	1.8E-02	1.8E-02	2.7E-02	2.7E-02	2.7E-02	7.8E-01	1.1E+00	1.1E+00	1.6E+00	1.6E+00	1.6E+00	1.6E+00
1,2-Dichloropropane	3.5E-02	4.2E-02	1.3E-01	8.2E-02	3.4E-02	3.4E-02	2.9E-02	2.9E-02	2.9E-02	8.2E-01	1.2E+00	1.2E+00	3.5E-01	3.5E-01	3.5E-01	3.5E-01
1,3,5-Trimethylbenzene	1.6E-02	1.9E-02	1.0E-01	1.5E-02	7.9E-03	7.9E-03	1.3E-02	1.3E-02	1.3E-02	3.7E-01	1.2E-02	1.2E-02	1.6E-01	1.6E-01	1.6E-01	1.6E-01
1,3-Butadiene	4.3E-02	5.1E-02	1.0E-01	4.1E-02	2.2E-02	2.2E-02	3.5E-02	3.5E-02	3.5E-02	1.0E+00	1.4E+00	1.4E+00	2.1E+00	2.1E+00	2.1E+00	2.1E+00
1,3-Dichlorobenzene	4.3E-02	5.1E-02	1.0E-01	4.1E-02	2.2E-02	2.2E-02	3.5E-02	3.5E-02	3.5E-02	1.0E+00	1.4E+00	1.4E+00	2.1E+00	2.1E+00	2.1E+00	2.1E+00
2,2,4-Trimethylpentane	1.0E-01	1.2E-01	7.8E-02	3.2E-02	1.7E-02	1.7E-02	2.7E-02	2.7E-02	2.7E-02	2.4E+00	7.8E-02	7.8E-02	1.0E+00	1.0E+00	1.0E+00	1.0E+00
2,2,4-Trimethylpentane	3.3E-02	4.0E-02	1.3E-01	3.2E-02	1.8E-02	1.8E-02	2.7E-02	2.7E-02	2.7E-02	7.8E-01	1.1E+00	1.1E+00	1.6E+00	1.6E+00	1.6E+00	1.6E+00
2,2-Dichlorobenzene	1.2E-01	1.4E-01	1.3E-01	2.7E-01	1.1E-01	1.1E-01	1.9E-01	1.9E-01	1.9E-01	2.0E+00	6.4E-02	6.4E-02	8.4E-01	8.4E-01	8.4E-01	8.4E-01
1,4-Dioxane	8.4E-02	1.0E-01	3.5E-02	9.6E-02	4.2E-02	4.2E-02	6.9E-02	6.9E-02	6.9E-02	2.0E+00	2.8E+00	2.8E+00	4.2E+00	4.2E+00	4.2E+00	4.2E+00
2-Butanone (MEK)	1.2E-01	1.4E-01	1.3E-01	2.7E-01	1.1E-01	1.1E-01	1.9E-01	1.9E-01	1.9E-01	2.0E+00	6.4E-02	6.4E-02	8.4E-01	8.4E-01	8.4E-01	8.4E-01
2-Propanone	7.0E-02	8.4E-02	1.6E-01	6.8E-02	3.5E-02	3.5E-02	5.8E-02	5.8E-02	5.8E-02	1.6E+00	5.4E-02	5.4E-02	7.0E-01	7.0E-01	7.0E-01	7.0E-01
3-Chloropropene	9.0E-02	1.1E-01	1.0E-01	8.6E-02	4.5E-02	4.5E-02	7.3E-02	7.3E-02	7.3E-02	2.1E+00	6.8E-02	6.8E-02	8.9E-01	8.9E-01	8.9E-01	8.9E-01
4-Ethyltoluene	3.5E-02	4.2E-02	1.3E-01	8.2E-02	3.4E-02	3.4E-02	2.9E-02	2.9E-02	2.9E-02	8.2E-01	1.2E+00	1.2E+00	3.5E-01	3.5E-01	3.5E-01	3.5E-01
4-Methyl-2-pentanone (MIBK)	2.9E-02	3.5E-02	1.9E-01	6.8E-02	2.8E-02	2.8E-02	1.5E-02	1.5E-02	1.5E-02	6.9E-01	2.2E-02	2.2E-02	2.9E-01	2.9E-01	2.9E-01	2.9E-01
Acetone	6.8E-02	1.3E-01	7.7E-02	1.6E-01	8.5E-02	8.5E-02	1.4E-01	1.4E-01	1.4E-01	1.8E+00	5.2E-02	5.2E-02	6.7E-01	6.7E-01	6.7E-01	6.7E-01
alpha-Chlorotoluene	3.7E-02	4.4E-02	1.4E-01	3.6E-02	1.8E-02	1.8E-02	3.0E-02	3.0E-02	3.0E-02	8.7E-01	2.8E-02	2.8E-02	1.9E+00	1.9E+00	1.9E+00	1.9E+00
Benzene	2.3E-02	2.7E-02	1.5E-01	5.3E-02	2.2E-02	2.2E-02	1.9E-02	1.9E-02	1.9E-02	5.4E-01	1.7E-02	1.7E-02	2.3E-01	2.3E-01	2.3E-01	2.3E-01
Bromodichloromethane	4.8E-02	5.7E-02	1.1E-01	4.6E-02	2.4E-02	2.4E-02	3.9E-02	3.9E-02	3.9E-02	1.7E+00	1.6E+00	1.6E+00	4.8E-01	4.8E-01	4.8E-01	4.8E-01
Bromoforn	7.4E-02	8.8E-02	1.6E-01	6.9E-02	3.7E-02	3.7E-02	6.0E-02	6.0E-02	6.0E-02	1.7E+00	2.5E+00	2.5E+00	2.9E+00	2.9E+00	2.9E+00	2.9E+00
Bromomethane	2.8E-02	3.3E-02	1.8E-01	6.4E-02	2.7E-02	2.7E-02	2.3E-02	2.3E-02	2.3E-02	6.5E-01	2.1E-02	2.1E-02	2.9E-01	2.9E-01	2.9E-01	2.9E-01
Carbon disulfide	4.0E-01	2.5E-01	8.4E-02	7.8E-02	2.0E-01	2.0E-01	3.6E-01	3.6E-01	3.6E-01	2.1E+00	6.8E-02	6.8E-02	2.2E-01	2.2E-01	2.2E-01	2.2E-01
Carbon tetrachloride	1.6E-01	4.9E-01	1.9E+00	4.1E+00	1.2E-01	1.2E-01	2.2E-01	2.2E-01	2.2E-01	5.9E+00	7.0E+00	7.0E+00	8.3E+00	8.3E+00	8.3E+00	8.3E+00
Chlorobenzene	3.3E-02	3.9E-02	1.2E-01	7.6E-02	3.2E-02	3.2E-02	1.6E-02	1.6E-02	1.6E-02	7.7E-01	2.5E-02	2.5E-02	3.3E-01	3.3E-01	3.3E-01	3.3E-01
Chloroethane	7.5E-02	9.0E-02	4.9E-01	1.8E-01	7.3E-02	7.3E-02	6.2E-02	6.2E-02	6.2E-02	1.8E+00	2.5E+00	2.5E+00	7.5E-01	7.5E-01	7.5E-01	7.5E-01
Chloroform	1.2E+01	1.0E+01	2.4E+01	6.7E+01	1.0E+01	1.0E+01	5.9E+00	5.9E+00	5.9E+00	2.1E+02	8.0E+00	8.0E+00	2.0E+02	2.0E+02	2.0E+02	2.0E+02
Chloromethane	1.6E-01	1.0E-01	3.8E-01	1.4E-01	7.4E-02	7.4E-02	1.2E-01	1.2E-01	1.2E-01	1.4E+00	4.5E-02	4.5E-02	5.9E-01	5.9E-01	5.9E-01	5.9E-01
cis-1,2-Dichloroethane	2.8E-02	3.4E-02	1.8E-01	6.6E-02	2.7E-02	2.7E-02	1.4E-02	1.4E-02	1.4E-02	6.7E-01	2.2E-02	2.2E-02	2.8E-01	2.8E-01	2.8E-01	2.8E-01
cis-1,3-Dichloropropene	3.2E-02	3.9E-02	1.2E-01	7.5E-02	3.1E-02	3.1E-02	1.8E-02	1.8E-02	1.8E-02	7.6E-01	2.5E-02	2.5E-02	3.2E-01	3.2E-01	3.2E-01	3.2E-01
Cyclohexane	2.5E-02	2.9E-02	1.6E-01	1.1E-01	2.4E-02	2.4E-02	2.0E-02	2.0E-02	2.0E-02	5.8E-01	1.9E-02	1.9E-02	2.4E-01	2.4E-01	2.4E-01	2.4E-01
Dibromochloromethane	6.1E-02	7.3E-02	2.9E-01	1.4E-01	5.9E-02	5.9E-02	5.0E-02	5.0E-02	5.0E-02	1.4E+00	4.8E-02	4.8E-02	6.0E-01	6.0E-01	6.0E-01	6.0E-01
Dichlorodifluoromethane (Freon 12)	3.5E-02	4.2E-02	1.1E+00	2.2E+00	3.4E-02	3.4E-02	2.9E-02	2.9E-02	2.9E-02	2.1E+00	2.4E-01	2.4E-01	3.6E+00	3.6E+00	3.6E+00	3.6E+00
Dichlorotetrafluoroethane (Freon 114)	5.0E-02	6.0E-02	1.2E-01	4.9E-02	2.5E-02	2.5E-02	4.1E-02	4.1E-02	4.1E-02	1.2E+00	3.8E-02	3.8E-02	5.0E-01	5.0E-01	5.0E-01	5.0E-01



TABLE 3

ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES AT SOIL VAPOR MONITORING POINTS 1,2,3,4,5

Combined Semi-Annual Reports  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona

Concentrations shown in milligrams per cubic meter (mg/m3)

Analyte	Sample Date	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-SP	SGS-Well	SGS-Well	SGS-Well	SGS-Well	SGS-Well-DUP	SGS-Well	SGS-Well-DUP	SGS-Well-DUP		
Ethanol		10/18/2011	11/3/2011	12/22/2011	1/24/2012	3/1/2012	3/12/2012	3/29/2012	4/18/2012	4/18/2012	11/3/2011	12/22/2011	3/5/2012	3/5/2012	3/5/2012	3/8/2012	3/8/2012	3/8/2012	3/8/2012	3/8/2012	
		5.4E-02	U	6.4E-02	U	1.4E-01	U	3.5E-01	U	1.2E-01	U	5.2E-02	U	2.7E-02	U	4.4E-02	U	1.8E+00	U	1.8E+00	U
Ethylbenzene		3.1E-02	U	3.7E-02	U	3.5E-02	U	2.0E-01	U	7.2E-02	U	3.0E-02	U	1.6E-02	U	2.5E-02	U	1.0E+00	U	1.0E+00	U
Heptane		2.9E-02	U	3.5E-02	U	3.3E-02	U	1.9E-01	U	6.8E-02	U	2.8E-02	U	1.5E-02	U	2.4E-02	U	9.8E-01	U	9.8E-01	U
Hexachlorobutadiene		3.0E-01	U	3.6E-01	U	3.4E-01	U	2.0E+00	U	7.1E-01	U	2.9E-01	U	1.5E-01	U	2.5E-01	U	7.2E+00	U	7.2E+00	U
Hexane		2.5E-02	U	3.0E-02	U	2.8E-02	U	1.6E-01	U	5.8E-02	U	2.4E-02	U	1.3E-02	U	2.1E-02	U	8.4E-01	U	8.4E-01	U
Isopropylbenzene		3.5E-02	U	4.2E-02	U	4.0E-02	U	2.3E-01	U	8.2E-02	U	3.4E-02	U	1.8E-02	U	2.9E-02	U	1.2E+00	U	1.2E+00	U
m,p-Xylene		3.1E-02	U	3.7E-02	U	3.5E-02	U	2.0E-01	U	7.2E-02	U	4.4E-02	U	2.1E-02	U	2.5E-02	U	7.3E-01	U	7.3E-01	U
Methyl tert-butyl ether		2.6E-02	U	3.1E-02	U	2.9E-02	U	1.7E-01	U	6.0E-02	U	2.5E-02	U	1.3E-02	U	2.1E-02	U	6.0E-01	U	6.0E-01	U
Methylene chloride		2.9E-02	U	3.0E-02	U	7.1E-02	U	3.9E-01	U	2.3E-01	U	1.2E-01	U	2.0E-01	U	2.0E-01	U	8.7E-01	U	8.7E-01	U
n-Propylbenzene		3.5E-02	U	4.2E-02	U	4.0E-02	U	2.3E-01	U	8.2E-02	U	3.4E-02	U	1.8E-02	U	2.9E-02	U	8.2E-01	U	8.2E-01	U
o-Xylene		3.1E-02	U	3.7E-02	U	3.5E-02	U	2.0E-01	U	7.2E-02	U	3.0E-02	U	1.6E-02	U	2.5E-02	U	7.3E-01	U	7.3E-01	U
Styrene		3.0E-02	U	3.6E-02	U	3.4E-02	U	2.0E-01	U	7.1E-02	U	2.9E-02	U	1.5E-02	U	2.5E-02	U	7.2E-01	U	7.2E-01	U
Tetrachloroethene		2.2E-01	U	2.3E-01	U	4.3E-01	U	4.4E-01	U	1.1E+00	U	1.4E-01	U	1.3E-01	U	2.9E-01	U	2.8E+00	U	2.8E+00	U
Tetrahydrofuran		2.1E-02	U	2.5E-02	U	2.4E-02	U	1.4E-01	U	4.9E-02	U	2.0E-02	U	1.0E-02	U	1.7E-02	U	5.0E-01	U	5.0E-01	U
Toluene		2.7E-02	U	3.2E-02	U	3.0E-02	U	1.7E-01	U	6.2E-02	U	8.6E-02	U	3.9E-02	U	2.2E-02	U	6.3E-01	U	6.3E-01	U
trans-1,2-Dichloroethene		2.8E-02	U	3.4E-02	U	3.2E-02	U	1.8E-01	U	6.6E-02	U	2.7E-02	U	1.4E-02	U	2.3E-02	U	6.7E-01	U	6.7E-01	U
trans-1,3-Dichloropropene		3.2E-02	U	3.9E-02	U	3.6E-02	U	2.1E-01	U	7.5E-02	U	3.1E-02	U	1.6E-02	U	2.6E-02	U	7.6E-01	U	7.6E-01	U
Trichloroethene		3.6E-01	U	3.7E-01	U	8.5E-01	U	1.0E+00	U	2.3E+00	U	2.6E-01	U	2.4E-01	U	4.6E-01	U	4.9E+00	U	4.9E+00	U
Trichlorofluoromethane (Freon 11)		1.9E+00	U	8.9E+00	U	3.3E+01	U	7.1E+01	U	6.2E+01	U	1.5E+00	U	1.0E+00	U	9.9E+01	U	7.7E+01	U	7.7E+01	U
Vinyl chloride		1.8E-02	U	2.2E-02	U	2.0E-02	U	1.2E-01	U	4.2E-02	U	1.8E-02	U	9.2E-03	U	1.5E-02	U	4.3E-01	U	4.3E-01	U

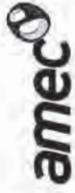


TABLE 3

ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES AT SOIL VAPOR MONITORING POINTS 1,2,3,4,5  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per cubic meter (mg/m<sup>3</sup>)

