Argonne NATIONAL LABORATORY

ANL/EVS/AGEM/TR-11-08

Sitewide Monitoring at Agra, Kansas, June 2011

Environmental Science Division

USDA United States Department of Agriculture

Work sponsored by Commodity Credit Corporation,
United States Department of Agriculture

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Sitewide Monitoring at Agra, Kansas, June 2011

by
Applied Geosciences and Environmental Management Section
Environmental Science Division, Argonne National Laboratory

September 2012

United States Department of Agriculture

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AGEM	Applied Geosciences and Environmental Management
BGL	below ground level
°C	degree(s) Celsius
CCC	Commodity Credit Corporation
CD	compact disc
DO	dissolved oxygen
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
gal	gallon(s)
IM	interim measure
in.	inch(es)
KDHE	Kansas Department of Health and Environment
L	liter(s)
µg/L	microgram(s) per liter
µS/cm	microsiemen(s) per centimeter
MAROS	Monitoring and Remediation Optimization System
mg/L	milligram(s) per liter
min	minute(s)
mV	millivolt(s)
ORP	oxidation-reduction potential
PWS	public water supply
TOC	top of casing
USDA	U.S. Department of Agriculture
VOC	volatile organic compound

Sitewide Monitoring at Agra, Kansas, June 2011

1 Introduction and Background

In 1985, carbon tetrachloride was discovered in the groundwater at Agra, Kansas, during routine sampling of public water supply wells. Two of Agra's four public water supply wells contained low but detectable levels of carbon tetrachloride; the concentrations in wells PWS-3 and PWS-4 exceeded the maximum contaminant level. These wells were removed from service in 1986. Other public wells, outside the area of contamination, supply drinking water for the city of Agra. Both PWS-3 and PWS-4 remain available for uses other than drinking water.

In 1987-2005, the Kansas Department of Health and Environment (KDHE) and the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA) conducted investigations to delineate the contaminant plume and to identify source areas for the contamination — which results from the past use of grain fumigants containing carbon tetrachloride. Source areas were identified on the former CCC/USDA grain storage facility property and on the property of the Producers Agricultural Marketing Association, Inc. (Pro-Ag), located to the south (Argonne 2006). The contaminant plume extends to the southeast, toward wells PWS-3 and PWS-4, from the three identified source areas.

The CCC/USDA is currently implementing a KDHE-approved interim measure (IM) to address the contamination identified on its former property. This source control IM consists of large-diameter boreholes (LDBs) coupled with soil vapor extraction (SVE) and air sparging (AS). The CCC/USDA completed installation of the IM in May 2009. Assessment of the performance and effectiveness of the IM is being reported separately. The KDHE plans to have Pro-Ag implement an IM, as well.

As part of the IM process, the KDHE (2008) requested the development of a joint sitewide groundwater monitoring plan for periodic assessment of the contaminant levels. A *Joint Work Plan for Sitewide Monitoring* was developed by the CCC/USDA through its technical consultant, Argonne National Laboratory, and was reviewed, approved, and signed by Pro-Ag and subsequently submitted to the KDHE on May 12, 2009. The finalized, signed version of the *Joint Work Plan* was provided to the KDHE on November 9, 2009 (Appendix A in Argonne 2010).

Under the *Joint Work Plan*, the CCC/USDA and Pro-Ag agreed to share monitoring responsibilities. The CCC/USDA conducts sampling events in odd-numbered years (2009, 2011, 2013, etc.), and Pro-Ag conducts the events in even-numbered years (2010, 2012, 2014, etc.). Each sitewide sampling event is to be conducted in the month of June. Argonne conducted the first annual sitewide event for the CCC/USDA on June 15-16, 2009 (Argonne 2010). Pro-Ag conducted the second annual sitewide event on August 3-5, 2010 (Pro-Ag 2010).

At the request of the KDHE (2011a,b), former public water supply well PWS-4 was added to the sitewide monitoring network. This well is currently used for irrigation of the school's football field.

The subject of this report is the third sitewide groundwater sampling event under the *Joint Work Plan*, which was conducted by Argonne for the CCC/USDA on June 6-7, 2011.

Table 1.1 lists the monitoring wells and public water supply wells sampled under the *Joint Work Plan*, plus the wells sampled to monitor the respective IMs. The entity responsible for each monitoring element is indicated, along with well completion dates and well registration numbers.

TABLE 1.1 Wells sampled in the annual sitewide monitoring and IM monitoring programs at Agra.

Sampling Responsibility	Well	Well Type	Casing Diameter (in.)	Depth (ft BGL) Screen Interval	Filter Pack Interval	Total	Completion Date	Registration Number
Joint sitewide monitoring — 11 wells								
Joint	KMW02	Monitoring	2	57-97	20-97	99	9/30/1987	45580
Joint	MW-C	Monitoring	2	35-55	33-55	55	6/3/1997	118623
Joint	MW-H	Monitoring	2	43-53	41-53	53	6/5/1997	118620
Joint	MW-J	Monitoring	2	54-66	54-66	66	6/13/1997	118618
Joint	MW-L	Monitoring	2	66-76[a]	64-76[a]	80	6/14/1997	118616
Joint	MW-M	Monitoring	2	54.5-68.5[b]	52.5-68.5[b]	75	6/15/1997	118510
Joint	MW-R	Monitoring	2	46.5-66[c]	40-66[c]	66	2/25/1998	353498
Joint	SB23S	Monitoring	1	49-55	48-55	55	5/10/2001	321229
Joint	SB36	Monitoring	4	42.7-62.7	40-64.7	62.7	7/15/1996	108165
Joint	PWS-3	Public	12	65-125	–	125	4/30/1954	–
Joint	PWS-4	Public	12	88-127	–	127	8/21/82	–
Joint	DW98	Domestic	8	–	–	59.5	–	–
Monitoring for CCC/USDA source area IM — 8 wells								
CCC/USDA	KMW03	Monitoring	2	74-89	NR	89	10/2/1987	45583
CCC/USDA	MW-P	Monitoring	2	39.5-59[d]	34-59[d]	59	2/25/1998	353496
CCC/USDA	MW-Q	Monitoring	2	49.5-69[e]	44-69[e]	69	2/25/1998	353497
CCC/USDA	GW-1	Monitoring	1	43-53	41-53	53	7/1/2009	426347
CCC/USDA	GW-2	Monitoring	1	43-53	41-53	53	7/1/2009	426346
CCC/USDA	GW-3	Monitoring	1	43-53	41-53	53	7/1/2009	426345
CCC/USDA	GW-4	Monitoring	1	43-53	41-53	53	7/1/2009	426344
CCC/USDA	GW-5	Monitoring	1	43-53	41-53	53	7/1/2009	426343
Monitoring for Pro-Ag source area IM — 15 wells								
Pro-Ag	KMW01	Monitoring	2	43-53	20-63	63	10/7/1987	45581
Pro-Ag	MW-2	Monitoring	2	39-59[f]	37-59[f]	59[f]	5/31/1997	118626
Pro-Ag	MW-F	Monitoring	2	65-75[g]	64-75[g]	75[g]	6/2/1997	118622
Pro-Ag	MW-G	Monitoring	2	89-99	87-99	100	6/13/1997	118621
Pro-Ag	MW-I	Monitoring	2	36-71	34-71	71	6/4/1997	118619
Pro-Ag	MW-O	Monitoring	2	38-58	36-58	58	8/29/1997	119090
Pro-Ag	PMW-01	Monitoring	2	49-59	47-59	59	8/21/2009	427877
Pro-Ag	PMW-02	Monitoring	2	49-59	47-59	59	8/21/2009	427825
Pro-Ag	PMW-03	Monitoring	2	52.5-62.5	50.5-62.5	62.5	8/21/2009	427824
Pro-Ag	PMW-04	Monitoring	2	53-63	51-63	63	8/21/2009	427963
Pro-Ag	PMW-05	Monitoring	2	54.5-64.5	52.5-64.5	64.5	8/21/2009	427962
Pro-Ag	PMW-06	Monitoring	2	49-59	47-59	59	8/21/2009	427964
Pro-Ag	PMW-07	Monitoring	2	70-75	68-75	75	8/21/2009	427961
Pro-Ag	PMW-09	Monitoring	2	55-65	53-65	65	5/17/2010	433967
Pro-Ag	PMW-10	Monitoring	2	45.5-55.5	43.5-55.5	55.5	5/17/2010	433970

[a] Reported screen interval for MW-L = 70-80 ft BGL; reported filter pack interval = 68-80 ft BGL.