Analyte	SGS-Well 3/12/2012	SGS-Well 3/29/2012	SGD-SP 10/18/2011	SGD-SP 11/22/2011	SGD-SP 12/22/2011	SGD-SP 1/24/2012	SGD-SP 3/7/2012	SGD-SP 3/12/2012	SGD-SP 3/29/2012	SGD-SP 4/18/2012	SGD-MP 10/18/2011	SGD-MP 11/3/2011	SGD-MP 11/3/2011	SGD-MP-Dup 11/3/2011	SGD-MP 11/22/2011
1,1,1-Trichloroethane	1.1E+00 U	1.2E+00 U	8.9E-01 U	9.2E-01 U	6.4E-01 U	1.5E+00 U	5.4E-01 U	9.5E-01 U	3.7E-01 U	5.3E-01 U	4.5E-01 U	8.9E-01 U	8.9E-01 U	8.9E-01 U	1.2E+00 U
1,1,2,2-Tetrachloroethane	1.3E+00 U	1.5E+00 U	1.1E+00 U	1.2E+00 U	8.0E-01 U	1.9E+00 U	6.8E-01 U	1.2E+00 U	4.7E-01 U	6.7E-01 U	5.7E-01 U	1.1E+00 U	1.1E+00 U	1.1E+00 U	1.5E+00 U
1,1,2-Trichloroethane	1.1E+00 U	1.2E+00 U	8.9E-01 U	9.2E-01 U	6.4E-01 U	1.5E+00 U	5.4E-01 U	9.5E-01 U	3.7E-01 U	5.3E-01 U	4.5E-01 U	8.9E-01 U	8.9E-01 U	8.9E-01 U	1.2E+00 U
1,1,2,2-Trichlorotrifluoroethane (Freon 113)	9.6E+00	9.9E+00	2.1E+00 U	3.1E+00 U	3.7E+00 U	6.3E+00 U	4.3E+00 U	1.3E+00 U	1.2E+00 U	1.8E+00 U	5.0E+00 U	1.2E+00 U	1.3E+00 U	1.3E+00 U	1.4E+00 U
1,1-Dichloroethane	7.9E-01 U	9.1E-01 U	6.5E-01 U	6.8E-01 U	4.7E-01 U	1.1E+00 U	4.0E-01 U	7.1E-01 U	2.8E-01 U	4.0E-01 U	3.4E-01 U	6.5E-01 U	6.5E-01 U	6.5E-01 U	8.9E-01 U
1,1-Dichloroethene	9.5E-01 U	8.9E-01 U	6.5E-01 U	6.7E-01 U	4.6E-01 U	1.1E+00 U	3.9E-01 U	6.9E-01 U	2.7E-01 U	3.9E-01 U	4.3E-01 U	6.6E-01 U	6.6E-01 U	6.6E-01 U	9.1E-01 U
1,1-Difluoroethane	2.1E+00 U	2.4E+00 U	--	1.8E+00 U	1.3E+00 U	3.0E+00 U	1.1E+00 U	1.9E+00 U	7.4E-01 U	--	--	--	--	2.4E+00 U	
1,2,4-Trichlorobenzene	5.8E+00 U	6.6E+00 U	4.8E+00 U	5.0E+00 U	3.5E+00 U	8.4E+00 U	2.9E+00 U	5.2E+00 U	2.0E+00 U	2.8E+00 U	2.5E+00 U	4.9E+00 U	4.9E+00 U	4.9E+00 U	6.5E+00 U
1,2,4-Trimethylbenzene	9.6E-01 U	1.1E+00 U	7.9E-01 U	8.2E-01 U	5.8E-01 U	1.4E+00 U	1.9E+00 U	8.6E-01 U	3.4E-01 U	4.8E-01 U	4.1E-01 U	8.1E-01 U	8.1E-01 U	8.1E-01 U	1.1E+00 U
1,2-Dibromoethane (EDB)	1.5E+00 U	1.7E+00 U	1.2E+00 U	1.3E+00 U	9.0E-01 U	2.2E+00 U	7.6E-01 U	1.3E+00 U	5.3E-01 U	7.5E-01 U	6.4E-01 U	1.3E+00 U	1.2E+00 U	1.2E+00 U	1.7E+00 U
1,2-Dichlorobenzene	1.2E+00 U	1.3E+00 U	9.8E-01 U	1.0E+00 U	7.0E-01 U	1.7E+00 U	6.0E-01 U	1.0E+00 U	4.1E-01 U	5.9E-01 U	9.9E-01 U	9.9E-01 U	9.9E-01 U	9.9E-01 U	1.3E+00 U
1,2-Dichloroethene	2.8E+00	3.7E+00	6.5E-01 U	6.8E-01 U	4.7E-01 U	1.1E+00 U	4.0E-01 U	7.1E-01 U	2.8E-01 U	4.0E-01 U	3.4E-01 U	6.5E-01 U	6.5E-01 U	6.5E-01 U	8.9E-01 U
1,3-Dichloropropane	9.0E-01 U	1.0E+00 U	7.4E-01 U	7.8E-01 U	5.4E-01 U	1.3E+00 U	4.6E-01 U	8.1E-01 U	3.2E-01 U	4.5E-01 U	3.8E-01 U	7.6E-01 U	7.6E-01 U	7.6E-01 U	1.0E+00 U
1,3,5-Trimethylbenzene	9.6E-01 U	1.1E+00 U	7.9E-01 U	8.2E-01 U	5.8E-01 U	1.4E+00 U	1.9E+00 U	8.6E-01 U	3.4E-01 U	4.8E-01 U	4.1E-01 U	8.1E-01 U	8.1E-01 U	8.1E-01 U	1.1E+00 U
1,3-Butadiene	4.3E-01 U	5.0E-01 U	3.6E-01 U	3.7E-01 U	2.6E-01 U	6.2E-01 U	2.2E-01 U	3.9E-01 U	1.5E-01 U	2.2E-01 U	1.8E-01 U	3.6E-01 U	3.6E-01 U	3.6E-01 U	4.9E-01 U
1,2-Dichlorobenzene	1.2E+00 U	1.3E+00 U	9.8E-01 U	1.0E+00 U	7.0E-01 U	1.7E+00 U	6.0E-01 U	1.0E+00 U	4.1E-01 U	5.9E-01 U	9.9E-01 U	9.9E-01 U	9.9E-01 U	9.9E-01 U	1.3E+00 U
1,4-Dichlorobenzene	2.8E+00 U	3.2E+00 U	2.3E+00 U	2.4E+00 U	1.7E+00 U	4.0E+00 U	1.4E+00 U	2.5E+00 U	9.9E-01 U	1.4E+00 U	1.2E+00 U	2.3E+00 U	2.3E+00 U	2.3E+00 U	3.1E+00 U
1,4-Dioxane	9.1E-01 U	1.0E+00 U	7.5E-01 U	7.8E-01 U	5.5E-01 U	1.3E+00 U	4.6E-01 U	8.2E-01 U	3.2E-01 U	4.6E-01 U	3.9E-01 U	7.7E-01 U	7.7E-01 U	7.7E-01 U	1.0E+00 U
2,2,4-Trimethylpentane	2.3E+00 U	2.6E+00 U	1.9E+00 U	2.0E+00 U	1.4E+00 U	3.3E+00 U	1.2E+00 U	2.1E+00 U	8.1E-01 U	1.2E+00 U	9.8E-01 U	1.9E+00 U	1.9E+00 U	1.9E+00 U	2.8E+00 U
2-Butanone (MEK)	3.2E+00 U	3.7E+00 U	2.7E+00 U	2.8E+00 U	1.9E+00 U	4.8E+00 U	1.6E+00 U	2.9E+00 U	1.1E+00 U	1.6E+00 U	1.4E+00 U	2.7E+00 U	2.7E+00 U	2.7E+00 U	3.1E+00 U
2-Hexanone	1.9E+00 U	2.2E+00 U	1.6E+00 U	1.6E+00 U	1.2E+00 U	2.8E+00 U	9.7E-01 U	1.9E+00 U	6.7E-01 U	9.6E-01 U	8.2E-01 U	1.6E+00 U	1.6E+00 U	1.6E+00 U	2.1E+00 U
3-Chloropropane	2.4E+00 U	2.8E+00 U	2.0E+00 U	2.0E+00 U	1.5E+00 U	3.5E+00 U	1.2E+00 U	2.2E+00 U	8.6E-01 U	1.2E+00 U	1.0E+00 U	2.0E+00 U	2.0E+00 U	2.0E+00 U	2.7E+00 U
4-Ethyltoluene	9.6E-01 U	1.1E+00 U	8.0E-01 U	8.2E-01 U	5.8E-01 U	1.4E+00 U	4.9E-01 U	8.6E-01 U	3.4E-01 U	4.8E-01 U	4.1E-01 U	8.1E-01 U	8.1E-01 U	8.1E-01 U	1.1E+00 U
4-Methyl-2-pentanone (MIBK)	8.0E-01 U	9.2E-01 U	6.7E-01 U	6.9E-01 U	4.8E-01 U	1.2E+00 U	4.0E-01 U	7.2E-01 U	2.8E-01 U	4.0E-01 U	3.4E-01 U	6.7E-01 U	6.7E-01 U	6.7E-01 U	9.0E-01 U
Acetone	4.6E+00 U	5.3E+00 U	1.5E+00 U	1.5E+00 U	2.0E+00 U	2.7E+00 U	9.4E-01 U	4.2E+00 U	1.8E+00 U	2.3E+00 U	7.9E-01 U	1.6E+00 U	1.6E+00 U	1.6E+00 U	2.1E+00 U
alpha-Chlorotoluene	1.0E+00 U	1.2E+00 U	8.4E-01 U	8.7E-01 U	6.0E-01 U	1.4E+00 U	2.0E+00 U	9.0E-01 U	3.5E-01 U	5.1E-01 U	4.3E-01 U	8.5E-01 U	8.5E-01 U	8.5E-01 U	1.1E+00 U
Benzene	6.2E-01 U	7.2E-01 U	5.1E-01 U	5.4E-01 U	3.7E-01 U	9.0E-01 U	3.2E-01 U	5.6E-01 U	2.2E-01 U	3.1E-01 U	2.6E-01 U	5.1E-01 U	5.1E-01 U	5.1E-01 U	7.0E-01 U
Bromodichloromethane	1.3E+00 U	1.5E+00 U	1.1E+00 U	1.1E+00 U	7.8E-01 U	1.9E+00 U	6.6E-01 U	1.2E+00 U	4.6E-01 U	6.6E-01 U	5.6E-01 U	1.1E+00 U	1.1E+00 U	1.1E+00 U	1.5E+00 U
Bromoforn	2.0E+00 U	2.3E+00 U	1.7E+00 U	1.7E+00 U	1.2E+00 U	2.9E+00 U	4.1E+00 U	1.8E+00 U	7.1E-01 U	1.0E+00 U	8.6E-01 U	1.7E+00 U	1.7E+00 U	1.7E+00 U	2.2E+00 U
Bromoethane	7.6E+00 U	8.7E+00 U	6.3E-01 U	6.5E-01 U	4.5E-01 U	1.1E+00 U	3.8E-01 U	6.8E+00 U	2.7E+00 U	3.8E+00 U	3.2E-01 U	6.4E-01 U	6.4E-01 U	6.4E-01 U	8.5E-01 U
Carbon disulfide	2.4E+00 U	2.8E+00 U	2.0E+00 U	2.1E+00 U	3.6E-01 U	3.5E+00 U	3.1E-01 U	2.2E+00 U	8.4E-01 U	1.2E+00 U	2.0E+00 U	2.0E+00 U	2.0E+00 U	2.0E+00 U	2.7E+00 U
Carbon tetrachloride	5.4E+00	1.0E+01	2.2E+00 U	5.2E+00 U	6.7E+00 U	1.1E+01	8.1E+00 U	2.3E+00 U	2.5E+00 U	3.4E+00 U	1.2E+00 U	1.4E+01	1.4E+01	1.4E+01	1.5E+01
Chlorobenzene	9.0E-01 U	1.0E+00 U	7.5E-01 U	7.7E-01 U	5.4E-01 U	1.3E+00 U	4.6E-01 U	8.0E-01 U	3.2E-01 U	4.5E-01 U	3.2E-01 U	7.6E-01 U	7.6E-01 U	7.6E-01 U	1.0E+00 U
Chloroethane	2.0E+00 U	2.4E+00 U	1.7E+00 U	1.8E+00 U	1.2E+00 U	3.0E+00 U	1.0E+00 U	1.8E+00 U	7.2E-01 U	1.0E+00 U	8.9E-01 U	1.7E+00 U	1.7E+00 U	1.7E+00 U	2.3E+00 U
Chloroform	2.5E+02	2.8E+02	2.0E+02	2.1E+02	2.6E+02	3.0E+02	3.0E+02	3.8E+02	1.1E+02	1.5E+02	5.3E+01	1.8E+02	1.8E+02	1.8E+02	2.0E+02
Chloromethane	4.0E+00 U	4.6E+00 U	1.3E+00 U	1.3E+00 U	9.7E-01 U	2.3E+00 U	8.3E+00 U	1.4E+00 U	1.4E+00 U	2.0E+00 U	5.6E+00 U	1.4E+00 U	1.4E+00 U	1.4E+00 U	1.9E+00 U
cis-1,2-Dichloroethene	7.7E-01 U	8.9E-01 U	6.5E-01 U	6.7E-01 U	4.6E-01 U	1.1E+00 U	3.9E-01 U	6.9E-01 U	2.7E-01 U	3.9E-01 U	3.3E-01 U	6.5E-01 U	6.5E-01 U	6.5E-01 U	8.7E-01 U
cis-1,3-Dichloropropene	8.8E-01 U	1.0E+00 U	7.4E-01 U	7.6E-01 U	5.3E-01 U	1.3E+00 U	4.5E-01 U	7.9E-01 U	3.1E-01 U	4.4E-01 U	3.8E-01 U	7.4E-01 U	7.4E-01 U	7.4E-01 U	9.9E-01 U
Cyclohexane	6.7E-01 U	7.7E-01 U	5.5E-01 U	5.8E-01 U	4.0E-01 U	9.7E-01 U	8.2E-01 U	6.0E-01 U	2.4E-01 U	3.4E-01 U	2.8E-01 U	5.6E-01 U	5.6E-01 U	5.6E-01 U	7.5E-01 U
Dibromochloromethane	1.6E+00 U	1.9E+00 U	1.4E+00 U	1.4E+00 U	1.0E+00 U	2.4E+00 U	1.5E+00 U	8.4E-01 U	5.8E-01 U	8.3E-01 U	7.1E-01 U	1.4E+00 U	1.4E+00 U	1.4E+00 U	1.9E+00 U
Dichlorodifluoromethane (Freon 12)	2.9E+00 U	3.4E+00 U	2.2E+00 U	3.4E+00 U	6.1E+00 U	1.0E+00 U	6.4E+00 U	2.2E+00 U	1.7E+00 U	2.4E+00 U	1.2E+00 U	1.2E+00 U	1.2E+00 U	1.2E+00 U	1.4E+00 U
Dichlorotetrafluoroethane (Freon 114)	1.4E+00 U	1.6E+00 U	1.1E+00 U	1.2E+00 U	8.2E-01 U	2.0E+00 U	1.69E-01 U	1.2E+00 U	4.8E-01 U	6.8E-01 U	5.8E-01 U	1.1E+00 U	1.1E+00 U	1.1E+00 U	1.5E+00 U







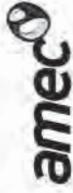


TABLE 3

ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES AT SOIL VAPOR MONITORING POINTS 1A3A45  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per cubic meter (mg/m<sup>3</sup>)

Analyte	Sample Date	SGD-DP 11/3/2011	SGD-DP 11/22/2011	SGD-DP 12/22/2011	SGD-DP 1/24/2012	SGD-DP 3/1/2012	SGD-DP 3/29/2012	SGD-DP 4/18/2012	SGD-Well 11/3/2011	SGD-Well 12/22/2011	SGD-Well 3/5/2012	MW-2 10/18/2011	MW-2 4/18/2012	MW-5 10/18/2011	MW-5-Dup 10/18/2011	MW-5 4/18/2012
1,1,1-Trichloroethane		9.2E-01 U	9.8E-01 U	1.4E-01 U	4.6E-01 U	3.3E-01 U	4.7E-01 U	4.3E-01 U	1.9E-02 U	9.3E-02 U	7.6E-02 U	4.8E-03 U	4.4E-03 U	4.7E-03 U	4.8E-03 U	4.8E-03 U
1,1,2,2-Tetrachloroethane		1.2E+00 U	1.2E+00 U	1.8E-01 U	5.8E-01 U	4.1E-01 U	5.9E-01 U	4.4E-01 U	2.3E-02 U	1.2E-01 U	9.6E-02 U	5.8E-03 U	5.5E-03 U	5.9E-03 U	6.0E-03 U	6.0E-03 U
1,1,2-Trichloroethane		9.2E-01 U	9.8E-01 U	1.4E-01 U	4.6E-01 U	3.3E-01 U	4.7E-01 U	4.3E-01 U	1.9E-02 U	9.3E-02 U	7.6E-02 U	4.8E-03 U	4.4E-03 U	4.7E-03 U	4.8E-03 U	4.8E-03 U
1,1,2-Trichlorofluoroethane (Freon 113)		4.8E+00	3.4E+00	3.6E+00	3.2E+00	6.7E+00	4.2E+00	2.8E+00	8.4E-02	1.3E-01	6.2E-01	7.1E-03	6.2E-03	8.5E-03	8.7E-03	6.7E-03 U
1,1-Dichloroethane		6.8E-01 U	7.2E-01 U	1.1E-01 U	3.4E-01 U	2.4E-01 U	3.5E-01 U	1.8E-01 U	1.4E-02 U	6.9E-02 U	5.7E-02 U	3.4E-03 U	3.2E-03 U	3.5E-03 U	3.5E-03 U	3.6E-03 U
1,1-Dichloroethane		6.7E-01 U	7.1E-01 U	1.1E-01 U	3.3E-01 U	2.4E-01 U	3.4E-01 U	1.8E-01 U	1.4E-02 U	6.8E-02 U	5.6E-02 U	3.3E-03 U	3.2E-03 U	3.4E-03 U	3.5E-03 U	3.5E-03 U
1,1-Difluoroethane		---	1.9E+00	2.8E-01 U	9.1E-01 U	6.5E-01 U	9.2E-01 U	4.7E-01 U	---	1.6E+02 J	1.5E-01 U	---	---	---	---	---
1,2,4-Trichlorobenzene		5.0E+00	5.3E+00	7.8E-01 U	2.5E+00	1.8E+00	2.3E+00	2.4E+00	1.0E-01 U	5.1E-01 U	4.2E-01 U	2.5E-02 U	2.4E-02 U	2.6E-02 U	2.6E-02 U	2.6E-02 U
1,2,4-Trimethylbenzene		8.2E-01 U	8.8E-01 U	1.3E-01 U	4.1E-01 U	1.2E+00	4.2E-01 U	2.2E-01 U	1.7E-02 U	8.4E-02 U	6.9E-02 U	4.1E-03 U	4.0E-03 U	4.2E-03 U	4.3E-03 U	4.1E-01 J
1,2-Dibromoethane (EDB)		1.3E+00	1.4E+00	2.0E-01 U	6.4E-01 U	4.6E-01 U	6.6E-01 U	3.4E-01 U	2.6E-02 U	1.3E-01 U	1.1E-01 U	6.4E-03 U	6.2E-03 U	6.6E-03 U	6.7E-03 U	6.8E-03 U
1,2-Dichlorobenzene		1.0E+00	1.1E+00	1.6E-01 U	5.1E-01 U	3.6E-01 U	5.1E-01 U	4.8E-01 U	2.0E-02 U	1.0E-01 U	8.4E-02 U	5.0E-03 U	4.8E-03 U	5.2E-03 U	5.3E-03 U	5.3E-03 U
1,2-Dichloroethane		6.8E-01 U	7.2E-01 U	1.1E-01 U	3.4E-01 U	2.4E-01 U	3.5E-01 U	1.8E-01 U	1.4E-02 U	6.9E-02 U	5.7E-02 U	3.4E-03 U	3.2E-03 U	3.5E-03 U	3.5E-03 U	3.6E-03 U
1,3,5-Trimethylbenzene		7.8E-01 U	8.3E-01 U	1.2E-01 U	3.9E-01 U	2.8E-01 U	2.0E-01 U	3.7E-01 U	1.6E-02 U	7.9E-02 U	6.5E-02 U	3.9E-03 U	3.7E-03 U	4.0E-03 U	4.0E-03 U	4.1E-02 U
1,3,5-Trimethylbenzene		8.2E-01 U	8.8E-01 U	1.3E-01 U	4.1E-01 U	2.9E-01 U	2.2E-01 U	3.9E-01 U	1.7E-02 U	8.4E-02 U	6.9E-02 U	4.1E-03 U	4.0E-03 U	4.2E-03 U	4.3E-03 U	4.1E-02 U
1,3-Butadiene		3.7E-01 U	4.0E-01 U	5.8E-02 U	1.8E-01 U	1.3E-01 U	1.9E-01 U	9.7E-02 U	1.8E-01 U	3.8E-02 U	3.1E-02 U	1.8E-03 U	1.8E-03 U	1.9E-03 U	1.9E-03 U	1.9E-03 U
1,3-Dichlorobenzene		1.0E+00	1.1E+00	1.6E-01 U	5.0E-01 U	3.6E-01 U	5.1E-01 U	4.8E-01 U	2.0E-02 U	1.0E-01 U	8.4E-02 U	5.0E-03 U	4.8E-03 U	5.2E-03 U	5.3E-03 U	5.3E-03 U
1,4-Dichlorobenzene		1.0E+00	1.1E+00	1.6E-01 U	5.0E-01 U	3.6E-01 U	5.1E-01 U	4.8E-01 U	2.0E-02 U	1.0E-01 U	8.4E-02 U	5.0E-03 U	4.8E-03 U	5.2E-03 U	5.3E-03 U	5.3E-03 U
1,4-Dioxane		2.4E+00	2.6E+00	3.8E-01 U	1.2E+00	8.6E-01 U	1.2E+00	6.3E-01 U	4.9E-02 U	2.5E-01 U	2.0E-01 U	1.2E-02 U	1.2E-02 U	1.2E-02 U	1.3E-02 U	1.3E-02 U
2,2,4-Trimethylpentane		7.8E-01 U	8.4E-01 U	1.2E-01 U	3.9E-01 U	2.8E-01 U	2.0E-01 U	3.7E-01 U	1.6E-02 U	8.0E-02 U	6.5E-02 U	3.9E-03 U	3.8E-03 U	4.0E-03 U	4.1E-03 U	4.1E-03 U
2-Butanone (MEK)		2.0E+00	2.1E+00	3.1E-01 U	9.9E-01 U	7.1E-01 U	1.0E+00	5.2E-01 U	4.0E-02 U	2.0E-01 U	1.8E-01 U	9.9E-03 U	9.5E-03 U	1.0E-02 U	1.0E-02 U	8.4E-02 U
2-Hexanone		2.8E+00	2.9E+00	4.3E-01 U	1.4E+00	9.8E-01 U	1.4E+00	7.2E-01 U	5.6E-02 U	2.8E-01 U	2.3E-01 U	1.4E-02 U	1.3E-02 U	1.4E-02 U	1.4E-02 U	1.4E-02 U
2-Propanol		1.6E+00	1.8E+00	2.8E-01 U	8.2E-01 U	5.9E-01 U	9.1E-01 U	4.3E-01 U	3.4E-02 U	1.7E-01 U	1.4E-01 U	8.2E-03 U	7.9E-03 U	8.5E-03 U	8.6E-03 U	8.6E-03 U
3-Chloropropane		2.1E+00	2.2E+00	3.3E-01 U	1.0E+00	7.5E-01 U	1.1E+00	5.5E-01 U	4.3E-02 U	2.1E-01 U	1.8E-01 U	1.0E-02 U	1.0E-02 U	1.1E-02 U	1.1E-02 U	1.1E-02 U
4-Ethyltoluene		8.2E-01 U	8.8E-01 U	1.3E-01 U	4.1E-01 U	2.9E-01 U	2.2E-01 U	3.9E-01 U	1.7E-02 U	8.4E-02 U	6.9E-02 U	4.1E-03 U	4.0E-03 U	4.2E-03 U	4.3E-03 U	4.3E-03 U
4-Methyl-2-pentanone (MIBK)		6.9E-01 U	7.3E-01 U	1.1E-01 U	3.4E-01 U	2.4E-01 U	3.2E-01 U	1.8E-01 U	1.4E-02 U	7.0E-02 U	5.7E-02 U	3.4E-03 U	3.3E-03 U	3.5E-03 U	3.6E-03 U	3.6E-03 U
Acetone		1.6E+00	1.7E+00	2.5E-01 U	8.0E-01 U	5.7E-01 U	2.0E+00	1.0E+00	4.4E-02 U	1.6E-01 U	1.3E-01 U	4.3E-02 U	2.0E-02 U	2.0E-02 U	2.0E-02 U	2.0E-02 U
alpha-Chlorotoluene		8.7E-01 U	9.3E-01 U	1.4E-01 U	4.3E-01 U	1.2E+00	4.4E-01 U	2.3E-01 U	1.8E-02 U	8.8E-02 U	7.2E-02 U	4.3E-03 U	4.2E-03 U	4.5E-03 U	4.5E-03 U	4.5E-03 U
Benzene		5.4E-01 U	5.7E-01 U	8.4E-02 U	2.7E-01 U	1.9E-01 U	2.7E-01 U	1.4E-01 U	1.1E-02 U	5.5E-02 U	4.2E-02 U	2.7E-03 U	2.6E-03 U	2.6E-03 U	2.6E-03 U	2.6E-03 U
Bromodichloromethane		1.1E+00	1.2E+00	1.8E-01 U	5.6E-01 U	4.0E-01 U	5.7E-01 U	2.9E-01 U	2.3E-02 U	1.1E-01 U	9.4E-02 U	5.8E-03 U	5.4E-03 U	5.8E-03 U	5.9E-03 U	5.9E-03 U
Bromoforn		1.7E+00	1.8E+00	2.7E-01 U	8.7E-01 U	2.5E+00	8.8E-01 U	4.5E-01 U	3.5E-02 U	1.8E-01 U	1.4E-01 U	8.7E-03 U	8.3E-03 U	8.9E-03 U	9.0E-03 U	9.1E-03 U
Bromomethane		6.5E-01 U	7.0E-01 U	1.0E-01 U	3.3E-01 U	2.3E-01 U	3.3E+00	1.7E+00	1.3E-02 U	6.6E-02 U	5.4E-01 U	3.3E-03 U	3.1E-02 U	3.4E-03 U	3.4E-03 U	3.4E-03 U
Carbon disulfide		2.1E+00	2.2E+00	8.2E-02 U	1.0E+00	1.9E-01 U	1.6E+00	5.4E-01 U	4.3E-02 U	2.1E-01 U	1.7E-01 U	1.0E-02 U	1.0E-02 U	1.4E-02 U	1.4E-02 U	1.2E-02 J
Carbon tetrachloride		4.9E+00	5.4E+00	4.4E+00	3.5E+00	7.4E+00	3.3E+00	4.3E+00	3.3E+00	4.3E+00	6.9E-01 U	1.0E-02 U	8.1E-03 U	5.5E-03 U	5.5E-03 U	5.5E-03 U
Chlorobenzene		7.7E-01 U	8.2E-01 U	1.2E-01 U	3.9E-01 U	2.8E-01 U	3.9E-01 U	2.0E-01 U	1.6E-02 U	7.9E-02 U	6.4E-02 U	3.9E-03 U	3.7E-03 U	4.0E-03 U	4.0E-03 U	4.0E-03 U
Chloroethane		1.8E+00	1.9E+00	2.8E-01 U	9.8E-01 U	6.3E-01 U	9.0E-01 U	4.6E-01 U	3.6E-02 U	1.8E-01 U	1.5E-01 U	8.9E-03 U	8.5E-03 U	9.1E-03 U	9.2E-03 U	9.3E-03 U
Chloroform		1.9E+00	1.7E+01	1.8E+01	1.4E+01	2.7E+01	6.3E+01	1.7E+01	1.4E-01 U	8.3E-02 U	3.0E+00	4.1E-03 U	3.9E-03 U	4.2E-03 U	4.3E-03 U	4.3E-03 U
Chloromethane		1.4E+00	1.5E+00	2.2E-01 U	6.9E-01 U	5.0E-01 U	1.8E+00	9.0E-01 U	2.8E-02 U	1.4E-01 U	2.9E-01 U	6.9E-03 U	7.1E-02 U	7.1E-03 U	7.2E-03 U	7.1E-02 U
cis-1,2-Dichloroethane		6.7E-01 U	7.1E-01 U	1.0E-01 U	3.3E-01 U	2.4E-01 U	3.4E-01 U	1.7E-01 U	1.4E-02 U	6.8E-02 U	5.9E-02 U	3.3E-03 U	3.2E-03 U	3.4E-03 U	3.5E-03 U	3.5E-03 U
cis-1,3-Dichloropropane		7.6E-01 U	8.1E-01 U	1.2E-01 U	3.9E-01 U	2.7E-01 U	3.6E-01 U	1.6E-02 U	1.6E-02 U	7.8E-02 U	6.4E-02 U	3.6E-03 U	3.6E-03 U	3.6E-03 U	3.6E-03 U	4.0E-03 U
Cyclohexane		5.8E-01 U	6.2E-01 U	9.1E-02 U	2.9E-01 U	2.0E-01 U	2.7E-01 U	1.5E-01 U	1.2E-02 U	5.9E-02 U	4.9E-02 U	2.9E-03 U	2.8E-03 U	3.0E-03 U	3.0E-03 U	3.0E-03 U
Dibromochloromethane		1.4E+00	1.5E+00	2.2E-01 U	7.2E-01 U	5.1E-01 U	3.7E-01 U	1.6E-01 U	2.9E-02 U	1.4E-01 U	1.2E-01 U	7.2E-03 U	6.8E-03 U	7.4E-03 U	7.4E-03 U	7.4E-03 U
Dichlorodifluoromethane (Freon 114)		3.4E+00	3.6E+00	3.6E+00	3.1E+00	5.9E+00	3.0E+00	3.4E+00	1.4E-01 U	8.4E-02 U	4.2E-01 U	1.4E-02 U	4.0E-03 U	4.7E-03 U	4.7E-03 U	4.4E-03 U
Dichlorodifluoroethane (Freon 112)		1.2E+00	1.2E+00	1.8E-01 U	5.9E-01 U	4.2E-01 U	6.0E-01 U	3.0E-01 U	2.4E-02 U	1.2E-01 U	9.8E-02 U	5.9E-03 U	5.6E-03 U	6.0E-03 U	6.1E-03 U	6.2E-03 U



TABLE 3

**ANALYTICAL RESULTS FOR SOIL VAPOR SAMPLES AT SOIL VAPOR MONITORING POINTS 1,2,3,4,5**  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per cubic meter (mg/m<sup>3</sup>)

Analyte	Sample Date	SGD-DP	SGD-Well	SGD-Well	SGD-Well	MW-2	MW-2	MW-5	MW-5-Dup	MW-5							
Ethanol	11/22/2011	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00								
Ethylbenzene	7.3E-01	7.8E-01	1.1E-01	3.6E-01	2.6E-01	4.5E-01	6.4E-01	3.3E-01	1.4E+00	2.6E-02	1.3E-01	7.4E-02	6.1E-03	6.1E-03	1.8E-02	1.5E-02	1.8E-02
Heptane	6.9E-01	7.3E-01	1.1E-01	3.4E-01	2.4E-01	3.5E-01	1.8E-01	3.2E-01	1.4E-02	1.5E-02	7.0E-02	5.7E-02	3.4E-03	3.4E-03	3.8E-03	3.8E-03	3.8E-03
Hexachlorobutadiene	7.2E+00	7.6E+00	1.1E+00	3.6E+00	2.6E+00	3.6E+00	1.9E+00	3.4E+00	1.4E-01	1.4E-01	7.3E-01	6.0E-01	3.6E-02	3.6E-02	3.7E-02	3.7E-02	3.7E-02
Hexane	5.9E-01	6.3E-01	9.3E-02	3.0E-01	5.7E-01	3.0E-01	1.5E-01	2.8E-01	1.2E-02	6.0E-02	6.0E-02	4.9E-02	2.8E-03	2.8E-03	3.0E-03	3.1E-03	3.1E-03
Isopropylbenzene	8.2E-01	8.8E-01	1.3E-01	4.1E-01	2.9E-01	4.2E-01	2.2E-01	3.9E-01	1.7E-02	8.4E-02	8.4E-02	6.9E-02	4.1E-03	4.0E-03	4.2E-03	4.3E-03	4.3E-03
m,p-Xylene	7.3E-01	7.8E-01	1.1E-01	3.6E-01	2.6E-01	3.7E-01	1.9E-01	3.4E-01	1.5E-02	7.4E-02	7.4E-02	6.1E-02	5.0E-03	4.9E-03	5.3E-03	5.3E-03	5.3E-03
Methyl tert-butyl ether	6.0E-01	6.4E-01	9.5E-02	3.0E-01	2.2E-01	3.1E-01	1.6E-01	2.9E-01	1.2E-02	6.2E-02	6.2E-02	5.0E-02	3.0E-03	2.9E-03	3.1E-03	3.2E-03	3.2E-03
Methylene chloride	5.8E-01	6.2E-01	1.7E-01	5.0E-01	4.2E-01	3.0E+00	1.5E+00	2.8E+00	1.2E-02	5.9E-02	5.9E-02	4.9E-01	3.6E-03	2.8E-02	3.2E-03	3.7E-03	3.7E-03
n-Propylbenzene	8.2E-01	8.8E-01	1.3E-01	4.1E-01	2.9E-01	4.2E-01	2.2E-01	3.9E-01	1.7E-02	8.4E-02	8.4E-02	6.9E-02	4.1E-03	4.0E-03	4.2E-03	4.3E-03	4.3E-03
o-Xylene	7.3E-01	7.8E-01	1.1E-01	3.6E-01	2.6E-01	3.7E-01	1.9E-01	3.4E-01	1.5E-02	7.4E-02	7.4E-02	6.1E-02	5.0E-03	4.9E-03	5.3E-03	5.3E-03	5.3E-03
Styrene	7.2E-01	7.6E-01	1.1E-01	3.6E-01	2.6E-01	3.7E-01	1.9E-01	3.4E-01	1.4E-02	7.3E-02	7.3E-02	6.0E-02	3.6E-03	3.4E-03	3.7E-03	3.7E-03	3.7E-03
Tetrachloroethene	1.1E+00	1.2E+00	3.5E-01	6.4E-01	5.3E-01	9.2E-01	3.3E-01	5.4E-01	2.3E-02	1.2E-01	1.2E-01	9.5E-02	5.7E-03	5.5E-03	5.9E-03	5.9E-03	5.9E-03
Tetrahydrofuran	5.0E-01	5.3E-01	7.8E-02	2.5E-01	1.8E-01	2.5E-01	1.3E-01	2.3E-01	1.0E-02	5.0E-02	5.0E-02	4.1E-02	2.5E-03	2.4E-03	2.6E-03	2.6E-03	2.6E-03
Toluene	6.3E-01	6.7E-01	9.9E-02	3.2E-01	2.3E-01	5.2E-01	1.9E-01	1.9E+00	1.3E-02	6.4E-02	6.4E-02	5.8E-02	3.2E-03	3.0E-03	2.0E-02	2.0E-02	2.0E-02
trans-1,2-Dichloroethene	6.7E-01	7.1E-01	1.0E-01	3.3E-01	2.4E-01	3.4E-01	1.7E-01	3.2E-01	1.4E-02	6.8E-02	6.8E-02	5.6E-02	3.3E-03	3.2E-03	3.4E-03	3.5E-03	3.5E-03
trans-1,3-Dichloropropene	7.6E-01	8.1E-01	1.2E-01	3.8E-01	2.7E-01	3.9E-01	2.0E-01	3.6E-01	1.6E-02	7.8E-02	7.8E-02	6.4E-02	3.8E-03	3.8E-03	3.9E-03	4.0E-03	4.0E-03
Trichloroethene	2.3E+00	2.0E+00	2.5E+00	3.8E+00	3.6E+00	1.9E+00	2.5E+00	2.5E+00	1.8E-02	9.2E-02	9.2E-02	2.9E-01	4.5E-03	4.3E-03	4.6E-03	4.7E-03	4.7E-03
Trichlorofluoromethane (Freon 11)	1.6E+02	1.9E+02	1.3E+02	2.1E+02	2.1E+02	9.1E+01	1.3E+02	1.3E+02	4.3E+00	9.6E-02	9.6E-02	2.0E+01	3.4E-01	3.4E-01	3.8E-01	4.0E-01	4.0E-01
Vinyl chloride	4.3E-01	4.6E-01	6.7E-02	2.1E-01	1.5E-01	1.1E-01	1.1E-01	1.1E-01	8.7E-03	4.4E-02	4.4E-02	3.6E-02	2.1E-03	2.0E-03	2.2E-03	2.2E-03	2.2E-03

Notes

- Data qualifiers are as follows:  
 -- = no data available.  
 ND = not detected; no numerical value available for detection limit or reporting limit.  
 U = analyte not detected at reporting limit indicated.  
 J = reported result is the estimated concentration.  
 2. Volatile organic compounds (VOCs) analyzed by EPA Method TO-15.  
 3. Dup = field duplicate sample.  
 4. The SVE system was shut down on October 20, 2011 and restarted on March 5, 2012. The March 5, 2012 samples were collected after restart.  
 5. Bold values indicate exceedance of threshold levels.

Abbreviations

- EDB = ethylene dibromide
- EPA = US Environmental Protection Agency
- MEK = methyl ethyl ketone
- MIBK = methyl isobutyl ketone

Table 4. Thresholds for Additional Actions for Soil Vapor Samples  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Compound	SGS-Well/SVE Influent	SGS-SP	SGS-SP	SGD-SP	SGD-MP	SGD-DP	MW-2	MW-5
Carbon tetrachloride	850	450	180	130	130	130	6	6
Chloroform	900	480	210	140	140	140	12	12
1,1-Dichloroethene (1,1-DCE)	2160	1150	470	340	340	340	7	7
Methylene chloride	530	280	120	80	80	80	1	1
Tetrachloroethene (PCE)	130	70	30	20	20	20	4	4
Trichloroethene (TCE)	330	180	80	50	50	50	2	2
Trichlorofluoromethane (Freon-11)	3870	2060	860	640	640	640	596	596

Notes:

1. All concentrations are in mg/m<sup>3</sup>

Table 5. Input and Output Files for USGS Kendall Program  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Input File to Kendall Program	
4 0	chloroform SGD-MP November 2009-April 2012 - Mann-Kendall test, input type 4
2009.1118	190
2010.1013	150
2011.0420	180
2011.1018	53
2012.0312	240
2012.0329	185
2012.0418	210

Out File from Kendall Program	
Kendall's tau Correlation Test US Geological Survey, 2005	
Data set: chloroform SGD-MP November 2009-April 2012 - Mann-Kendall te	
The tau correlation coefficient is 0.238	
S = 5.	
z = 0.601	
p = 0.5480	
The relation may be described by the equation:	
Y = -34258. + 17.13 * X	

Table 6. Groundwater Elevations  
Combined Semi-Annual Reports  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona

MP Elevation (ft amsl)	MW-2			MW-3			MW-4			MW-5			Note
	DTW (ft bgs) <sup>1</sup>	WL (ft amsl)	3629.73	DTW (ft bgs) <sup>1</sup>	WL (ft amsl)	3632.45	DTW (ft bgs) <sup>1</sup>	WL (ft amsl)	3631.96	DTW (ft bgs) <sup>1</sup>	WL (ft amsl)	3642.28	
1/31/2001	642.70	2987.03		645.30	2987.15		644.81	2987.15		655.32	2986.96		
10/10/2001	642.71	2987.02		645.57	2986.88		644.89	2987.07		654.75	2987.53		
3/27/2002	642.42	2987.31		645.44	2987.01		644.92	2987.04		655.08	2987.20		
10/23/2002	642.34	2987.39		645.48	2986.97		645.23	2986.73		654.96	2987.32		
4/23/2003	642.38	2987.35		645.27	2987.18		645.07	2986.89		664.74	2977.54	2	
10/22/2003	642.79	2986.94		645.83	2986.62		645.57	2986.39		662.23	2980.05	2	
4/21/2004	642.55	2987.18		645.60	2986.85		645.31	2986.65		664.02	2978.26	2	
5/5/2004	642.63	2987.10		645.90	2986.55		645.63	2986.33		655.49	2986.79		
10/13/2004	642.75	2986.98		644.92	2987.53		645.71	2986.25		655.62	2986.66		
4/13/2005	643.47	2986.26		646.08	2986.37		645.81	2986.15		656.67	2985.61		
10/12/2005	644.50	2985.23		647.37	2985.08		647.33	2984.63		657.61	2984.67		
4/12/2006	645.33	2984.40		648.20	2984.25		647.66	2984.30		657.61	2984.67		
10/11/2006	NM			649.16	2983.29		648.96	2983.00		658.00	2984.28		
1/17/2006	646.49	2983.24		NM			NM			652.89	2989.39	2	
4/11/2007	646.02	2983.71		649.11	2983.34		648.99	2982.97		658.37	2983.91		
10/24/2007	646.78	2982.95		649.85	2982.60		649.21	2982.75		658.56	2983.72		
4/9/2008	646.79	2982.94		649.29	2983.16		649.18	2982.78		658.67	2983.61		
10/22/2008	647.48	2982.25		649.87	2982.58		649.69	2982.27		659.32	2982.96		
4/8/2009	647.47	2982.26		649.97	2982.48		649.08	2982.88		659.70	2982.58		
10/14/2009	647.97	2981.76		650.61	2981.84		650.47	2981.49		659.88	2982.40		
4/14/2010	574.94	3054.79	2	650.57	2981.88		650.35	2981.61		659.88	2982.40		
10/13/2010	648.95	2980.78		650.36	2982.09		651.28	2980.68		660.74	2981.54		
4/20/2011	649.19	2980.54		651.62	2980.83		651.59	2980.37		661.28	2981.00		
10/18/2011	649.79	2979.94		652.38	2980.07		652.10	2979.86		661.67	2980.61		
4/18/2012	650.33	2979.40		652.58	2979.87		652.51	2979.45		662.50	2979.78		

Notes:

1. Depth to water measurements collected by University of Arizona.
2. Anomalous measurement.

Abbreviations:

- MP = measuring point
- DTW = depth to water
- WL = water level
- ft = feet
- bgs = below ground surface
- amsl = above mean sea level
- NM = not measured

**TABLE 7**  
**ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES<sup>1</sup>**  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per liter (mg/L)

Analyte	Sample Date	MW-2		MW-3		MW-4		MW-5	
		10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012
<b>Conventional</b>									
Chloride (Cl)		5.7	5.6	4.7	5.0	3.3	3.6	6.2	6.0
Sulfate (SO <sub>4</sub> )		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
<b>Metals/Inorganics</b>									
Manganese (Mn)	0.11		0.083	0.066	0.039	0.06	0.055	0.12	0.085
Sodium (Na)	34		27	32	27	29	25	31	26
<b>VOCs<sup>2</sup></b>									
1,1,1,2-Tetrachloroethane		0.0005 U	0.0005 U						
1,1,1-Trichloroethane		0.0005 U	0.0005 U						
1,1,2,2-Tetrachloroethane		0.0005 U	0.0005 U						
1,1,2-Trichloroethane		0.0005 U	0.0005 U						
1,1-Dichloroethane		0.0005 U	0.0005 U						
1,1-Dichloroethene		0.0005 U	0.0005 U						
1,1-Dichloropropane		0.0005 U	0.0005 U						
1,2,3-Trichlorobenzene		0.0005 U	0.0005 U						
1,2,3-Trichloropropane		0.0005 U	0.0005 U						
1,2,4-Trichlorobenzene		0.0005 U	0.0005 U						
1,2,4-Trimethylbenzene		0.0005 U	0.0005 U						
1,2-Dichlorobenzene		0.0005 U	0.0005 U						
1,2-Dichloroethane		0.0005 U	0.0005 U						
1,2-Dichloropropane		0.0005 U	0.0005 U						
1,3,5-Trimethylbenzene		0.0005 U	0.0005 U						
1,3-Dichlorobenzene		0.0005 U	0.0005 U						
1,3-Dichloropropane		0.0005 U	0.0005 U						
1,4-Dichlorobenzene		0.0005 U	0.0005 U						
2,2-Dichloropropane		0.0005 U	0.0005 U						
2-Chlorotoluene		0.0005 U	0.0005 U						
4-Chlorotoluene		0.0005 U	0.0005 U						
4-Isopropyltoluene		0.0005 U	0.0005 U						
Benzene		0.0005 U	0.0005 U						
Bromobenzene		0.0005 U	0.0005 U						
Bromochloromethane		0.0005 U	0.0005 U						
Bromodichloromethane		0.0005 U	0.0005 U						
Bromoform		0.0005 U	0.0005 U						
Bromomethane		0.0005 U	0.0005 U						
Carbon tetrachloride		0.0005 U	0.0005 U						
Chlorobenzene		0.0005 U	0.0005 U						
Chloroethane		0.0005 U	0.0005 U						
Chloroform		0.0005 U	0.0005 U						
Chloromethane		0.0005 U	0.0005 U						
cis-1,2-Dichloroethene		0.0005 U	0.0005 U						
cis-1,3-Dichloropropene		0.0005 U	0.0005 U						

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 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per liter (mg/L)