[b] Reported screen interval for MW-M = 59-69 ft BGL; reported filter pack interval = 57-75 ft BGL.

[c] Reported screen interval for MW-R = 44.45-63.95 ft BGL; reported filter pack interval = 38-66 ft BGL.

[d] Reported screen interval for MW-P = 35.42-54.92 ft BGL; reported filter pack interval = 31-59 ft BGL.

[e] Reported screen interval for MW-Q = 43.28-62.78 ft BGL; reported filter pack interval = 38-69 ft BGL.

[g] Reported screen interval for MW-F = 65-75 ft BGL; reported filter pack interval = 63-85 ft BGL; total depth = 85 ft BGL.

2 Sampling and Analysis Activities

2.1 Monitoring Well Sampling and Analyses

The sitewide groundwater sampling event conducted by the CCC/USDA on June 6-7, 2011, involved the 11 designated joint sitewide groundwater monitoring wells (Figure 2.1), plus the 8 wells (MW-P, MW-Q, KMW03, and GW-1 through GW-5) being sampled to monitor the CCC/USDA IM (also shown in Figure 2.1). For the sake of completeness, this map also includes the locations of the wells sampled in alternate years to monitor the Pro-Ag IM.

The June 2011 sampling began with measurement of water levels in the monitoring wells. Low-flow groundwater sampling techniques were then used to purge and sample the wells in accordance with U.S. Environmental Protection Agency (EPA) guidelines (Puls and Barcelona 1996; Yeskis and Zavala, 2002). The low-flow sampling of monitoring wells involved the use of a bladder pump and field measurement equipment designed to determine when representative formation water was entering the well screen. Stabilization of formation water in the screened area of the well was determined by measuring the static water levels and monitoring the levels of pH, temperature, specific conductivity, oxidation-reduction potential (ORP), and dissolved oxygen (DO) during pumping through the in-line flow cell.

The procedure for each well sampled was as follows:

1. A bladder pump was inserted into the well to a depth midway between the top and bottom of the screen. To minimize disturbance of the solids that are typically present at the bottom of a well, care was taken not to lower the pump to the bottom of the casing.

2. The pumping rate for the bladder pump was set to ensure that minimal drawdown occurred in each well during pumping. The rate was monitored by measuring the static water level periodically throughout pumping and was modified as appropriate to minimize fluctuations in water levels.

3. Polyethylene tubing was used to connect the bladder pump to an in-line flow cell. Formation parameters, including pH, temperature, specific conductivity,

ORP, and DO, were measured continuously in the in-line flow cell during pumping. Measurements were recorded every 4 min until three successive measurements for each parameter were within a range indicating that the formation water was stable. The range for formation stabilization varies for each parameter, as follows: pH, within 0.1; temperature, within 3%; specific conductivity, within 3%; ORP, within 10 mV; and DO, within 10%.

4. After stabilization of the formation water parameters, the polyethylene tubing was disconnected from the in-line flow cell, and a representative groundwater sample was pumped through the tubing into laboratory-approved containers.

5. The polyethylene tubing for each well was kept and dedicated for reuse at that specific well. In addition, pumping rate data were recorded for each well as a reference for subsequent sampling events.

The sequence of activities during the June 2011 sampling event is summarized in Appendix A, Table A.1. The field measurements —temperature, pH, conductivity, DO, and ORP — recovered during the sampling event are in Appendix A, Table A.2.

Groundwater samples designated for analyses for volatile organic compounds (VOCs) were collected in appropriate laboratory containers, labeled, packaged, and chilled to 4°C by placement in ice-filled coolers. The samples were shipped via an overnight delivery service to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne for VOCs analyses with EPA Method 524.2 (EPA 1995). Aliquots of selected samples (chosen in the field) were also shipped to TestAmerica Laboratories, Inc., South Burlington, Vermont, for verification VOCs analyses according to EPA Contract Laboratory Program protocols.

The analytical results are presented and discussed in Section 3.1.

2.2 Measurement of Groundwater Levels

Manual measurements of water levels were made on June 28, 2011, in a sitewide set of monitoring wells (KMW01, KMW02, MW-2, MW-B, MW-F, MW-I, MW-J, MW-K, MW-L,

MW-M, MW-P, MW-Q, MW-R, SB23S, SB28S, SB38S, SB72). The groundwater level data are presented and discussed in Section 3.2.

2.3 Handling and Disposal of Investigation-Derived Waste

Purge water generated during the June 2011 annual sitewide monitoring was containerized on-site in 55-gal drums. The accumulated wastewater (approximately 31 gal) was sampled on June 22, 2011, and was analyzed for carbon tetrachloride and chloroform at the AGEM Laboratory on June 23, 2011 (Supplement 1, on the CD [compact disc] inside the back cover of this report). Carbon tetrachloride was present in the wastewater at 2.6 µg/L; chloroform was not detected. Because of the low volume of wastewater and the low contaminant levels present, disposal of the containerized water was deferred until additional wastewater is accumulated during the upcoming July-September quarterly monitoring of the CCC/USDA IM. During the IM quarterly monitoring event, a composite wastewater sample will be collected for analysis at a KDHE-certified laboratory. Disposal of the water will be carried out subsequently as appropriate.

2.4 Quality Control for Sample Collection, Handling, and Analysis

Quality assurance/quality control procedures followed during the June 2011 monitoring event are described in detail in the *Master Work Plan* (Argonne 2002). The results are summarized as follows:

- Sample collection and handling activities were monitored by the documentation of samples as they were collected and the use of chain-of-custody forms and custody seals to ensure sample integrity during handling and shipment.

- Samples designated for VOCs analyses were received with custody seals intact and at the appropriate preservation temperature. All samples sent to the AGEM Laboratory were analyzed within the required holding times.

- Quality control samples collected to monitor sample-handling activities (trip blanks and equipment rinsates) and method blanks analyzed with the samples

to monitor analytical methodologies were all free of carbon tetrachloride and chloroform contamination. Analytical results for quality control samples collected to monitor sample-handling activities are in Appendix A, Table A.3.

- Groundwater samples were analyzed for VOCs at the AGEM Laboratory by the purge-and-trap method on a gas chromatograph-mass spectrometer system. Calibration checks analyzed with each sample delivery group were required to be within ±20% of the standard. Surrogate standard determinations performed on samples and blanks were within the specified range of 80-120% for all samples, in either the initial analysis or a successful reanalysis.

- Results from the AGEM Laboratory for dual analyses of the groundwater samples are in Appendix A, Table A.4. The results of the dual analyses compare well, with average relative percent difference values for carbon tetrachloride and chloroform of approximately 2% and 1%, respectively, indicating consistency in the sampling and analytical methodologies.