Analyte	Sample Date	MW-2			MW-3			MW-4			MW-5		
		10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012
Dibromochloromethane		0.0005 U	0.0005 U										
Dibromomethane		0.0005 U	0.0005 U										
Dichlorodifluoromethane (Freon 12)		0.0005 U	0.0005 U										
Ethylbenzene		0.0005 U	0.0005 U										
Hexachlorobutadiene		0.0005 U	0.0005 U										
Isopropylbenzene		0.0005 U	0.0005 U										
Methylene chloride		0.0005 U	0.0005 U										
Naphthalene		0.0005 U	0.0005 U										
n-Butylbenzene		0.0005 U	0.0005 U										
n-Propylbenzene		0.0005 U	0.0005 U										
sec-Butylbenzene		0.0005 U	0.0005 U										
Styrene		0.0005 U	0.0005 U										
tert-Butylbenzene		0.0005 U	0.0005 U										
Tetrachloroethene		0.0005 U	0.0005 U										
Toluene		0.0005 U	0.0005 U										
trans-1,2-Dichloroethene		0.0005 U	0.0005 U										
trans-1,3-Dichloropropene		0.0005 U	0.0005 U										
Trichloroethene		0.0005 U	0.0005 U										
Trichlorofluoromethane (Freon 11)		0.0005 U	0.0005 U										
Trihalomethanes, total		0.0005 U	0.0005 U										
Vinyl chloride		0.0005 U	0.0005 U										
Xylenes, total		0.0015 U	0.0015 U										
<b>Pesticides/PCBs</b>													
4,4'-DDD		0.00096 U	0.00096 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
4,4'-DDE		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
4,4'-DDT		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Aldrin		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
alpha-BHC		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
alpha-Chlordane		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
beta-BHC		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
delta-BHC		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Dieldrin		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Endosulfan I		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Endosulfan II		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Endosulfan sulfate		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Endrin		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Endrin aldehyde		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Endrin ketone		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
gamma-BHC		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
gamma-Chlordane		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Heptachlor		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						
Heptachlor epoxide		0.00096 U	0.00099 U	0.00097 U	0.00098 U	0.00096 U	0.00099 U						

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Analyte	MW-2		MW-3		MW-4		MW-5	
	10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012
Methoxychlor	0.000096 U	0.000099 U	0.000097 U	0.000098 U	0.000097 U	0.000099 U	0.000096 U	0.000099 U
Toxaphene	0.000000096 U	0.000099 U	0.000000097 U	0.000098 U	0.000000097 U	0.000099 U	0.000000096 U	0.000099 U
<b>SVOGs</b>								
1,2,4-Trichlorobenzene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
1,2-Dichlorobenzene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
1,3-Dichlorobenzene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
1,4-Dichlorobenzene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,4,5-Trichlorophenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,4,6-Trichlorophenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,4-Dichlorophenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,4-Dimethylphenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,4-Dinitrophenol	0.049 U	0.05 U	0.049 U	0.05 U	0.048 U	0.05 U	0.05 U	0.05 U
2,4-Dinitrotoluene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2,6-Dinitrotoluene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2-Chloronaphthalene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2-Chlorophenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2-Methyl-4,6-dinitrophenol	0.020 U	0.02 U	0.020 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U
2-Methylsaphthalene	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
2-Methylphenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
2-Nitroaniline	0.020 U	0.02 U	0.020 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U
2-Nitrophenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
3,3'-Dichlorobenzidine	0.020 U	0.02 U	0.020 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U
3-Nitroaniline	0.020 U	0.02 U	0.020 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U
4-Bromophenyl phenyl ether	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
4-Chloro-3-methylphenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
4-Chloroaniline	0.020 U	0.02 U	0.020 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U
4-Chlorophenyl phenyl ether	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
4-Methylphenol	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
4-Nitroaniline	0.020 U	0.02 U	0.020 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U
4-Nitrophenol	0.049 U	0.05 U	0.049 U	0.05 U	0.048 U	0.05 U	0.05 U	0.05 U
Acenaphthene	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Acenaphthylene	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Aniline	0.020 U	0.02 U	0.020 U	0.02 U	0.019 U	0.02 U	0.02 U	0.02 U
Anthracene	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Benz(a)anthracene	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Benz(a)pyrene	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Benz(b)fluoranthene	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Benz(g,h,i)perylene	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Benzoic acid	0.049 U	0.05 U	0.049 U	0.05 U	0.048 U	0.05 U	0.05 U	0.05 U
Benzyl alcohol	0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Bis(2-chloroethoxy)methane	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Bis(2-chloroethyl) ether	0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U

**TABLE 7**  
**ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES<sup>1</sup>**  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Concentrations shown in milligrams per liter (mg/L)

Analyte	Sample Date	MW-2		MW-3		MW-4		MW-5	
		10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012	10/18/2011	4/18/2012
Bis(2-chloroisopropyl) ether		0.0096 U	0.01 U	0.0096 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Bis(2-ethylhexyl) phthalate		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Butyl benzyl phthalate		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Chrysene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Dibenz(a,h)anthracene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Dibenzofuran		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Diethyl phthalate		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Dimethyl phthalate		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Di-n-butyl phthalate		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Di-n-octyl phthalate		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Fluoranthene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Fluorene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Hexachlorobenzene		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Hexachlorobutadiene		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Hexachlorocyclopentadiene		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Hexachloroethane		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Hexachloropropene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Indeno(1,2,3-cd)pyrene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Isophorone		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Naphthalene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Nitrobenzene		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
N-Nitrosodimethylamine		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
N-Nitroso-di-n-propylamine		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
N-Nitrosodiphenylamine		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Pentachlorophenol		0.029 U	0.03 U	0.029 U	0.03 U	0.029 U	0.03 U	0.03 U	0.03 U
Phenanthrene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U
Phenol		0.0098 U	0.01 U	0.0098 U	0.0099 U	0.0097 U	0.01 U	0.01 U	0.01 U
Pyrene		0.0049 U	0.005 U	0.0049 U	0.005 U	0.0048 U	0.005 U	0.005 U	0.005 U

**Notes**

1. Data qualifiers are as follows:

-- = no data available.

ND = not detected; no numerical value available for detection limit or reporting limit.

U = analyte not detected at reporting limit indicated.

2. VOCs by EPA Method 524-2.

**Abbreviations**

EDB = ethylene dibromide

EPA = US Environmental Protection Agency

MEK = methyl ethyl ketone

MIBK = methyl isobutyl ketone

PCBs = polychlorinated biphenyls

SVOCs = semivolatle organic compounds

VOCs = volatile organic compounds

**Table 8. Alert Levels for Organic Constituents in Groundwater Sam**  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona  
 Concentrations shown in milligrams per liter (mg/L)



Analyte	MCL	Alert Level
<b>Polychlorinated Biphenyls (PCBs)</b>	0.0005	0.0004
<b>Pesticides</b>		
Chlordane	0.002	0.0016
Endrin	0.002	0.0016
Heptachlor	0.0004	0.00032
Heptachlor epoxide	0.0002	0.00016
Lindane	0.0002	0.00016
Methoxychlor	0.04	0.032
Toxaphene	0.003	0.0024
<b>Semivolatile Organic Compounds</b>		
		0
1,2,4-Trichlorobenzene	0.07	0.056
1,2-Dichlorobenzene	0.6	0.48
1,4-Dichlorobenzene	0.075	0.06
Benzo(a)pyrene	0.0002	0.00016
Bis(2-ethylhexyl) phthalate	0.006	0.0048
Hexachlorobenzene	0.001	0.0008
Hexachlorocyclopentadiene	0.05	0.04
Pentachlorophenol	0.001	0.0008
<b>Volatile Organic Compounds</b>		
1,1,1-Trichloroethane	0.2	0.16
1,1,2-Trichloroethane	0.005	0.004
1,1-Dichloroethene	0.007	0.0056
1,2-Dibromo-3-chloropropane	0.0002	0.00016
Ethylene Dibromide (EDB)	0.00005	0.00004
1,2-Dichlorobenzene	0.6	0.48
1,2-Dichloroethane	0.005	0.004
1,2-Dichloropropane	0.005	0.004
1,4-Dichlorobenzene	0.075	0.06
Benzene	0.005	0.004
Carbon tetrachloride	0.005	0.004
Chlorobenzene	0.1	0.08
cis-1,2-Dichloroethene	0.07	0.056
Ethylbenzene	0.7	0.56
Methylene chloride	0.005	0.004
Styrene	0.1	0.08
Tetrachloroethene	0.005	0.004
Toluene	1	0.8
trans-1,2-Dichloroethene	0.1	0.08
Trichloroethene	0.005	0.004
Trihalomethanes	0.08	0.064
Vinyl chloride	0.002	0.0016
Xylenes, total	10	8

Notes

1. Only chemicals that have primary MCLs are listed.
2. Primary MCLs obtained from National Primary Drinking Water Regulations (EPA 816-F-09-0004, May 2009).
3. Alert levels are calculated as 80% of MCLs.

Abbreviations

EPA = US Environmental Protection Agency  
 MCLs = maximum contaminant levels

**Table 9. Alert Levels for Inorganic Constituents in  
 Groundwater Samples  
 Combined Semi-Annual Reports  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona**

Parameter	Alert Levels
MW-2	
Chloride (Cl <sup>-</sup> )	9.045
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	7.954
Manganese (Mn)	6.8
Sodium (Na)	47
MW-3	
Chloride (Cl <sup>-</sup> )	9.135
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	7.757
Manganese (Mn)	7.72
Sodium (Na)	52
MW-4	
Chloride (Cl <sup>-</sup> )	9.65
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	6.686
Manganese (Mn)	0.412
Sodium (Na)	45
MW-5	
Chloride (Cl <sup>-</sup> )	8.992
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	6.339
Manganese (Mn)	0.88
Sodium (Na)	54

Notes:

1. All concentrations are in unit mg/L, except noted otherwise.
2. "-" = not applicable.

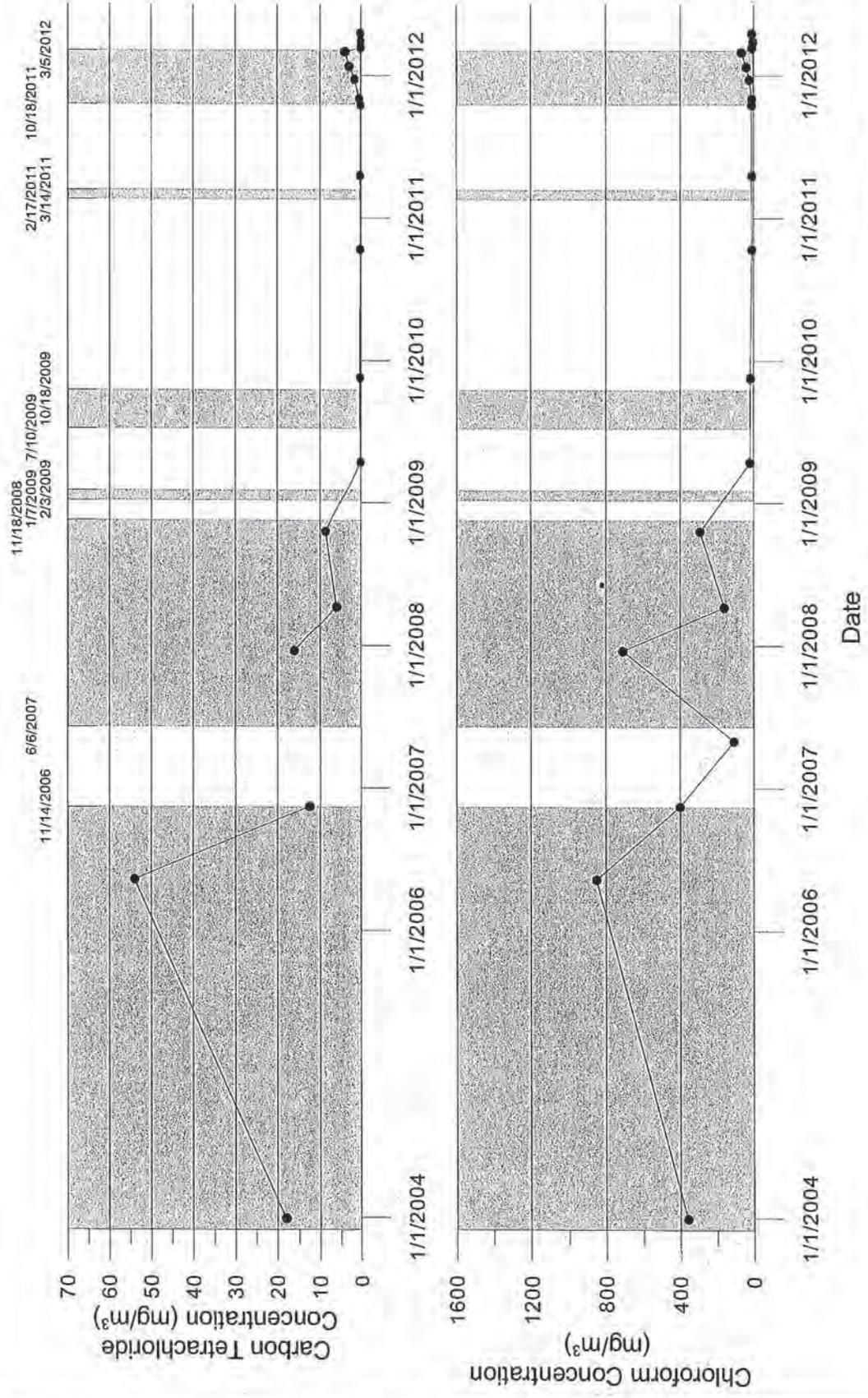
---

**FIGURES**









**LEGEND**

- Constituent concentration is above the reporting limit.
- ▨ Soil vapor extraction system was nonoperational.

Note:  
1.) A discontinuous line occurs where the the constituent concentration was nondetect and the reporting limit was not provided.

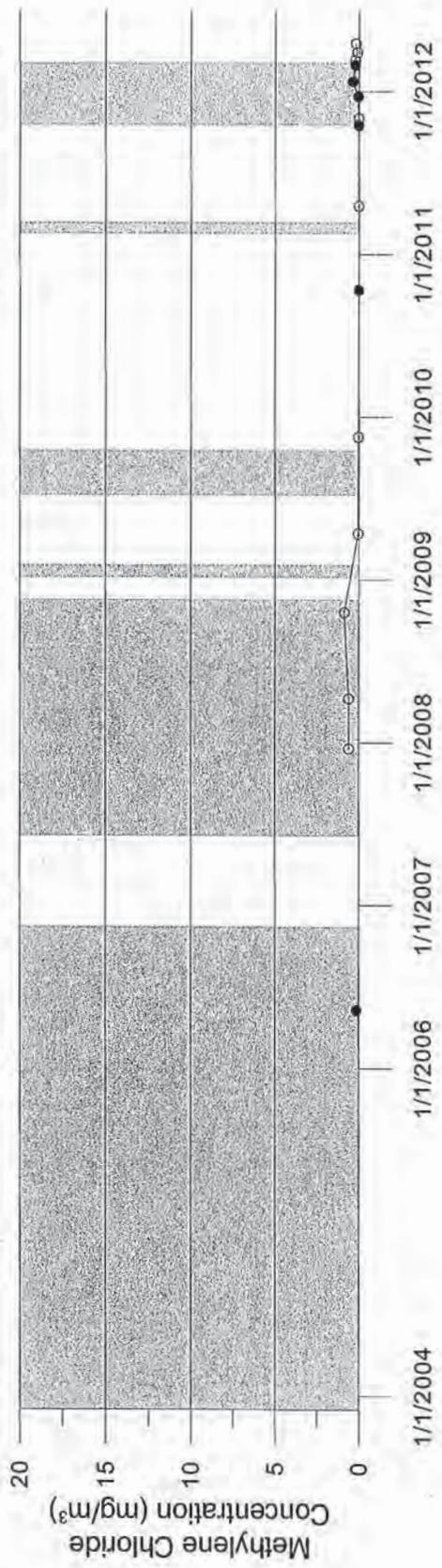
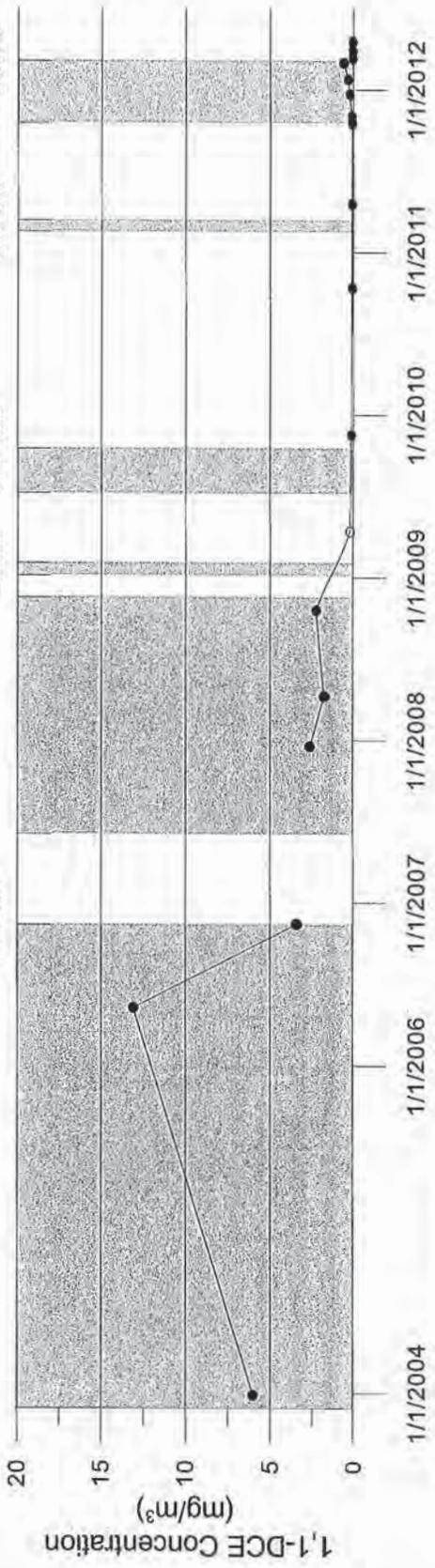
Abbreviations:  
mg = milligrams  
m = meter

**amec**

SGS-SP CARBON TETRACHLORIDE AND CHLOROFORM  
CONCENTRATION TRENDS  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona

Project No. 1420112039	Prepared By: DO
Figure No. 4a	6/7/12

11/18/2008  
1/7/2009  
2/3/2009  
7/10/2009  
10/18/2009  
2/17/2011  
3/14/2011  
10/18/2011  
3/5/2012



**LEGEND**

- Constituent concentration is above the reporting limit.
- Non-detect is plotted as the reporting limit.

Soil vapor extraction system was nonoperational.

**Date**

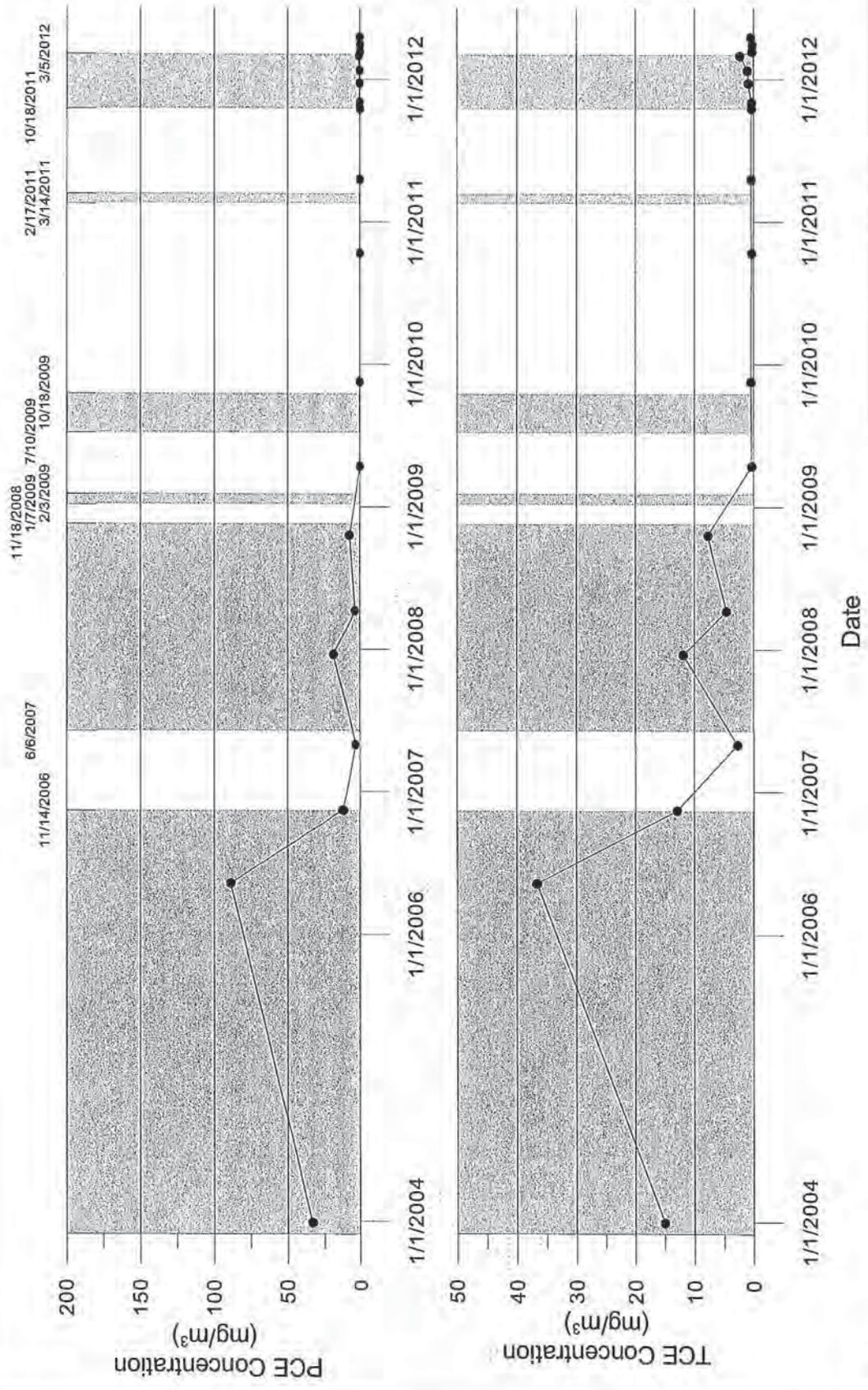
Abbreviations:  
1,1-DCE = 1,1 Dichloroethene  
mg = milligrams  
m = meter

Note:  
1.) A discontinuous line occurs where the constituent concentration was nondetect and the reporting limit was not provided.