- In accordance with the procedures defined in the *Master Work Plan* (Argonne 2002), groundwater samples were submitted to a second laboratory (TestAmerica) for verification analysis according to the protocols of the EPA's Contract Laboratory Program. The results from the two laboratories (Appendix A, Table A.5) compare favorably over the range of contaminant concentrations detected. The analytical data provided by TestAmerica for sample delivery group 200-5447 are in Supplement 2 (on CD).

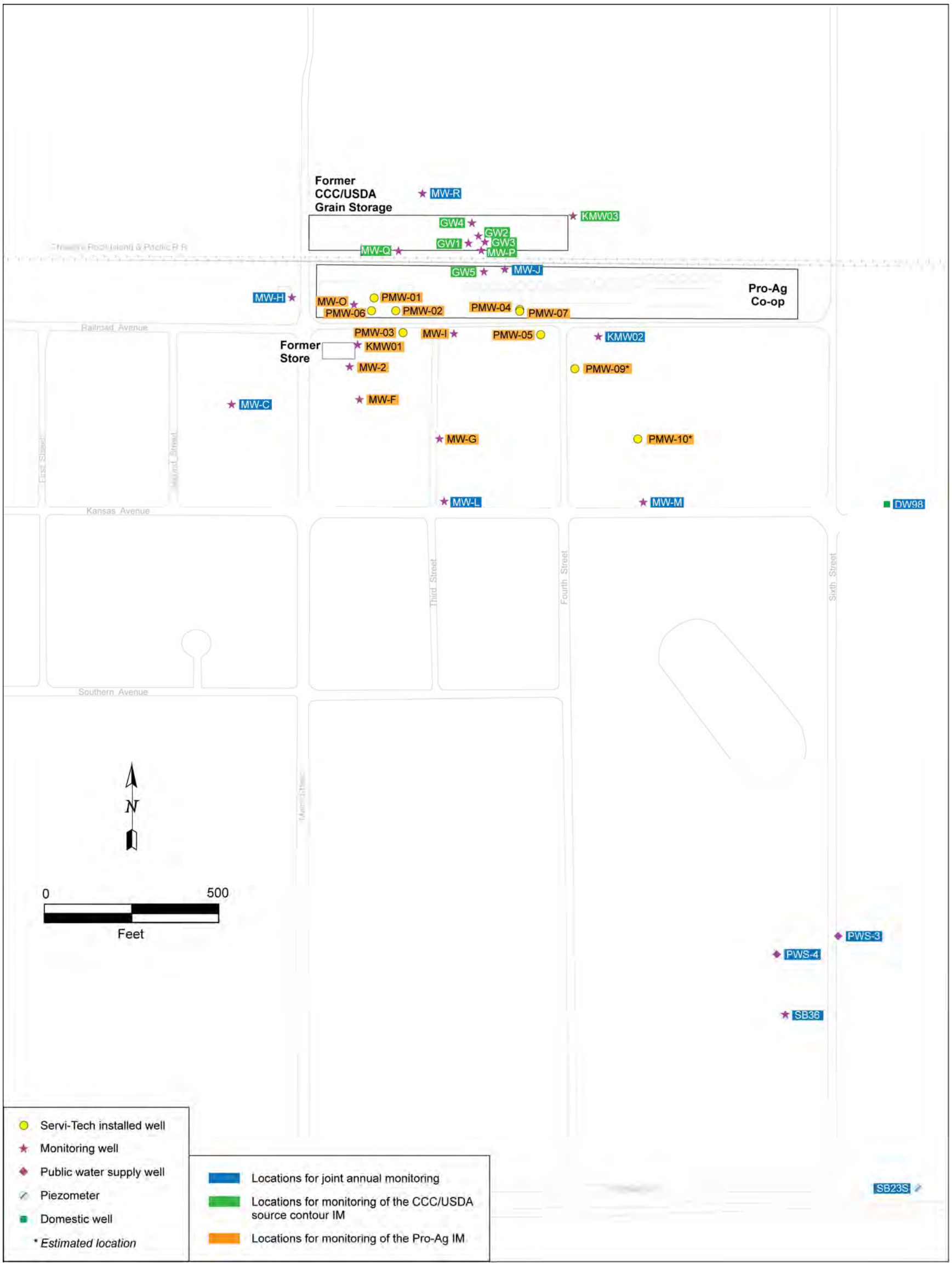

FIGURE 2.1 Locations for joint annual groundwater monitoring, sampling to monitor the CCC/USDA source control IM, and sampling to monitor the Pro-Ag IM.

3 Results and Discussion

3.1 Analytical Results for Volatile Organic Compounds in Groundwater Samples and Lateral Distribution of the Contaminants

The analytical data for VOCs in the groundwater samples collected by Argonne for the CCC/USDA in conjunction with the annual sitewide groundwater monitoring event in June 2011 are in Table 3.1. A map illustrating the current levels and distribution of carbon tetrachloride contamination in groundwater, based on the results of the June 2011 sitewide sampling, is in Figure 3.1. For the sake of completeness, this map includes the locations of the wells sampled by Pro-Ag in alternate years to monitor the Pro-Ag IM.

The historical time series of carbon tetrachloride concentrations at the joint sitewide monitoring locations is shown in Figure 3.2.

For long-term evaluation of the effectiveness of the CCC/USDA and Pro-Ag IMs, a comprehensive summary of the annual monitoring results for carbon tetrachloride and chloroform in groundwater is included in Appendix B, Table B.1. This summary begins with the 2005 targeted investigation and continues through the October 2008 pre-remedial baseline study and the 2009-2011 sitewide monitoring events.

3.2 Groundwater Level Data

Observations made during interpretation of the results from the recent groundwater monitoring event indicate that the groundwater flow direction and gradients did not change significantly from that depicted in earlier reports (Argonne 2006, 2010), remaining consistent with a predominant groundwater flow direction to the south-southeast from the vicinity of the former CCC/USDA facility and the Pro-Ag facility. Groundwater elevation data were recovered on June 28, 2011. The water level contour map in Figure 3.3 confirms the south to southeasterly flow direction identified in previous investigations.

3.3 Trend Analysis for Carbon Tetrachloride Monitoring Data

Trend analyses of time series groundwater monitoring data for carbon tetrachloride can provide information on the condition of the carbon tetrachloride plume in groundwater over the monitoring period. The carbon tetrachloride contamination at Agra was initially identified in 1985. Investigations conducted in the 1990s and 2000s included Argonne's extensive studies on behalf of the CCC/USDA in 1995-1997 and 2005 (Argonne 2006). More recently, ongoing monitoring of the carbon tetrachloride plume in groundwater began in 2008 through sampling of a network of monitoring wells.

The sections below present the results of the trend analysis for historical carbon tetrachloride data collected from a set of monitoring wells, conducted to evaluate the general development of the carbon tetrachloride plume in groundwater over the years.

3.3.1 Selection of Monitoring Wells and Data Processing Methods for the Trend Analysis

Four monitoring wells, MW-F, MW-J, MW-L and MW-M, were selected for the trend analysis, on the basis of the trend analysis presented by Pro-Ag (2010). Wells MW-J and MW-M are located along the axis of the eastern lobe of the carbon tetrachloride plume; they represent the upgradient and downgradient parts of the eastern lobe, respectively. Wells MW-F and MW-L are located along the axis of the western lobe of the plume. Well MW-F is near the center of the highly contaminated part of the plume, while MW-L is at the forefront of western lobe (Figure 3.4). All four wells were installed in 1997 and were sampled and analyzed in 1997-1999 and 2005. More recent ongoing monitoring started in 2008. Historical analytical results for carbon tetrachloride in these wells are in Table 3.2.

Samples for these four monitoring wells were generally collected once a year during the months of April-October; however, multiple sampling events occurred in 1997 and 1998 (Table 3.2). To generate a consistent data set representing annual trends, the data in Table 3.2 were processed by taking the average value of concentrations from multiple sampling events in 1997 and 1998 as annual values. In addition, any value below the detection limit was treated as a numeric value of zero. The final data set prepared for the trend analysis is in Table 3.3.

3.3.2 Trend Analysis Methods

The trend analysis was performed by two methods: (1) a simple graphic trend illustration that qualitatively visualizes the change in carbon tetrachloride concentrations over time and (2) a Mann-Kendall analysis (e.g., Helsel and Hirsch 2002), which is a nonparametric statistical test that can quantitatively show whether the carbon tetrachloride concentration at each monitoring well is *increasing*, *stable*, or *decreasing*.

The Mann-Kendall test uses the Mann-Kendall statistic (S) to measure the trend in the concentration data. Unlike other statistic tests, the Mann-Kendall test requires no assumptions (normal, lognormal, etc.) regarding the statistical distribution of the data. This analysis can be used even with missing data and irregular sampling intervals.

The Monitoring and Remediation Optimization System (MAROS) tool developed by the Air Force Center for Environmental Excellence (http://www.afcee.af.mil/resources/technologytransfer/models/index.asp) incorporates the Mann-Kendall test into a trend analysis with a decision matrix. In the MAROS decision matrix, six categories of concentration trend are characterized by the Mann-Kendall statistic (S), confidence in trend, and coefficient of variation. Confidence in trend is a statistical probability that the concentration is *increasing* ($S > 0$) or *decreasing* ($S < 0$), while coefficient of variation is a statistical measure of how the individual concentration varies from the mean values at a sampling point. The MAROS Mann-Kendall decision matrix (MAROS version 2.2; http://www.gsi-net.com/en/software/free-software/maros.html) can be used to guide a determination that concentrations are *increasing*, *probably increasing*, showing *no trend* or stable, *probably decreasing*, or d*ecreasing*. The matrix is in Table 3.4.

3.3.3 Trend Analysis Results and Interpretation

A graphic presentation of historical carbon tetrachloride concentrations is shown in Figure 3.5 for wells MW-F, MW-J, MW-L and MW-M. Three patterns of change in concentration are visualized qualitatively, as follows:

- At MW-F (near the center of the western lobe of the plume), an *increasing* trend from the late 1990s to 2005 is followed by a *decreasing* trend to the present time.

- At MW-L and MW-M (near the forefronts of the western and eastern lobes of the plume, respectively), a slight *increase* (compared to the concentrations in the late 1990s) is followed by relatively great fluctuation and *no apparent trend* in recent years.

- At MW-J (at the upgradient end of the eastern lobe of the plume), *no trend* is apparent, and concentration levels are relatively low.

The results for Mann-Kendall analysis are shown in Table 3.3. The Mann-Kendall statistic (*S*), coefficient of variance, and confidence in trend were estimated by using the equations in MAROS, version 2.2 (http://www.gsi-net.com/en/software/free-software/maros.html). The category of carbon tetrachloride concentration trend was determined by using the decision matrix in Table 3.4. The results of the Mann-Kendall analysis suggest that *no trend* is apparent at upgradient locations MW-F and MW-J, while *increasing* and *probably increasing* trends are occurring at downgradient locations MW-L and MW-M, respectively.

In comparison with the graphic analysis (Figure 3.5), the Mann-Kendall analysis generates a statistical, well-defined trend category for concentration data at each location. However, it cannot characterize change in trend over time, such as the change from early *increasing* trend to recent *decreasing* trend at MW-F or from early *increasing* trend to the recent showing of *no trend* at MW-L and MW-M. Further Mann-Kendall analyses using only the subset of concentration data collected in recent years will be able to address the uncertainty of the recent trends, when more data become available in the future. On the basis of results from trend analyses using both methods, the possible condition of the plume over the time can be inferred.

For the western lobe of the plume, high-level carbon tetrachloride migrated from the upgradient area through location MW-F in the middle part of the western lobe, reaching a peak in 2005. At the same time, the carbon tetrachloride concentration at MW-L was also *increasing*, suggesting an impact of downgradient migration at MW-L. In recent years (2008-2011), however, concentrations at MW-L have fluctuated relative to the 2005 value, with less certainty in the trend. When more data become available in the future, a Mann-Kendall analysis with only recent-year data might be able to address the uncertainty in the recent trend. The overall *decrease* in concentrations in the western lobe might represent natural attenuation through various processes (dilution, dispersion, etc.).

For the eastern lobe of the plume, upgradient concentrations (MW-J) have been relatively low (13-30.7 µg/L), with *no trend* apparent, as confirmed by both the graphic (Figure 3.5) and Mann-Kendall (Table 3.3) analyses. The observation of relatively low-level carbon tetrachloride with *no trend* over the 14-yr observation period indicates that no high-level carbon tetrachloride has migrated from the former CCC/USDA facility and downgradient through MW-J, to enter the eastern lobe of the plume. The high concentration of carbon tetrachloride (>1,000 µg/L) found at the former CCC/USDA facility appears to be disconnected from the rest of the eastern lobe.

This evidence supports the conclusion that the elevated contamination at the former CCC/USDA facility is relatively isolated and has minimal effect on the size and concentration level of the entire plume, which has been fed primarily by the source areas identified south of the former railroad. At the forefront of the eastern plume (MW-M), carbon tetrachloride *increased* from the late 1990s to 2005, reflecting downgradient migration of the eastern lobe. However, the recent concentrations have fluctuated, with *no trend* apparent visually (Figure 3.5). Further evaluation of the recent trend can be performed with the Mann-Kendall analysis and recent-year annual data only, when more data for this location become available in the future.

3.3.4 Trend Analysis Findings

In summary, the main findings of the trend analysis are as follows:

- Near the center of the western lobe of the plume (MW-F), *increases* in carbon tetrachloride concentrations from the late 1990s to 2005 have been followed by a *decreasing* trend to the present time. The western lobe of the plume has apparently experienced migration from the upgradient area through this location. The recent *decreasing* trend (2005-2010) might represent processes of both downgradient migration and natural attenuation.

- At the forefronts of the western and eastern lobes of the plume (MW-L and MW-M), carbon tetrachloride concentrations, in general, have *increased* over the last 14 yr (1997-2011), as indicated by both graphic and Mann-Kendall analyses. The *increasing* trend might indicate downgradient migration in the western and eastern lobes of the plume, respectively. However, the graphic trend in recent years (2005-2011; Figure 3.5) does not show a continuous

increase. Further evaluation with additional data will address the uncertainty for recent years.

- Upgradient in the eastern lobe of the plume (MW-J), *no apparent trend* with relatively low concentration is confirmed by both graphic and Mann-Kendall analyses. *No trend* with low concentration at this location indicates that no high-level plume has migrated from the former CCC/USDA facility to the downgradient eastern lobe of the plume over last 14 yr. The evidence supports the conclusion that contamination at the former CCC/USDA facility is isolated and has minimal effect on the downgradient areas.

TABLE 3.1 Results of CCC/USDA annual sitewide groundwater monitoring and IM-related monitoring in June 2011.