Project No. 1420112039	Prepared By: DO
Figure No. 4b	6/7/12

**SGS-SP 1,1-DCE AND METHYLENE CHLORIDE CONCENTRATION TRENDS**  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona





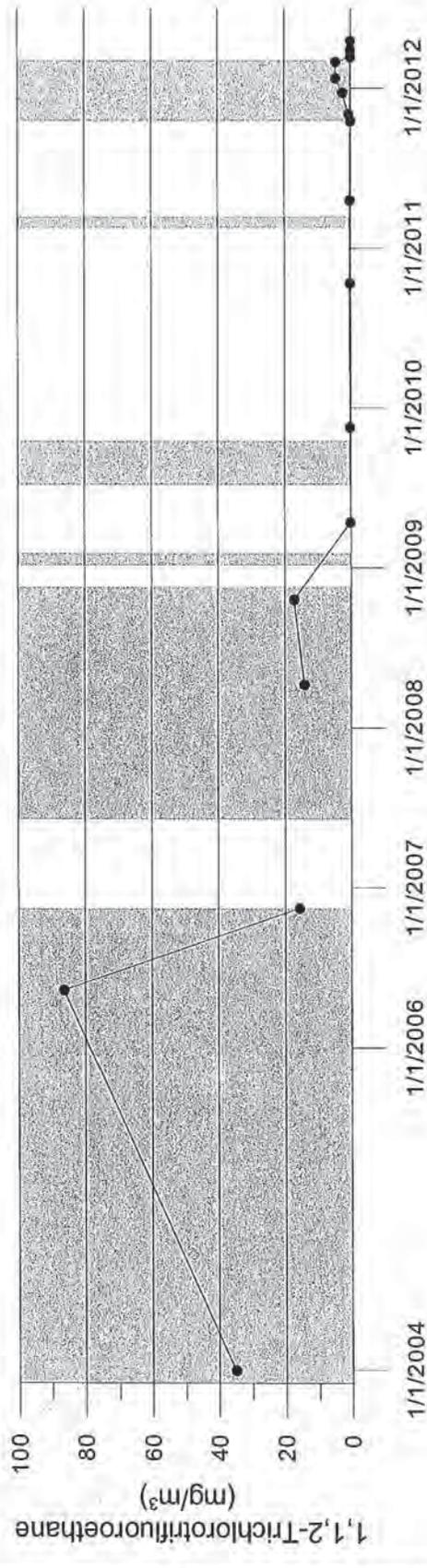
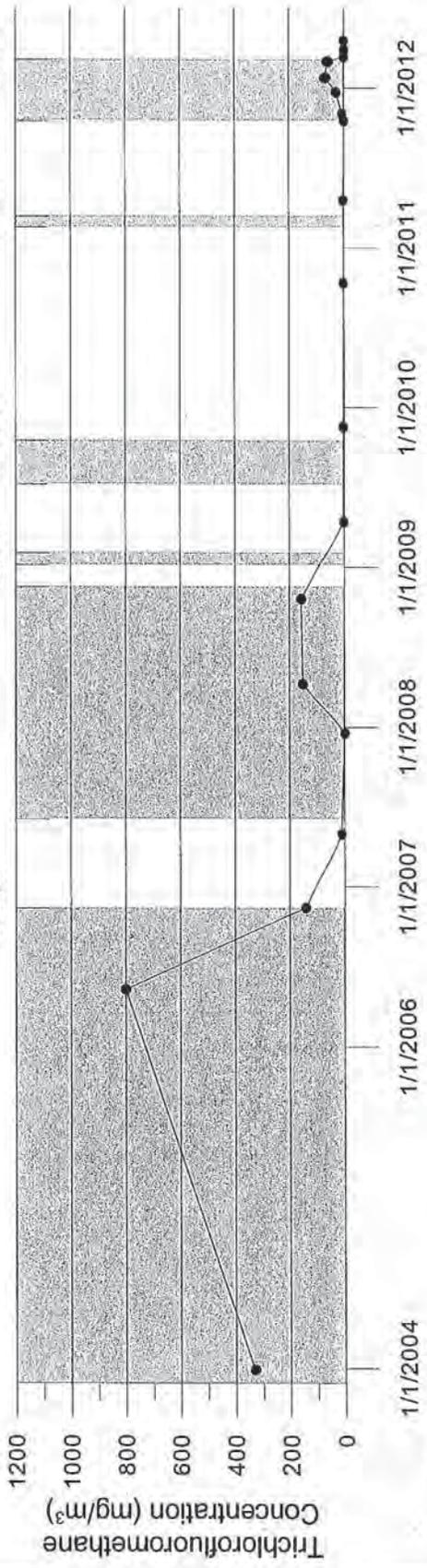
Abbreviations:  
PCE = Tetrachloroethene  
TCE = Trichloroethene  
mg = milligrams  
m = meter



SGS-SP PCE AND TCE CONCENTRATION TRENDS  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona

Prepared By:	Project No.
DO	1420112039
6/7/12	Figure No.
	4c

11/18/2008 2/17/2011 10/18/2011  
 1/7/2009 7/10/2009 3/14/2011 3/5/2012  
 2/3/2009 10/18/2009



Date

**LEGEND**  
 ● Constituent concentration is above the reporting limit.  
 ■ Soil vapor extraction system was nonoperational.

Abbreviations:  
 mg = milligrams  
 m = meter

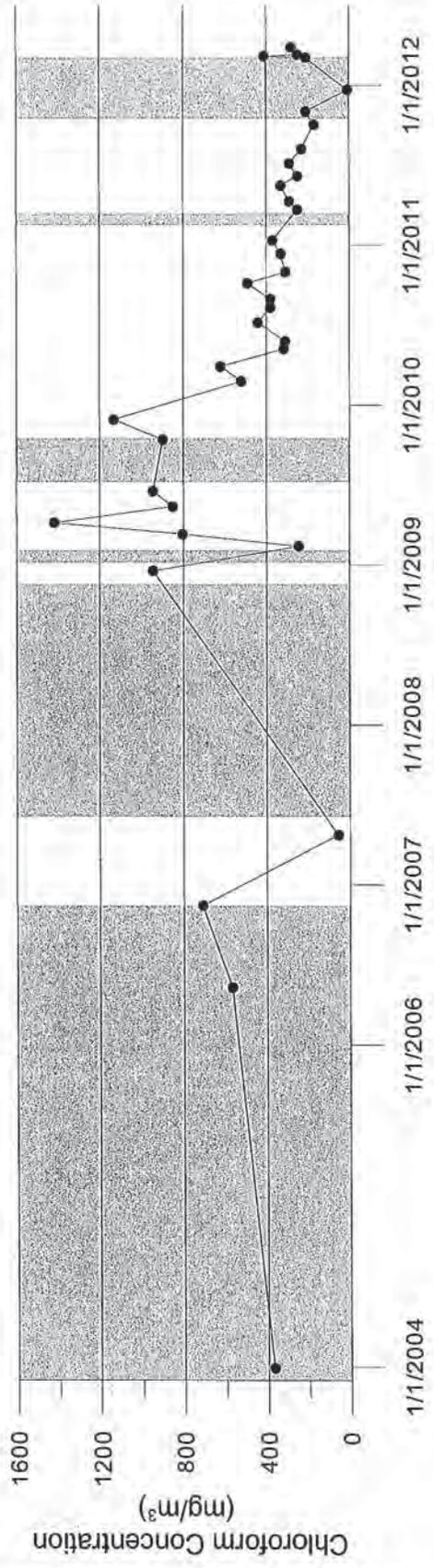
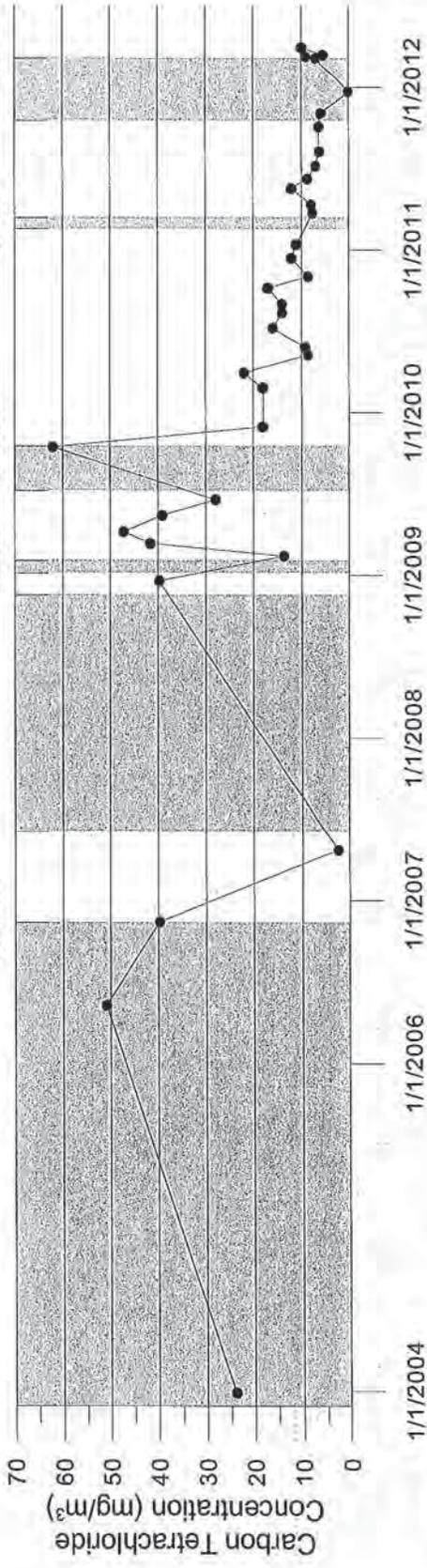
Note:  
 1.) A discontinuous line occurs where the the constituent concentration was nondetect and the reporting limit was not provided.

Project No. 1420112039  
 Prepared By: DO  
 Figure No. 4d  
 6/7/12

**SGS-SP TRICHLOROFLUOROMETHANE AND 1,1,2-TRICHLOROTRIFLUOROETHANE CONCENTRATION TRENDS**  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona



11/18/2008  
1/7/2009 7/10/2009  
2/3/2009 10/18/2009  
2/17/2011 10/18/2011  
3/14/2011 3/5/2012



Date

**LEGEND**

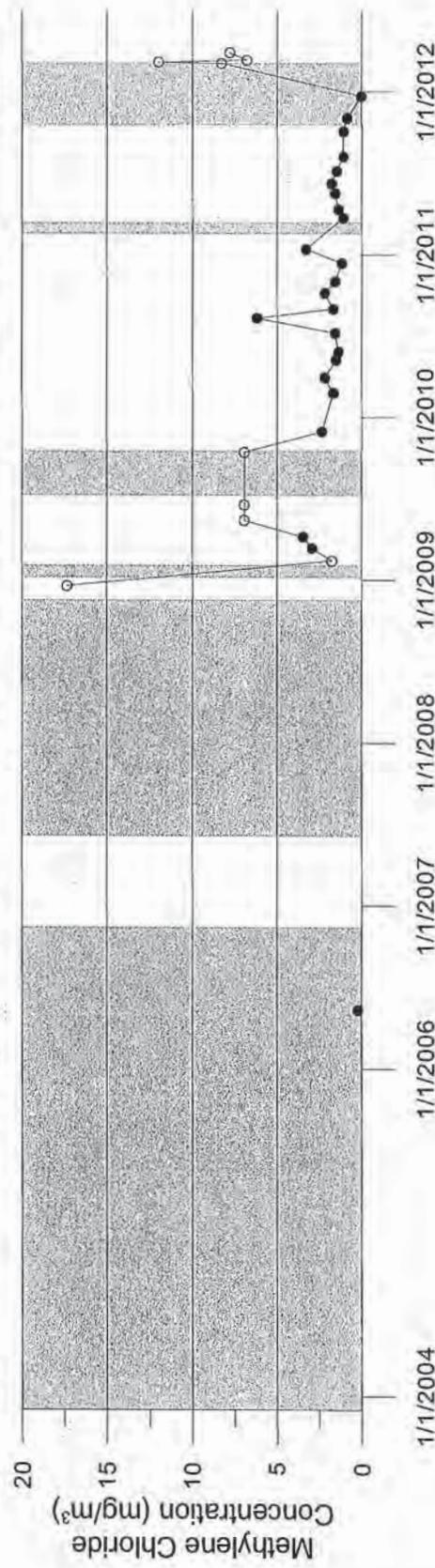
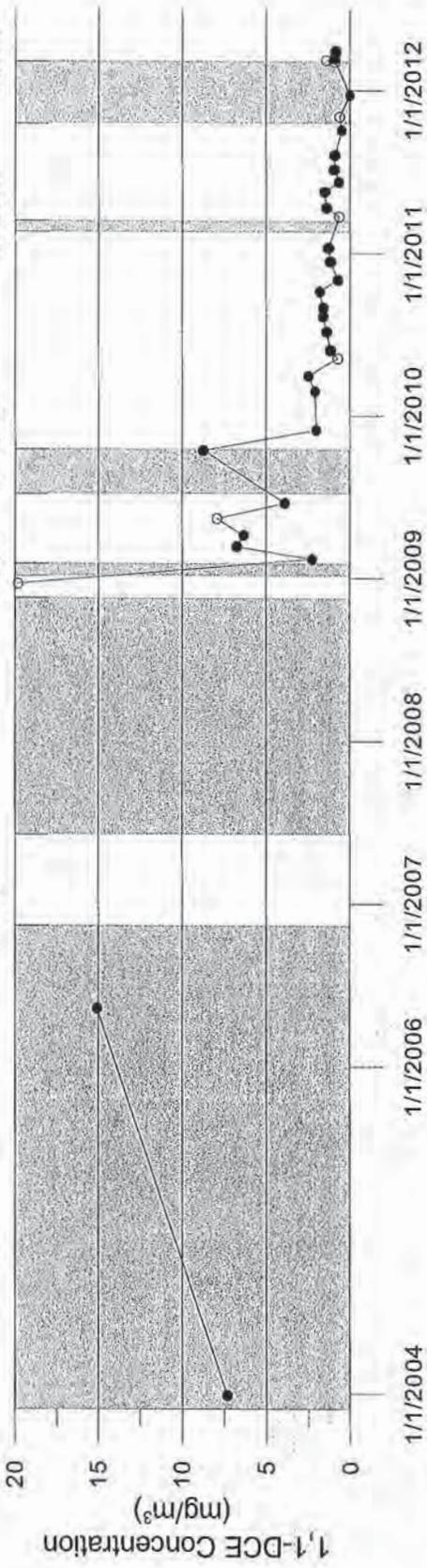
- Constituent concentration is above the reporting limit.
- ▨ Soil vapor extraction system was nonoperational.

Abbreviations:  
mg = milligrams  
m = meter

Note:  
1.) For field duplicates collected on 3/5/12 and 3/8/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.

	<b>SGS-WELL CARBON TETRACHLORIDE AND CHLOROFORM CONCENTRATION TRENDS</b> Page-Trowbridge Ranch Landfill Pinal County, Arizona		Project No. 1420112039
	Prepared By: DO 6/7/12	Figure No. 4e	

11/18/2008  
1/7/2009 7/10/2009  
2/3/2009 10/18/2009  
6/6/2007  
11/14/2006  
2/4/7/2011 10/18/2011 3/5/2012



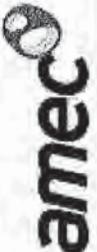
**LEGEND**

- Constituent concentration is above the reporting limit.
- Non-detect is plotted as the reporting limit.
- ▨ Soil vapor extraction system was nonoperational.

Date

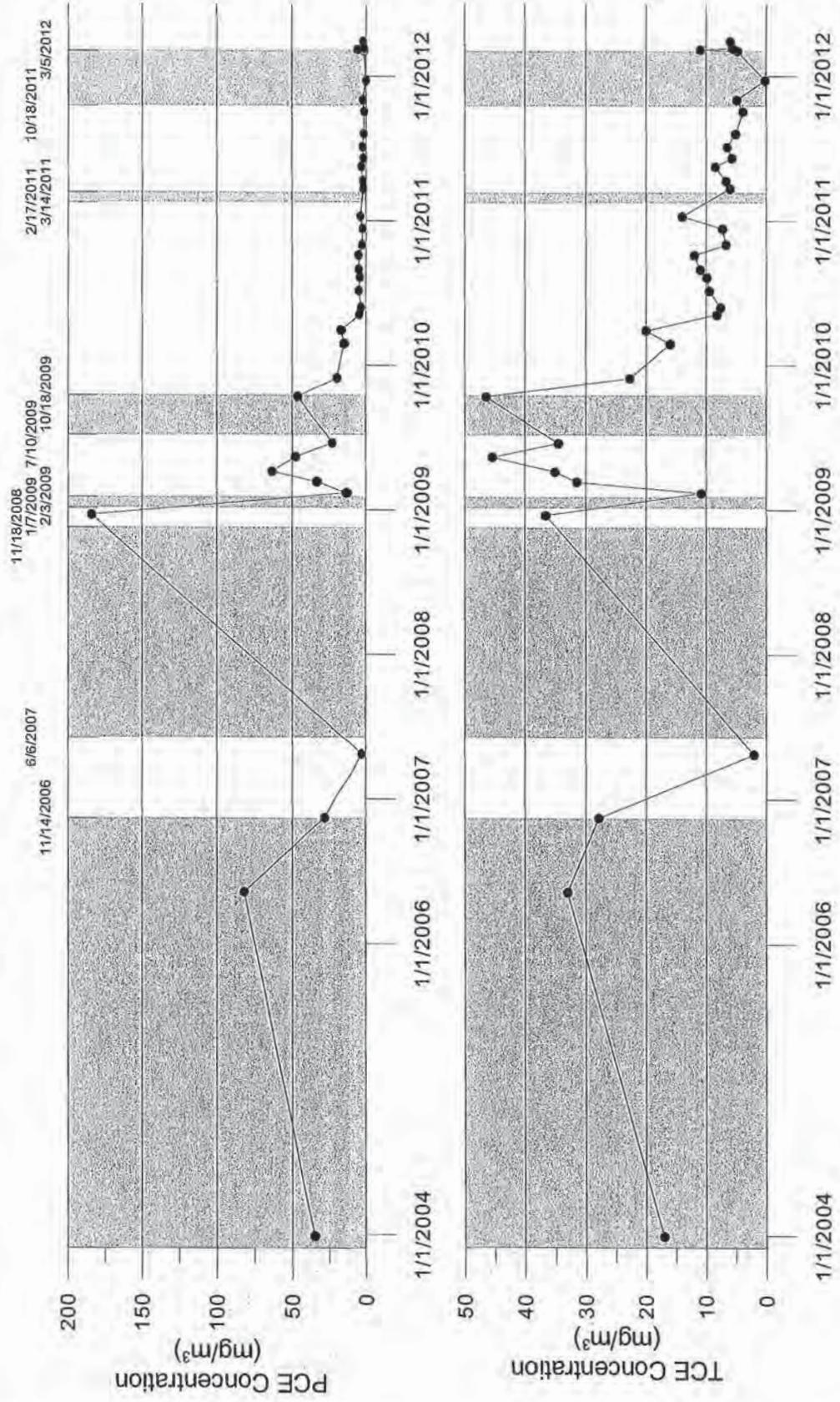
Abbreviations:  
1,1-DCE = 1,1 Dichloroethene  
mg = milligrams  
m = meter

Note:  
1.) A discontinuous line occurs where the constituent concentration was nondetect and the reporting limit was not provided.  
2.) For field duplicates collected on 3/5/12 and 3/8/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.