Sampling Responsibility	Well	Sampling Date	Concentration (μg/L)			
			Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dichloro-Ethane
Joint	KMW02	6/6/11	ND[a]	ND	ND	ND
Joint	MW-C	6/6/11	ND	ND	ND	ND
Joint	MW-H	6/7/11	ND	ND	ND	ND
Joint	MW-J	6/7/11	18	ND	ND	ND
Joint	MW-L	6/7/11	82	2.1	ND	ND
Joint	MW-M	6/6/11	97	1.9	ND	ND
Joint	MW-R	6/6/11	ND	ND	ND	ND
Joint	PWS-3	6/7/11	9.8	0.4 J[b]	ND	ND
Joint	PWS-4	6/7/11	33	1.0	ND	ND
Joint	SB23S	6/7/11	70	0.9 J	ND	ND
Joint	SB36	6/7/11	9.6	0.6 J	ND	ND
Joint	DW98[c]	–	–	–	–	–
Argonne	KMW03	6/6/11	ND	ND	ND	ND
Argonne	MW-P	6/6/11	222	5.9	ND	ND
Argonne	MW-Q	6/6/11	0.5 J	ND	ND	ND
Argonne	GW-1	6/6/11	37	4.9	ND	ND
Argonne	GW-2	6/6/11	2,900	20	ND	ND
Argonne	GW-3	6/6/11	1,777	15	ND	ND
Argonne	GW-4	6/6/11	112	1.4	ND	ND
Argonne	GW-5	6/6/11	0.4 J	ND	ND	ND

[a] ND, not detected at instrument detection limit of 0.1 μg/L.

[b] Qualifier J indicates an estimated concentration below the quantitation limit of 1.0 μg/L for purge-and-trap analyses at the AGEM Laboratory.

[c] Access to well denied.

TABLE 3.2 Historical carbon tetrachloride concentrations at selected monitoring wells.

	Carbon Tetrachloride (µg/L)									
Sampling Point	1997 June	1997 August	1998 March	1998 September	1999 April	2005 May	2008 October	2009 June	2010 August	2011 June
Western lobe of the plume										
MW-F	180	97	–[a]	82	180	445	361	–	249	–
MW-L	< 5	8.1	–	9.5	26	64	21	23	80.4	82
Eastern lobe of the plume										
MW-J	11	16	1.7	23	15	13	32	13	30.7	18
MW-M	90	37	–	38	91	112	106	84	158	97

[a] No sample collected for carbon tetrachloride analysis during this sampling event, at this location.

TABLE 3.3 Results of trend analysis based on all available data.

Sampling Point	Carbon Tetrachloride (µg/L)[a]								Mann-Kendall Trend Analysis Results			
	1997	1998	1999	2005	2008	2009	2010	2011	Mann-Kendall Statistic (*S*)	Coefficient of Variation[b]	Confidence in Trend[c]	Carbon Tetrachloride Concentration Trend[d]
Western lobe of the plume												
MW-F	138.5	82	180	445	361	–[e]	249	–	7	0.577	86%	*No trend*
MW-L	4.1	9.5	26	64	21	23	80.4	82	20	0.818	99%	*Increasing*
Eastern lobe of the plume												
MW-J	13.5	12.4	15	13	32	13	30.7	18	9	0.443	83%	*No trend*
MW-M	63.5	38	91	112	106	84	158	97	12	0.377	91%	*Probably increasing*

[a] Annual value. If multiple measurements occurred within a year, an average value is used as an annual value.

[b] Statistic measure of how the individual carbon tetrachloride concentrations vary about the mean value at each sampling point.

[c] Statistical probability that the carbon tetrachloride concentration is *increasing* ($S > 0$) or *decreasing* ($S < 0$).

[d] Concentration trend for each sampling point as determined by the MAROS Mann-Kendall analysis decision matrix (MAROS version 2.2; http://www.gsi-net.com/en/software/free-software/maros.html).

[e] No concentration data are available for the year.

TABLE 3.4 MAROS Mann-Kendall analysis decision matrix.[a]

Mann-Kendall Statistic	Confidence in Trend	Concentration Trend
S > 0	> 95%	Increasing
S > 0	90-95%	Probably increasing
S > 0	< 90%	No trend
S ≤ 0	< 90% and coefficient of variance ≥ 1	No trend
S ≤ 0	< 90% and coefficient of variance < 1	Stable
S < 0	90-95%	Probably decreasing
S < 0	> 95%	Decreasing

[a] MAROS version 2.2 (http://www.gsi-net.com/en/software/free-software/maros.html).

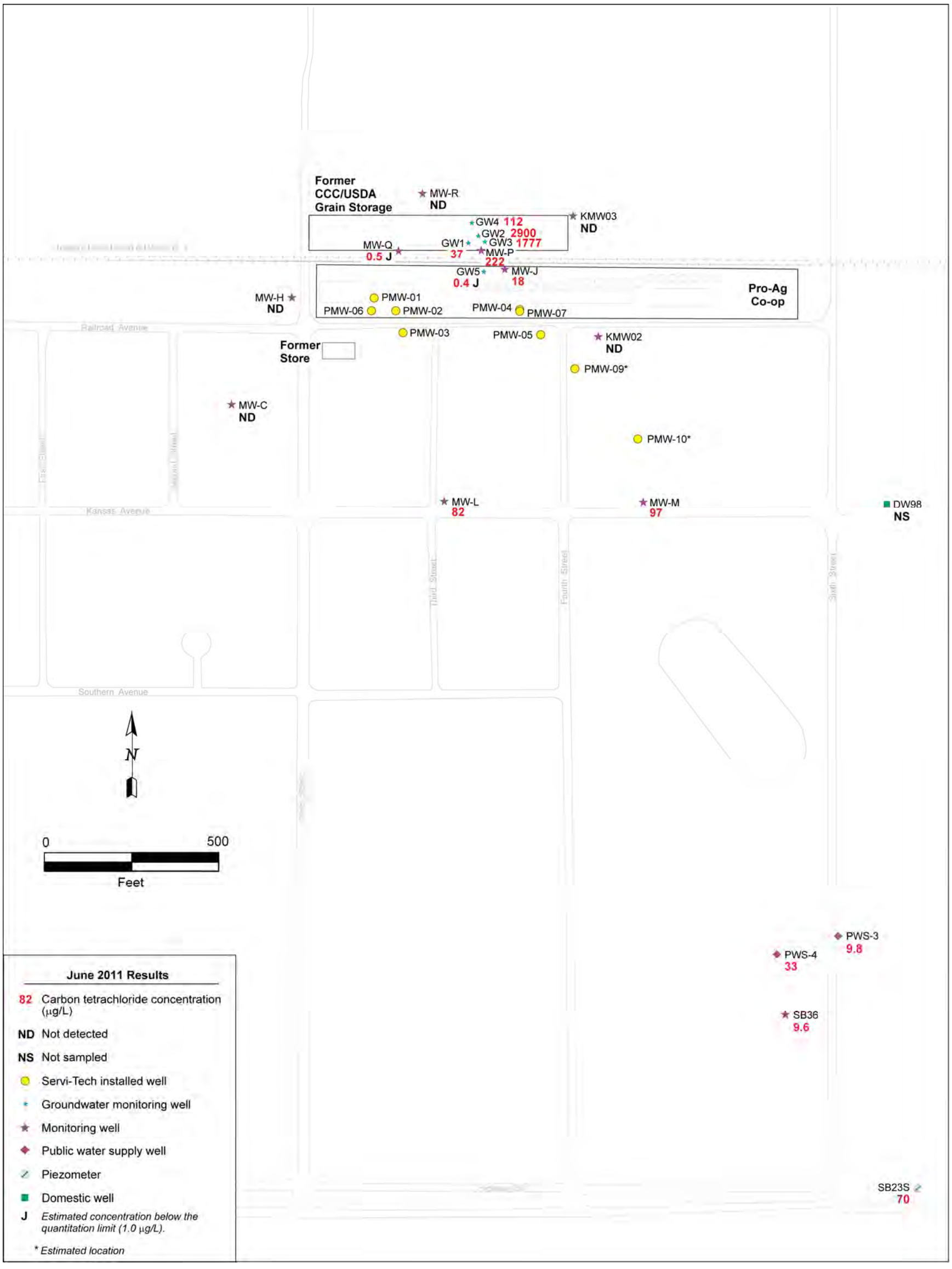

FIGURE 3.1 Distribution of carbon tetrachloride in groundwater at Agra, as determined in June 2011 annual sitewide monitoring.