**SGS-WELL 1,1-DCE AND METHYLENE CHLORIDE CONCENTRATION TRENDS**  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona

Project No.  
1420112039  
Prepared By:  
DO  
6/7/12  
Figure No.  
4f



**LEGEND**

- Constituent concentration is above the reporting limit.
- Non-detect is plotted as the reporting limit.

Soil vapor extraction system was nonoperational.

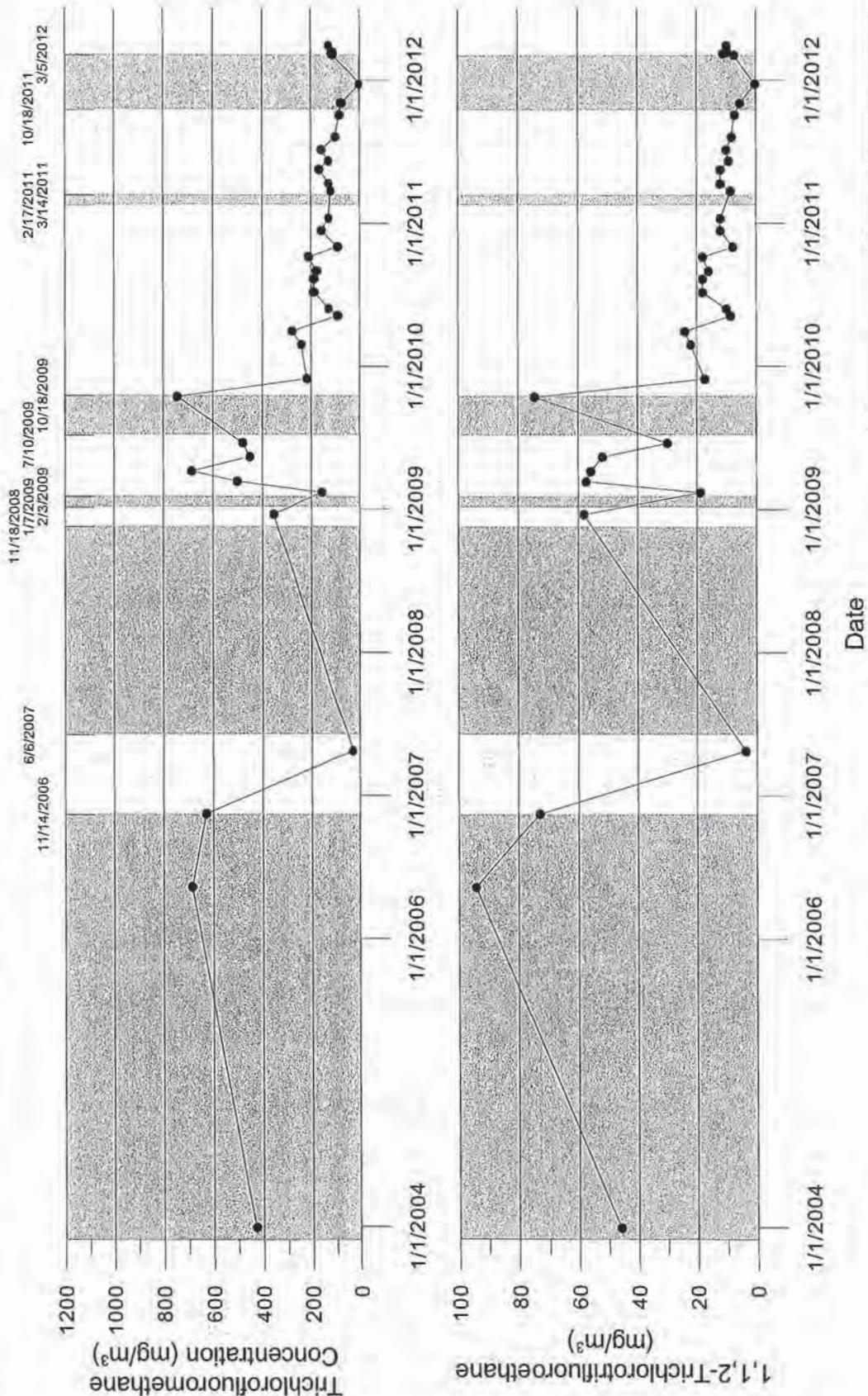
**Abbreviations:**  
 PCE = Tetrachloroethene  
 TCE = Trichloroethene  
 mg = milligrams  
 m = meter

**Note:**  
 1.) For field duplicates collected on 3/5/12 and 3/8/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.



**SGS-WELL PCE AND TCE CONCENTRATION TRENDS**  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Prepared By: DO  
 Date: 6/7/12  
 Project No. 1420112039  
 Figure No. 4g



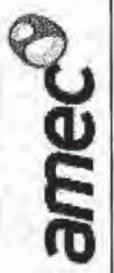
**LEGEND**

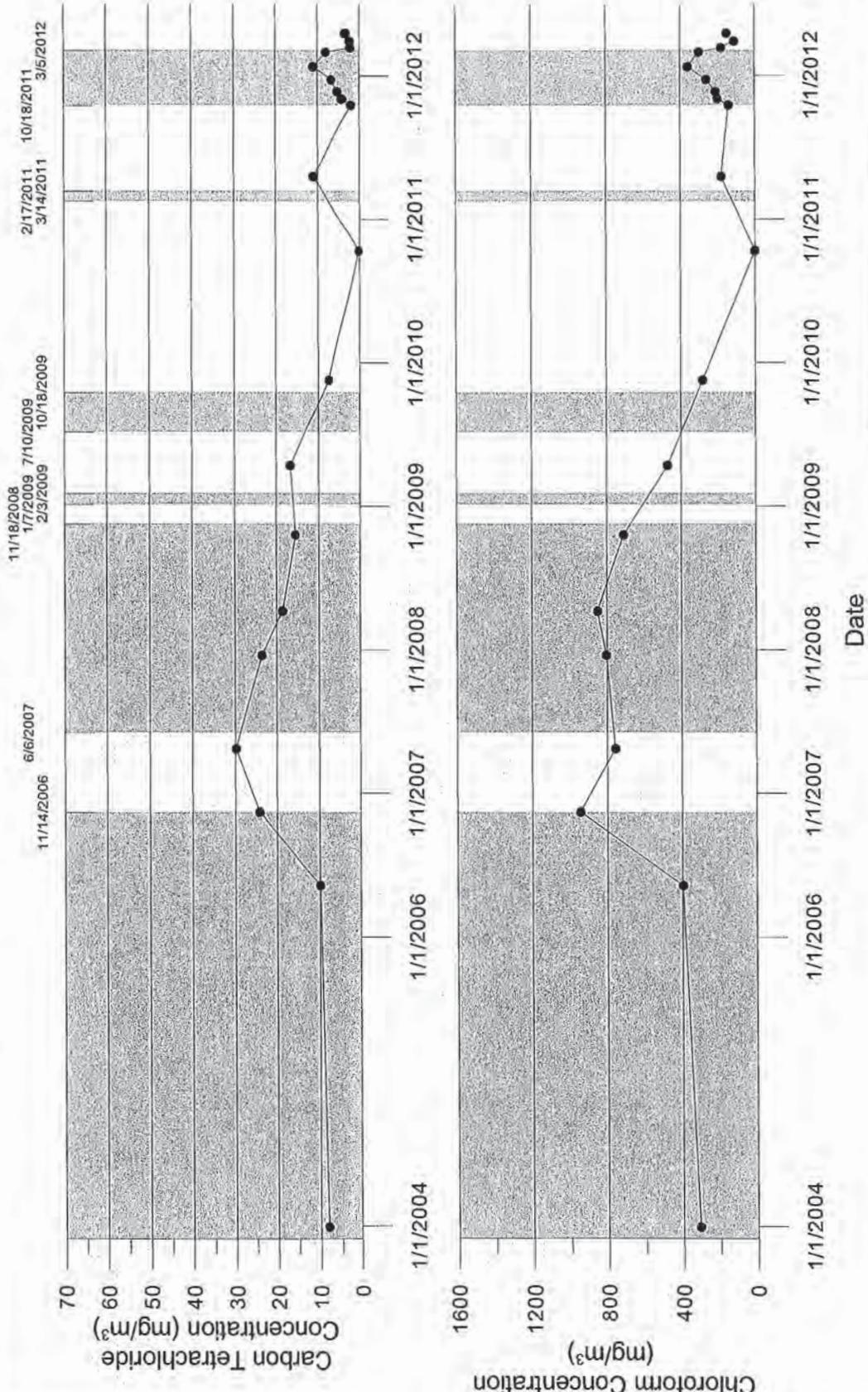
- Constituent concentration is above the reporting limit.
- ▨ Soil vapor extraction system was nonoperational.

Abbreviations:  
 mg = milligrams  
 m = meter

Note:  
 1.) For field duplicates collected on 3/5/12 and 3/8/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.

<p><b>SGS-WELL TRICHLOROFLUOROMETHANE AND 1,1,2-TRICHLOROTRIFLUOROETHANE CONCENTRATION TRENDS</b>          Page-Trowbridge Ranch Landfill          Pinal County, Arizona</p>	<p>Prepared By: DO</p>	<p>Project No. 1420112039</p>
	<p>6/7/12</p>	<p>Figure No. 4h</p>





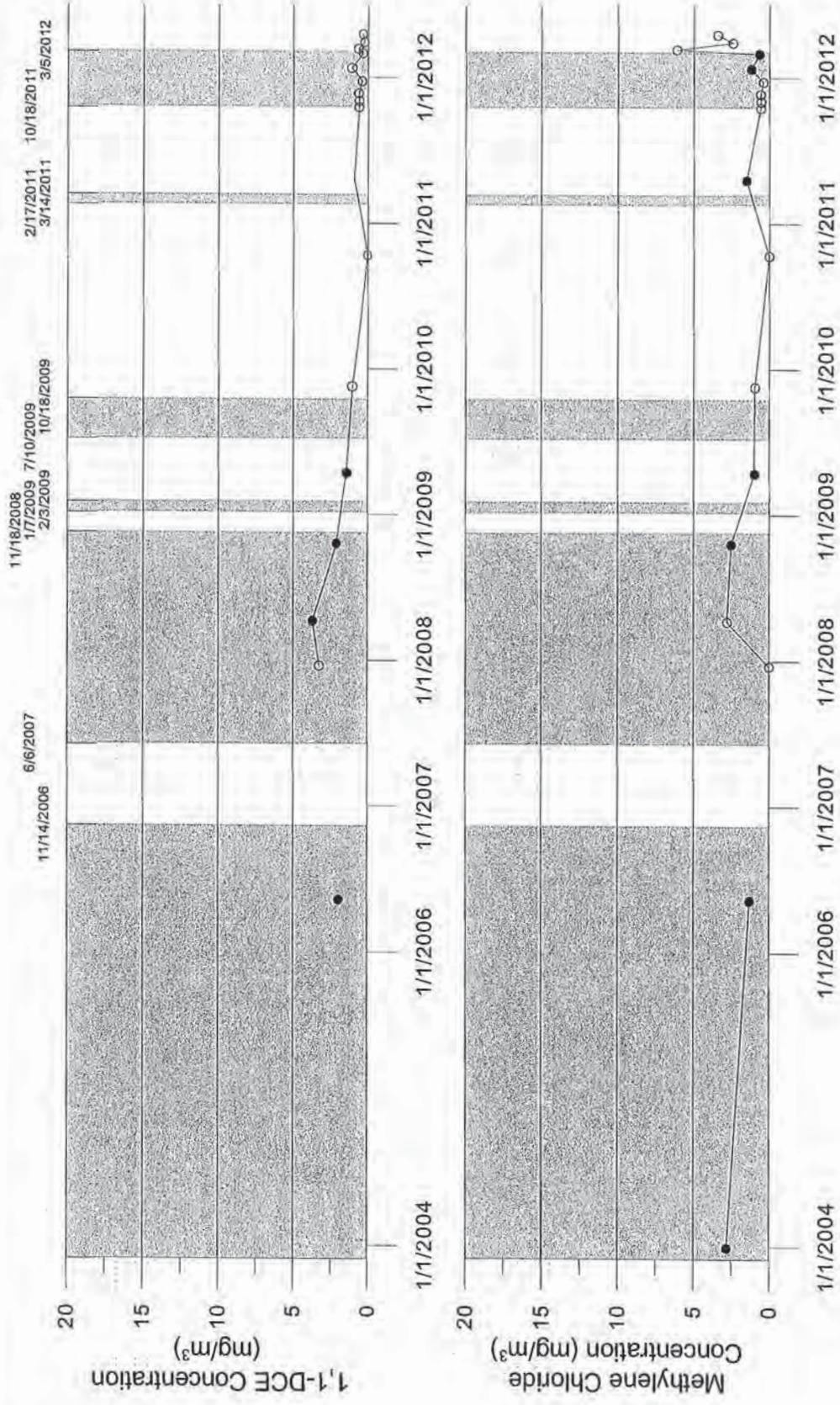
Abbreviations:  
 mg = milligrams  
 m = meter



SGD-SP CARBON TETRACHLORIDE AND CHLOROFORM  
 CONCENTRATION TRENDS  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Prepared By: DO  
 6/7/12

Project No. 1420112039  
 Figure No. 4i



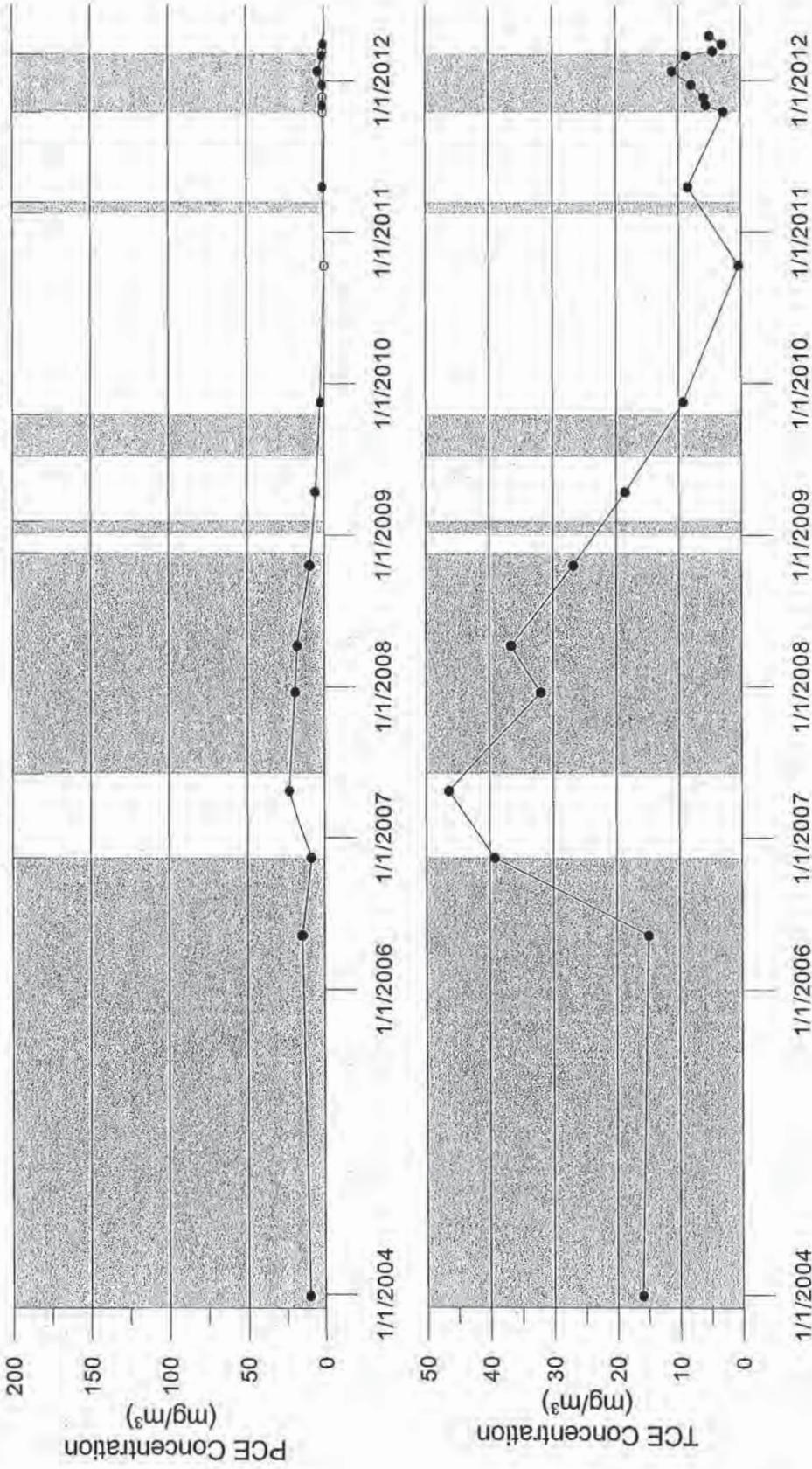
Note:  
 1.) A discontinuous line occurs where the constituent concentration was nondetect and the reporting limit was not provided.  
 Abbreviations:  
 1,1-DCE = 1,1 Dichloroethene  
 mg = milligrams  
 m = meter

**SGD-SP 1,1-DCE AND METHYLENE CHLORIDE CONCENTRATION TRENDS**  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

**amec**

Project No. 1420112039	Prepared By: DO
Figure No. 4j	6/7/12

11/18/2008 7/10/2009 10/18/2009  
 1/7/2009 2/3/2009 3/14/2011 2/17/2011 10/18/2011 3/5/2012



**LEGEND**

- Constituent value is above the reporting limit.
- Non-detect is plotted as the reporting limit.
- Soil vapor extraction system was nonoperational.