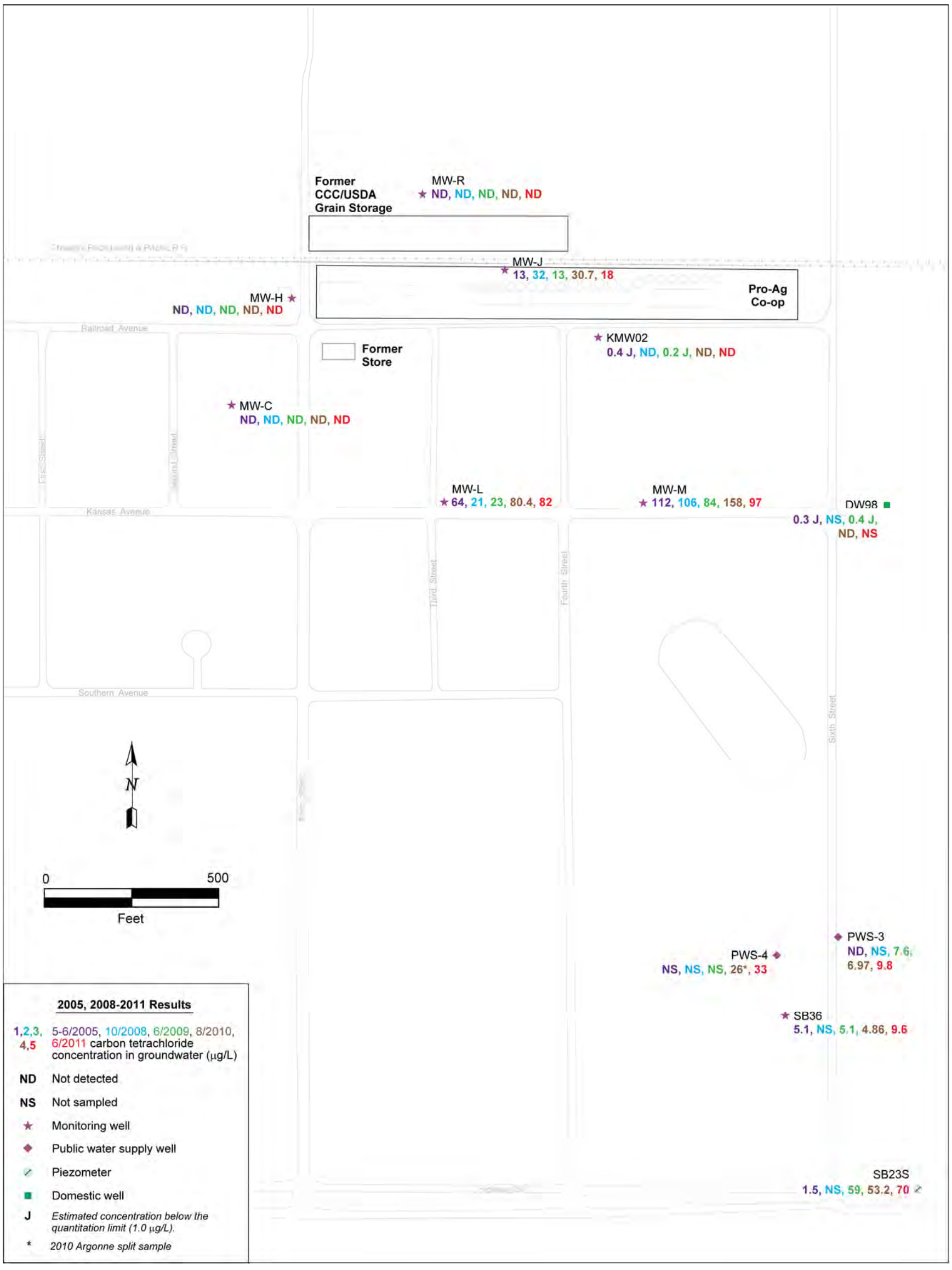

FIGURE 3.2 Historical distribution of carbon tetrachloride in groundwater at the joint sitewide monitoring locations at Agra, 2005-2011. Data for 2005, 2008, 2009, and 2011 are from the CCC/USDA-Argonne targeted investigation (2005), pre-IM baseline sampling (2008), first sitewide monitoring (2009), and third sitewide monitoring (2011). Data for 2010 are from the Pro-Ag second sitewide monitoring (except for the PWS-4 result).