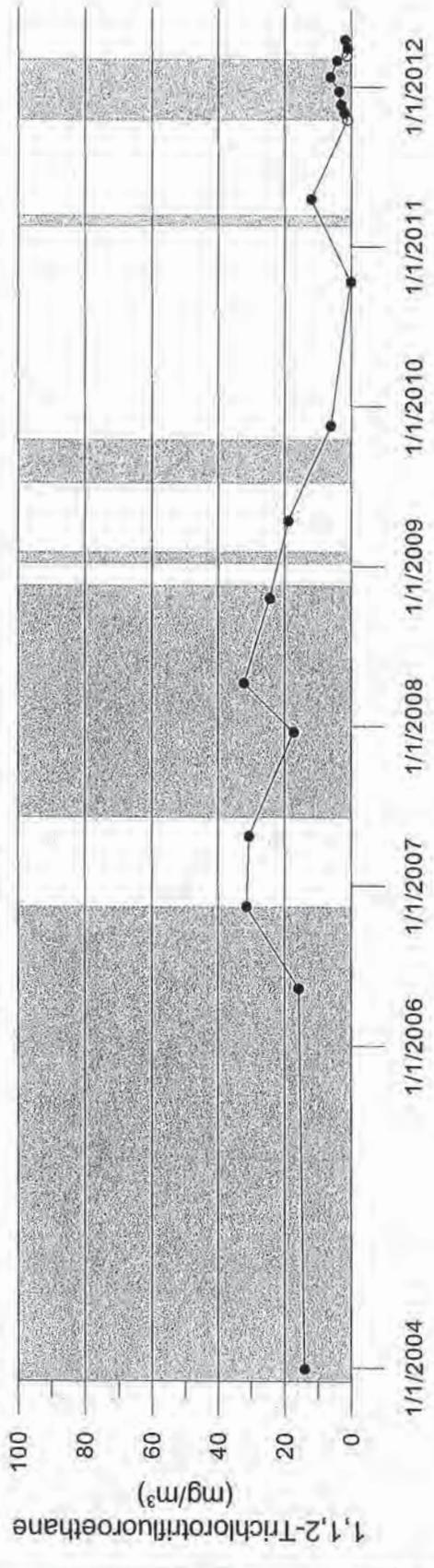
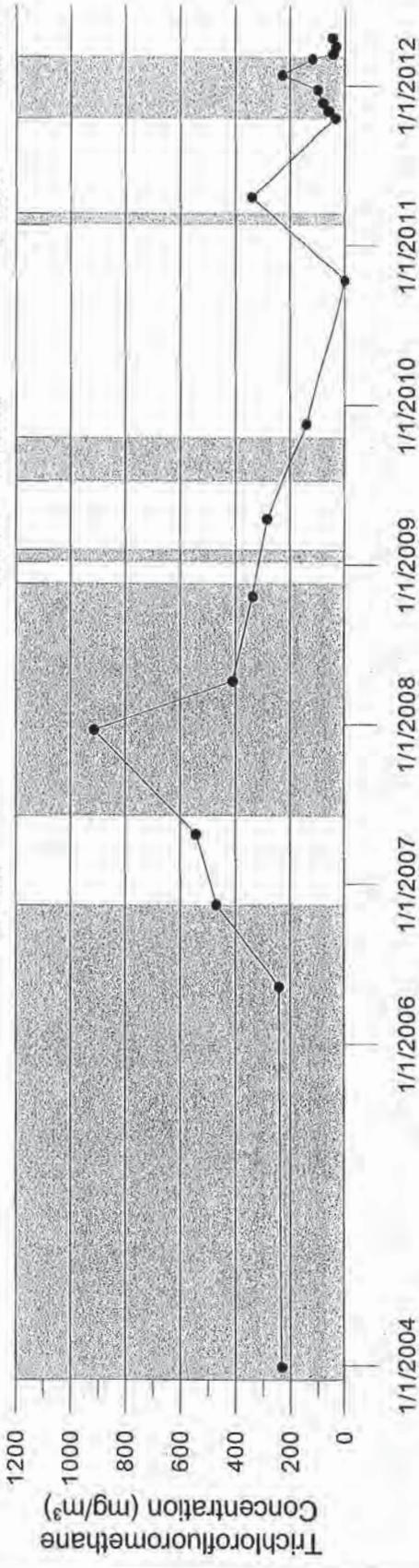
Abbreviations:  
 PCE = Tetrachloroethene  
 TCE = Trichloroethene  
 mg = milligrams  
 m = meter



**SGD-SP PCE AND TCE CONCENTRATION TRENDS**  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Prepared By: Project No.  
 DO 1420112039  
 6/7/12 Figure No.  
 4k

11/18/2008 10/18/2011 2/17/2011 3/5/2012  
 1/7/2009 7/10/2009 10/18/2009  
 2/3/2009 6/6/2007 11/14/2006

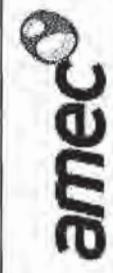


**LEGEND**

- Constituent value is above the reporting limit.
- Non-detect is plotted as the reporting limit.
- ▨ Soil vapor extraction system was nonoperational.

Date

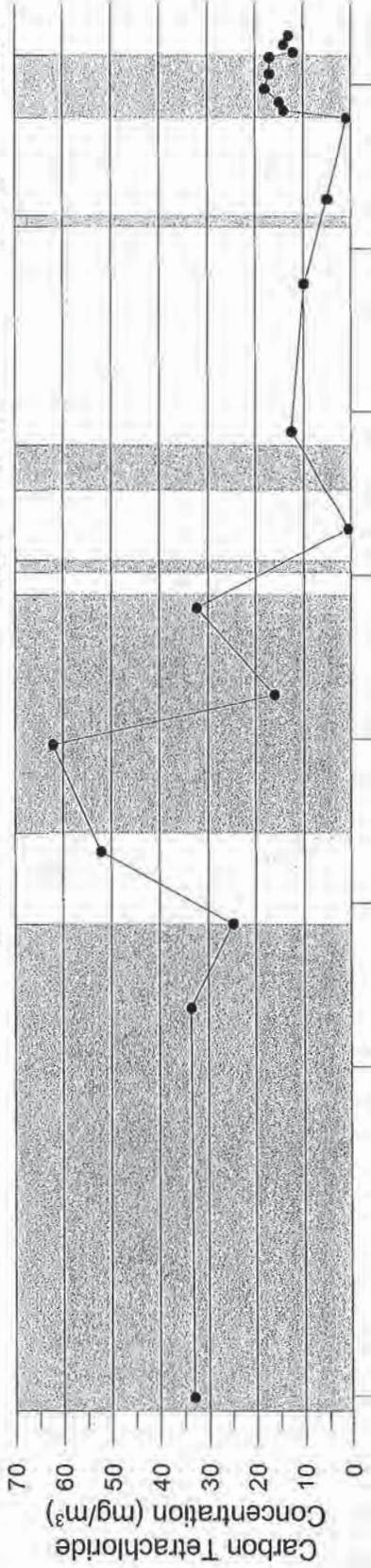
Abbreviations:  
 mg = milligrams  
 m = meter



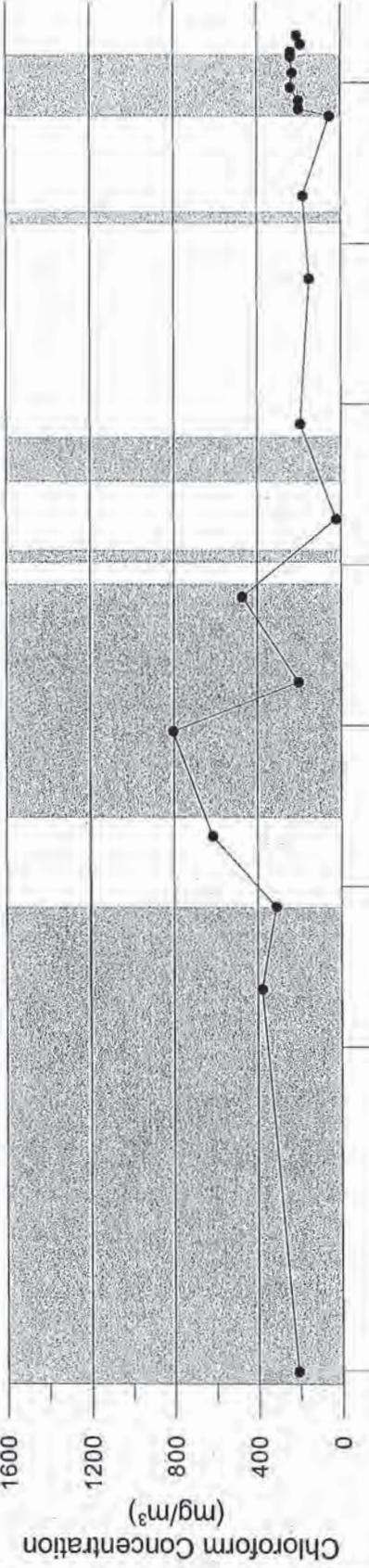
SGD-SP TRICHLOROFLUOROMETHANE AND  
 1,1,2-TRICHLOROTRIFLUOROETHANE CONCENTRATION TRENDS  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Prepared By: Project No.  
 DO 1420112039  
 6/7/12 Figure No.  
 41

11/1/2004 11/1/2006 11/1/2007 11/1/2008 11/1/2009 11/1/2010 11/1/2011 11/1/2012



11/1/2004 11/1/2006 11/1/2007 11/1/2008 11/1/2009 11/1/2010 11/1/2011 11/1/2012



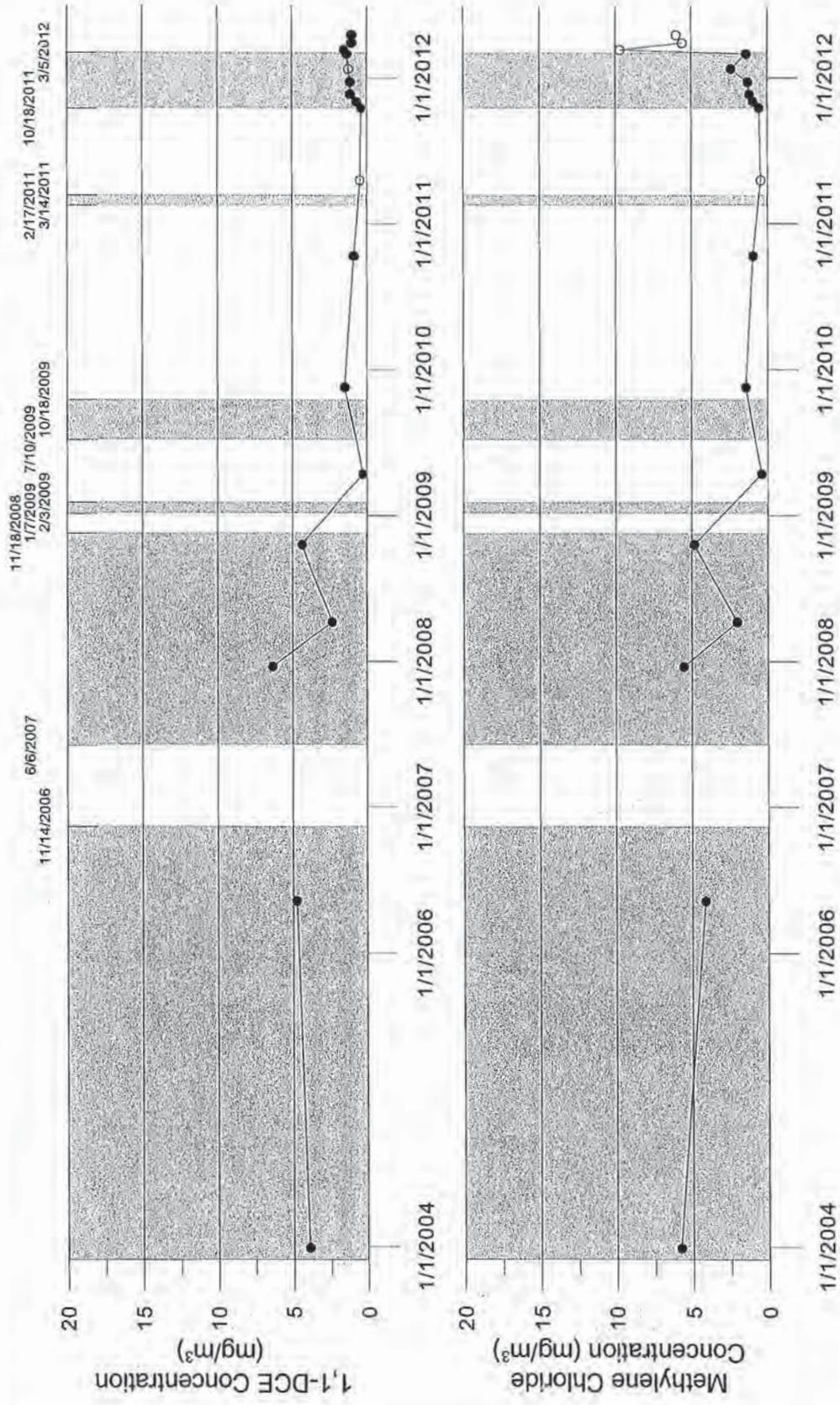
LEGEND  
 ● Constituent value is above the reporting limit.  
 [Shaded Area] Soil vapor extraction system was nonoperational.

Note:  
 1.) For field duplicates collected on 1/3/11, 11/22/11, 12/22/11, 1/24/12, 3/12/12, and 3/29/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.

Abbreviations:  
 mg = milligrams  
 m = meter

<b>SGD-MP CARBON TETRACHLORIDE AND CHLOROFORM          CONCENTRATION TRENDS</b> Page-Trowbridge Ranch Landfill Pinal County, Arizona	Prepared By: DO 6/7/12	Project No. 1420112039
	Figure No. 4m	





**LEGEND**

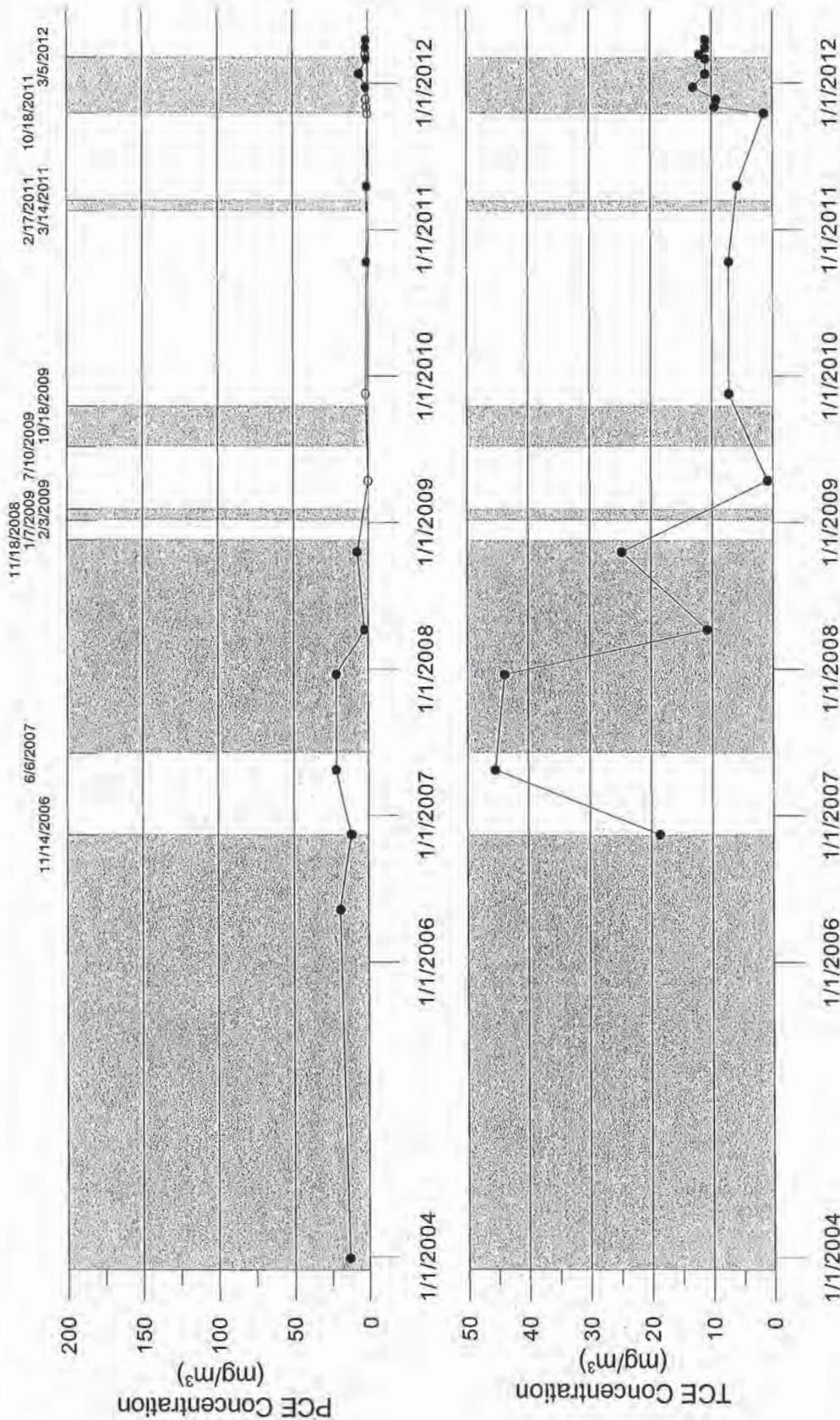
- Constituent value is above the reporting limit.
- Non-detect is plotted as the reporting limit.

Soil vapor extraction system was nonoperational.

**Abbreviations:**  
 1,1-DCE = 1,1 Dichloroethene  
 mg = milligrams  
 m = meter

**Note:**  
 1.) For field duplicates collected on 11/3/11, 11/22/11, 12/22/11, 1/24/12, 3/12/12, and 3/29/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.  
 2.) A discontinuous line occurs where the constituent concentration was nondetect and the reporting limit was not provided.

	<b>SGD-MP 1,1-DCE AND METHYLENE CHLORIDE CONCENTRATION TRENDS</b> Page-Trowbridge Ranch Landfill Pinal County, Arizona		Project No. 1420112039
	Prepared By: DO	Date: 6/7/12	Figure No. 4n



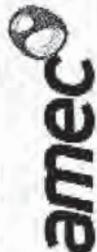
**LEGEND**

- Constituent value is above the reporting limit.
- Non-detect is plotted as the reporting limit.
- Shaded Area Soil vapor extraction system was not operational.

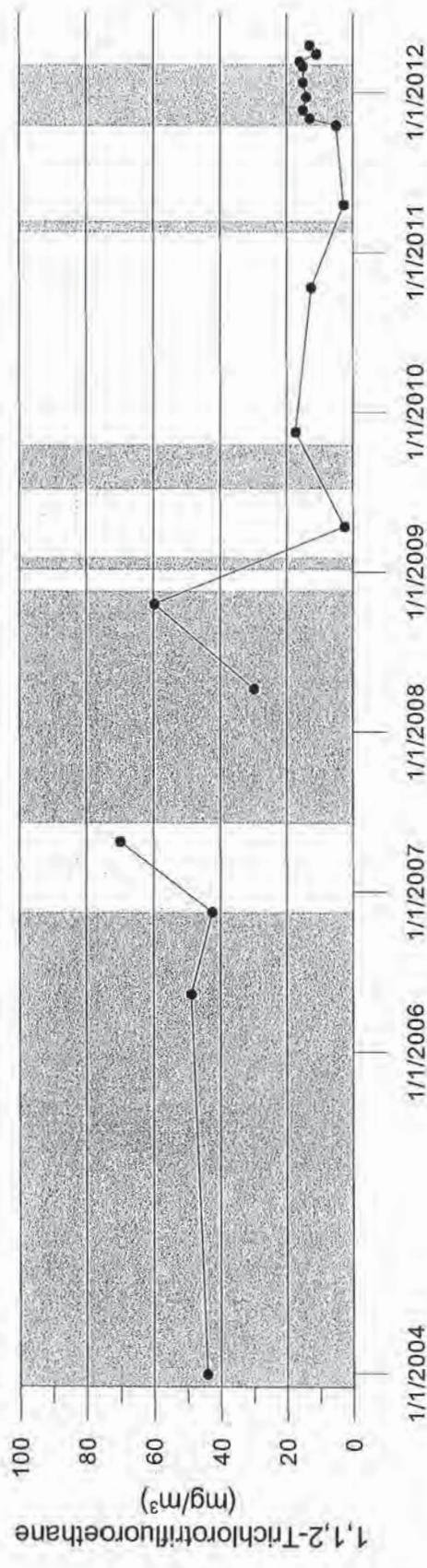
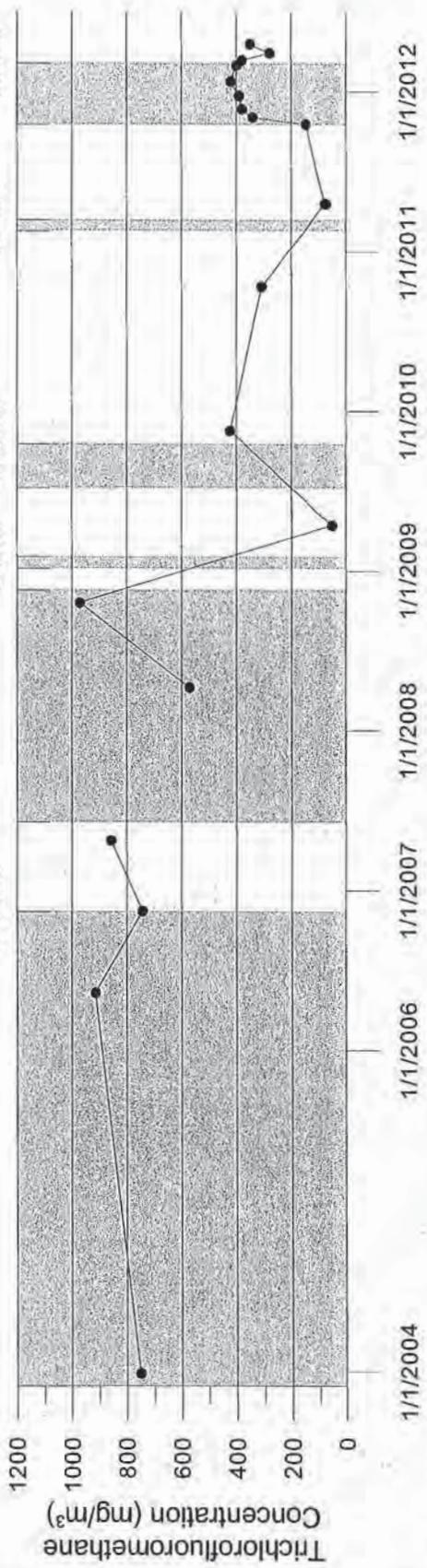
**Date**

Abbreviations:  
 PCE = Tetrachloroethene  
 TOE = Trichloroethene  
 mg = milligrams  
 m = meter

**Note:**  
 1.) For field duplicates collected on 11/3/11, 11/22/11, 12/22/11, 1/24/12, and 3/12/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.  
 2.) A discontinuous line occurs where the constituent concentration was nondetect and the reporting limit was not provided.