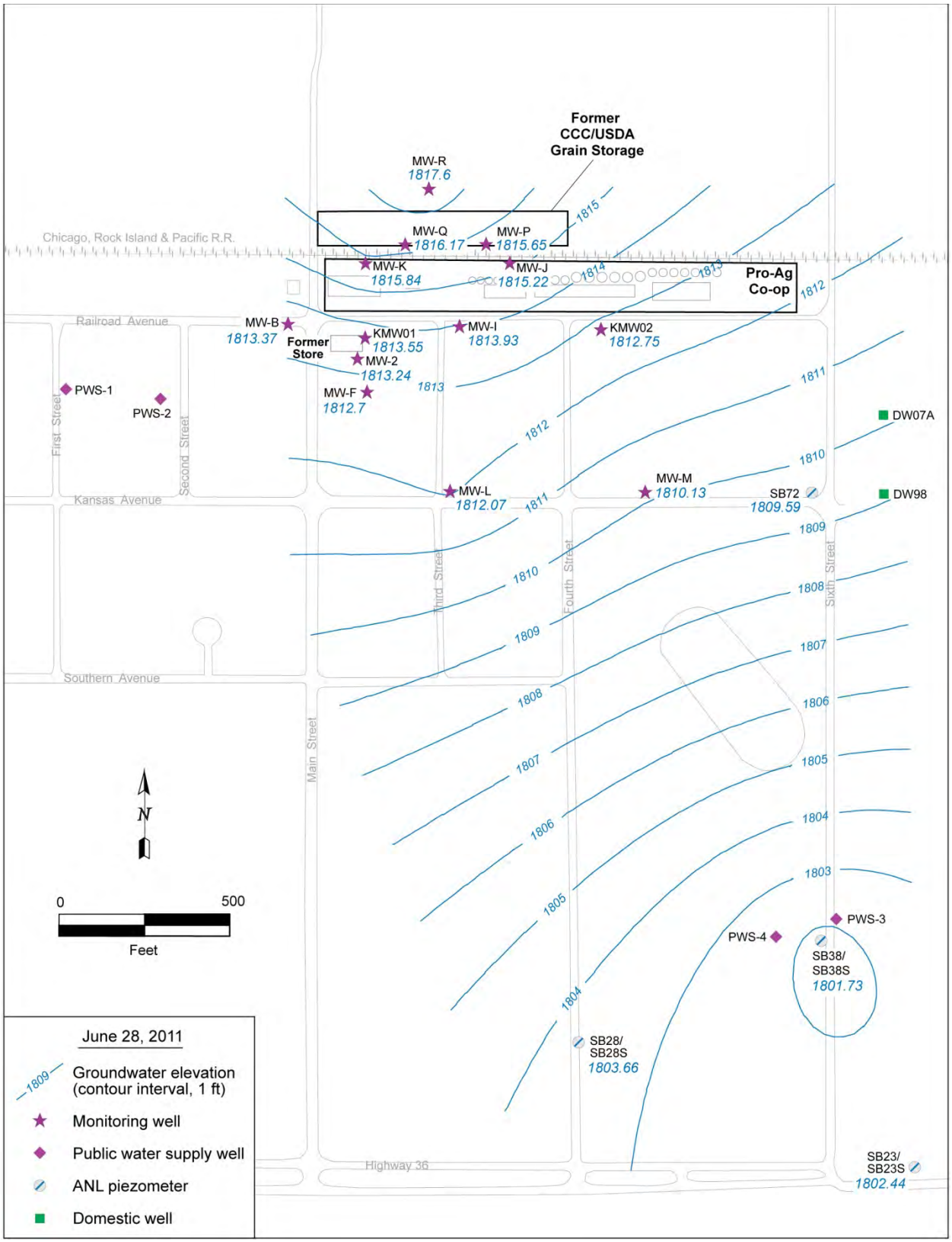

FIGURE 3.3 Groundwater level elevations at Agra on June 28, 2011, as interpreted from manually recorded data.

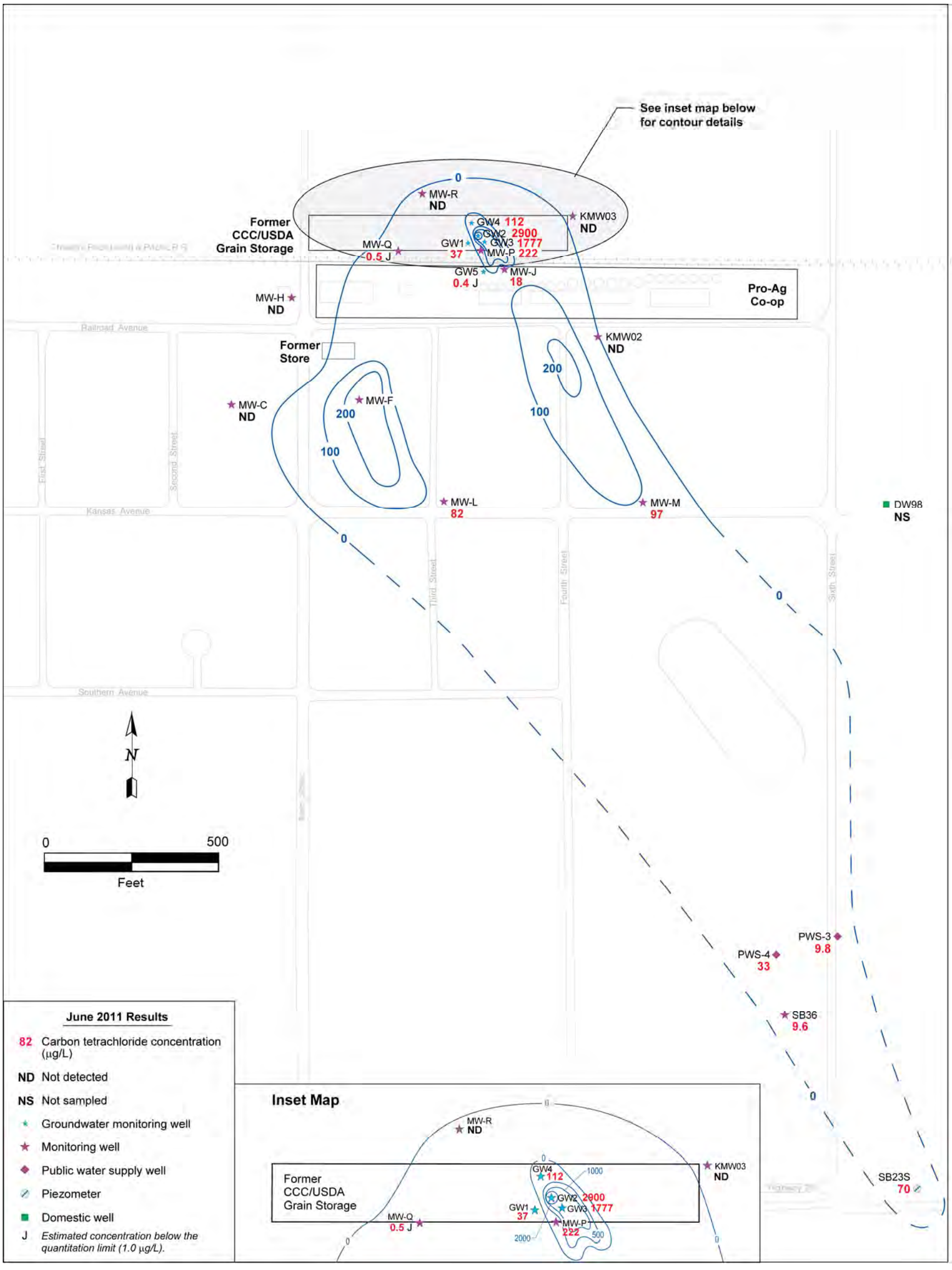

FIGURE 3.4 Isoconcentration map based on analytical results for carbon tetrachloride in groundwater samples collected in June 2011.