	<b>SGD-MP PCE AND TCE CONCENTRATION TRENDS</b> Page-Trowbridge Ranch Landfill Pinal County, Arizona	
	Prepared By: DO	Project No. 1420112039
	6/7/12	Figure No. 40

11/18/2008 1/17/2009 7/10/2009 10/18/2009  
 2/3/2009 10/18/2009  
 2/17/2011 3/14/2011  
 10/18/2011 3/5/2012



**LEGEND**

- Constituent value is above the reporting limit.
- ▨ Soil vapor extraction system was nonoperational.

Date

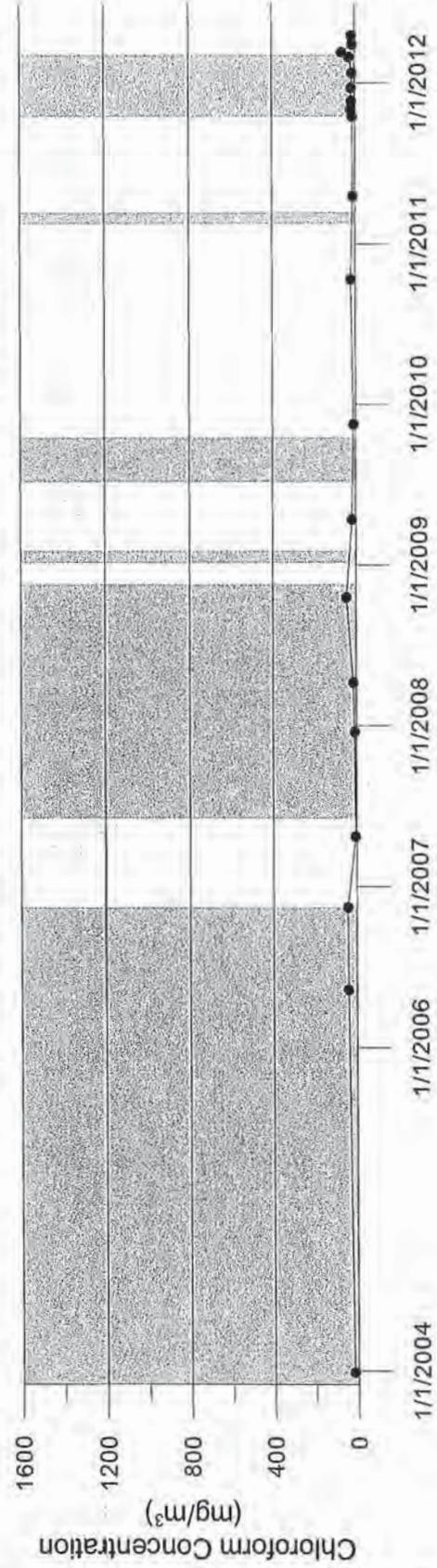
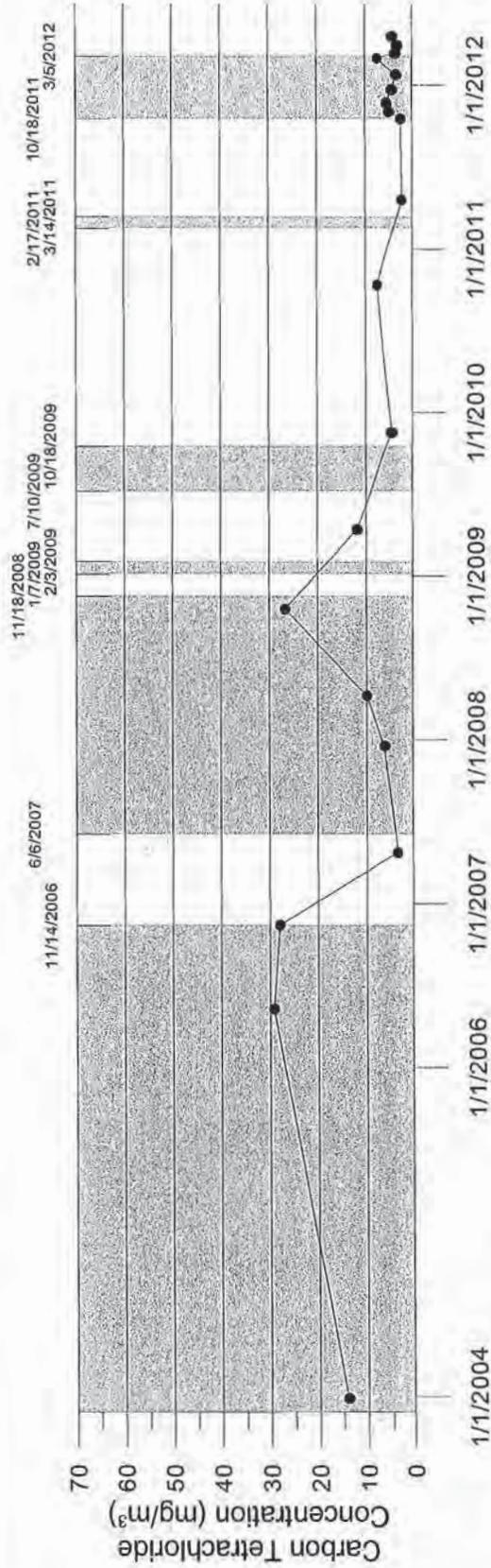
Note:  
 1.) For field duplicates collected on 11/3/11, 11/22/11, 12/22/11, 1/24/12, and 3/29/12, concentrations from the original and duplicate sample were compared and the higher value is plotted.  
 2.) A discontinuous line occurs where the constituent concentration was nondetect and the reporting limit was not provided.

Abbreviations:  
 mg = milligrams  
 m = meter



**SGD-MP TRICHLOROFLUOROMETHANE AND  
 1,1,2-TRICHLOROTRIFLUOROETHANE CONCENTRATION TRENDS**  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Project No.	1420112039
Prepared By:	DO
DO	6/7/12
Figure No.	4p



**LEGEND**

- Constituent value is above the reporting limit.
- ▨ Soil vapor extraction system was nonoperational.

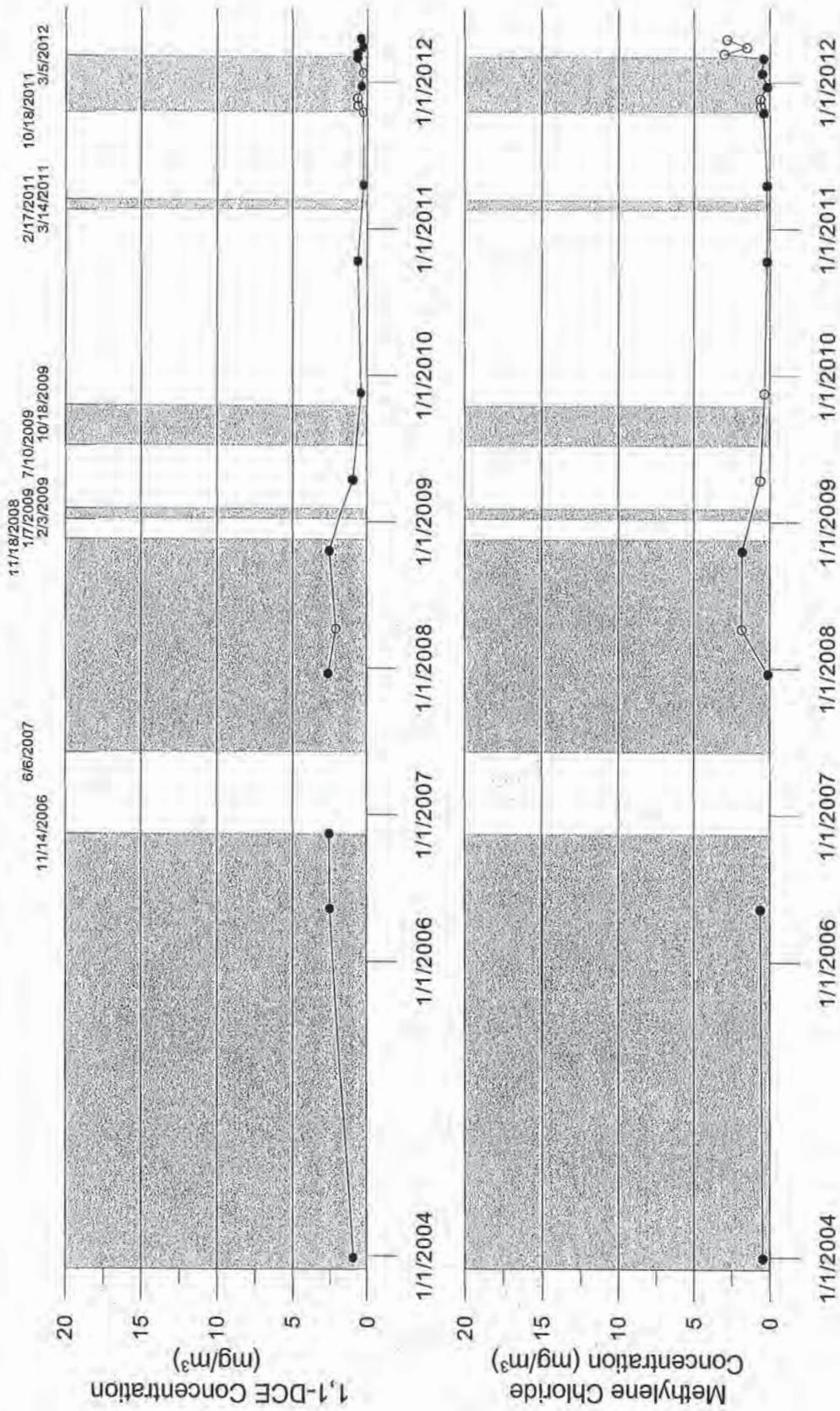
**Abbreviations:**  
 mg = milligrams  
 m = meter

**Note:**  
 1.) For field duplicates collected on April 20, 2011, concentrations from the original and duplicate sample were compared and the higher value is plotted.

Prepared By: Project No.  
 DO 1420112039  
 6/7/12 Figure No.  
 4q

**SGD-DP CARBON TETRACHLORIDE AND CHLOROFORM  
 CONCENTRATION TRENDS**  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona





**LEGEND**

- Constituent value is above the reporting limit.
- Non-detect is plotted as the reporting limit.
- Soil vapor extraction system was nonoperational.

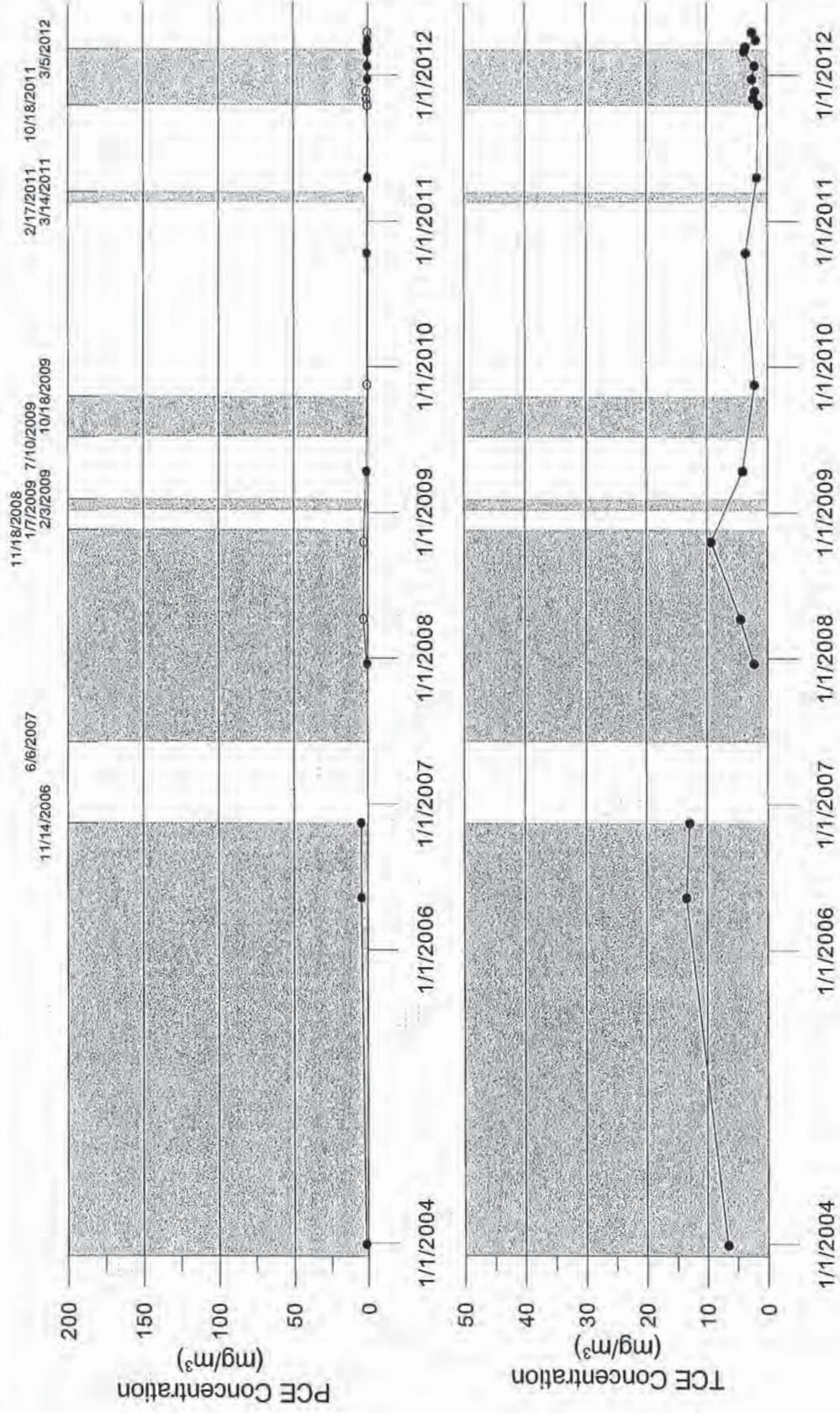
**Abbreviations:**  
 1,1-DCE = 1,1 Dichloroethene  
 mg = milligrams  
 m = meter

**Note:**  
 1.) For field duplicates collected on April 20, 2011, concentrations from the original and duplicate sample were compared and the higher value is plotted.

**amec**

SGD-DP 1,1-DCE AND METHYLENE CHLORIDE CONCENTRATION TRENDS  
 Page-Trowbridge Ranch Landfill  
 Pinal County, Arizona

Project No. 1420112039	Prepared By: DO
Figure No. 4f	6/7/12



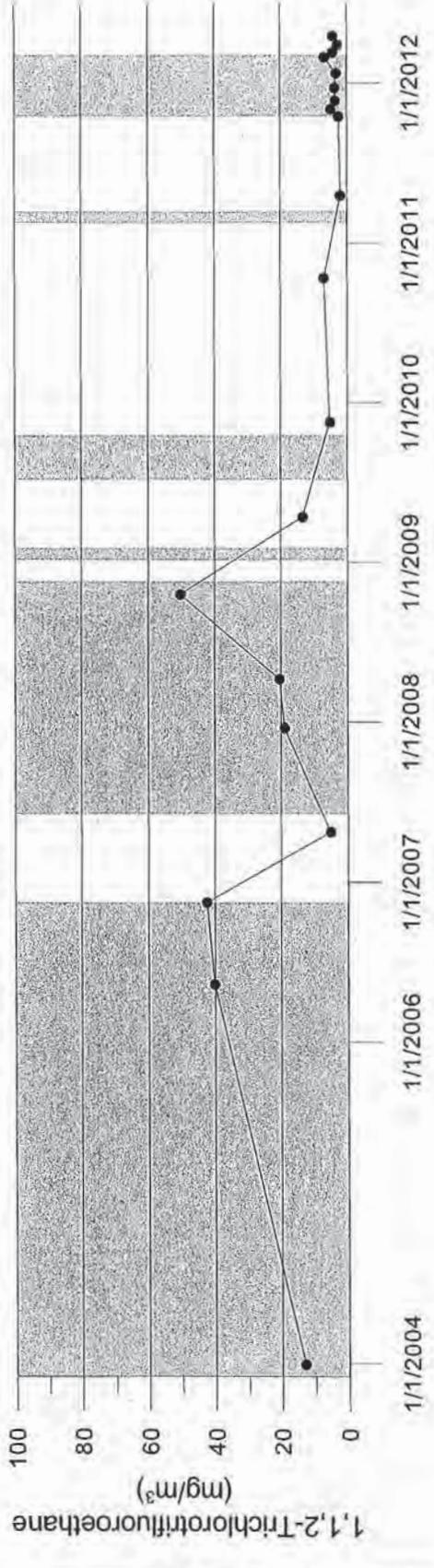
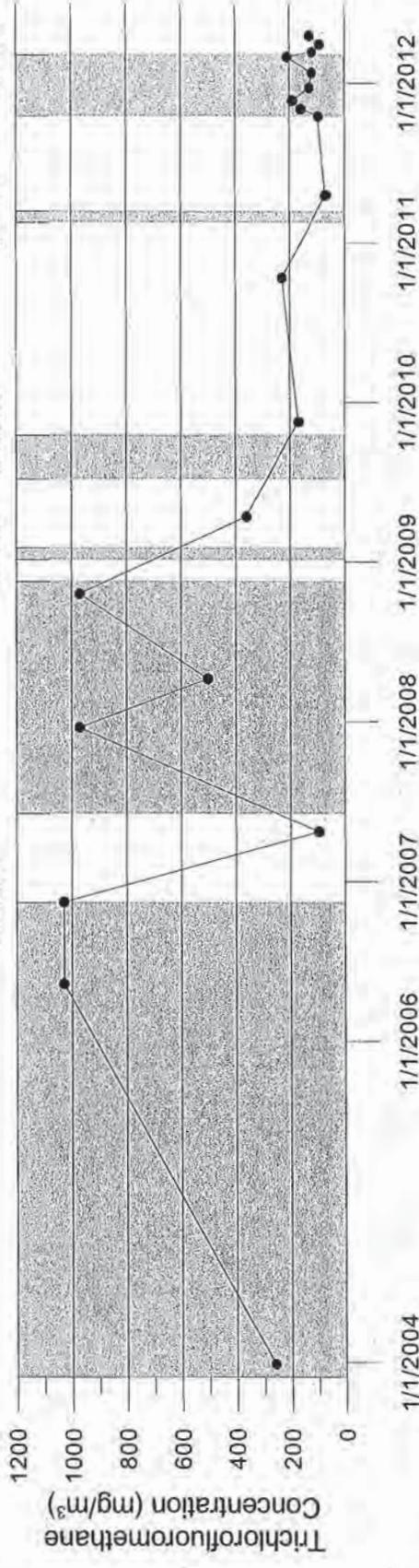
Note:  
1.) For field duplicates collected on April 20, 2011, concentrations from the original and duplicate sample were compared and the higher value is plotted.  
2.) A discontinuous line occurs where the constituent concentration was nondetect and the reporting limit was not provided.



SGD-DP PCE AND TCE CONCENTRATION TRENDS  
Page-Trowbridge Ranch Landfill  
Pinal County, Arizona

Project No.  
1420112039  
DO  
6/7/12  
Figure No.  
4s

11/18/2008  
1/7/2009  
2/3/2009  
6/6/2007  
11/14/2006  
1/1/2006  
1/1/2007  
1/1/2008  
1/1/2009  
1/1/2010  
1/1/2011  
2/17/2011  
3/14/2011  
10/18/2011  
3/5/2012



Date

**LEGEND**  
 ● Constituent value is above the reporting limit.  
 [Shaded Area] Soil vapor extraction system was nonoperational.

Abbreviations:  
 mg = milligrams  
 m = meter

Note:  
 1.) For field duplicates collected on April 20, 2011, concentrations from the original and duplicate sample were compared and the higher value is plotted.

	<b>SGD-DP TRICHLOROFLUOROMETHANE AND          1,1,2-TRICHLOROTRIFLUOROETHANE CONCENTRATION TRENDS</b> Page-Trowbridge Ranch Landfill Pinal County, Arizona		Project No. 1420112039
	Prepared By: DO 6/7/12	Figure No. 4t	