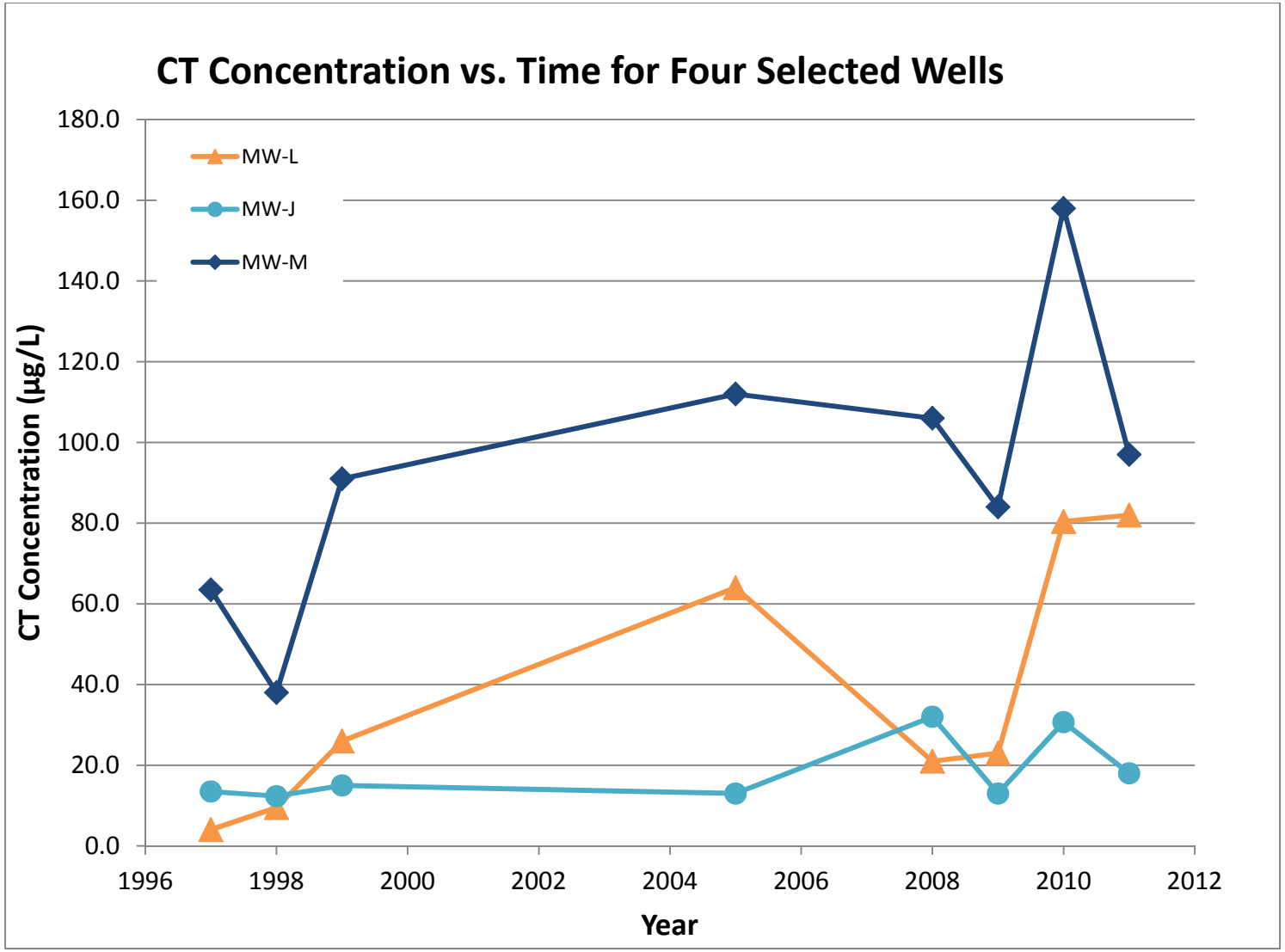

FIGURE 3.5 Historical carbon tetrachloride concentrations over the years 1997-2011 at four wells selected for trend analysis (MW-F and MW-L along the western lobe of the plume and MW-J and MW-M along the eastern lobe).

4 Future Actions

The next KDHE-approved joint sitewide groundwater monitoring event is scheduled for June 2012. In keeping with the joint agreement, Pro-Ag and its technical consultants will be conducting the sampling effort.

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Appendix A:

Sequence of Activities during the June 2011 Sitewide Monitoring Event, Field Measurements on Groundwater Samples, and Quality Control Summary

TABLE A.1 Sequence of sitewide monitoring activities at Agra in June 2011.

Sample Date	Time	Sample Location	Depth (ft BGL)	Sample	Sample Type	Chain of Custody	Shipping Date	Sample Description
6/6/11	11:33	MW-R	44.45-63.95	AGMWR-W-30292	MW	2968	6/7/11	Depth to water = 38.71 ft. Depth of 2-in. well = 63.95 ft. Sample collected by using low-flow bladder pump after purging of 5.5 L. Pump intake positioned at 54.2 ft.
6/6/11	11:43	GW3	43-53	AGGW3-W-30300	MW	2968	6/7/11	Depth to water = 37.88 ft BGL. Depth of 1-in. well = 52.07 ft. Sample collected by using Waterra pump after purging of 7 L.
6/6/11	12:12	GW4	43-53	AGGW4-W-30301	MW	2968	6/7/11	Depth to water = 39.00 ft BGL. Depth of 1-in. well = 51.81 ft. Sample collected by using Waterra pump after purging of 6 L.
6/6/11	12:41	MW-Q	43.28-62.78	AGMWQ-W-30291	MW	2968	6/7/11	Depth to water = 38.34 ft. Depth of 2-in. well = 62.78 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 53 ft.
6/6/11	12:43	GW5	43-53	AGGW5-W-30302	MW	2968	6/7/11	Depth to water = 38.06 ft BGL. Depth of 1-in. well = 51.75 ft. Sample collected by using Waterra pump after purging of 6.5 L.
6/6/11	14:07	GW1	43-53	AGGW1-W-30298	MW	2968	6/7/11	Depth to water = 38.05 ft BGL. Depth of 1-in. well = 51.90 ft. Sample collected by using Waterra pump after purging of 7 L.
6/6/11	14:27	KMW03	74-89	AGKMW3-W-30284	MW	2968	6/7/11	Depth to water = 39.65 ft. Depth of 2-in. well = 89 ft. Sample collected by using low-flow bladder pump after purging of 5.75 L. Pump intake positioned at 81.5 ft.
6/6/11	14:29	GW2	43-53	AGGW2-W-30299	MW	2968	6/7/11	Depth to water = 39.28 ft BGL. Depth of 1-in. well = 52.04 ft. Sample collected by using Waterra pump after purging of 6 L.
6/6/11	14:40	MW-P	35.42-54.92	AGMWP-W-30290	MW	2968	6/7/11	Depth to water = 38.08 ft. Depth of 2-in. well = 54.92 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 45.17 ft.
6/6/11	15:58	MW-M	59-69	AGMWM-W-30289	MW	2968	6/7/11	Depth to water = 41.46 ft. Depth of 2-in. well = 69 ft. Sample collected by using low-flow bladder pump after purging of 9 L. Pump intake positioned at 64 ft.

TABLE A.1 (Cont.)

Sample Date	Time	Sample Location	Depth (ft BGL)	Sample	Sample Type	Chain of Custody	Shipping Date	Sample Description
6/6/11	16:58	MW-C	35-55	AGMWC-W-30285	MW	2968	6/7/11	Depth to water = 39.15 ft. Depth of 2-in. well = 55 ft. Sample collected by using low-flow bladder pump after purging of 5.5 L. Pump intake positioned at 45 ft.
6/6/11	17:10	KMW02	57-55	AGKMW2-W-30283	MW	2968	6/7/11	Depth to water = 40.41 ft. Depth of 2-in. well = 97 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 77 ft.
6/6/11	17:11	KMW02	57-97	AGKMW2DUP-W-30303	MW	2968	6/7/11	Replicate of sample AGKMW2-W-30283.
6/6/11	17:15	QC	–	AGQCIR-W-30305	RI	2968	6/7/11	Rinsate of decontaminated sampling line after collection of sample AGMWC-W-30285.
6/6/11	17:55	QC	–	AGQCIR-W-30306	RI	2968	6/7/11	Rinsate of decontaminated sampling line after collection of sample AGKMW2-W-30283 and replicate AGKMW2DUP-W-30303.
6/7/11	8:24	PWS-4	88-127	AGPWS4-W-30296	PW	2969	6/7/11	School had been irrigating football field most of yesterday and was pumping morning of arrival.
6/7/11	8:41	PWS-3	65-125	AGPWS3-W-30295	PW	2969	6/7/11	Well turned on and purged of 100 gal prior to sampling.
6/7/11	9:02	SB36	42.7-62.7	AGSB36-W-30294	MW	2969	6/7/11	Depth to water = 34.96 ft. Depth of 4-in. well = 62.70 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 52.7 ft.
6/7/11	9:02	SB36	42.7-62.7	AGSB36DUP-W-30304	MW	2969	6/7/11	Replicate of sample AGSB36-W-30294.
6/7/11	10:14	MW-H	43-53	AGMWH-W-30286	MW	2969	6/7/11	Depth to water = 41.62ft. Depth of 2-in. well = 53 t. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 48 ft.
6/7/11	10:40	SB23S	49-55	AGSB23S-W-30293	MW	2969	6/7/11	Depth to water = 27.90 ft. Depth of 1 in. well = 55 ft. Sample collected by using low-flow bladder pump after purging of 13 L. Pump intake positioned at 52 ft.

TABLE A.1 (Cont.)

Sample Date	Time	Sample Location	Depth (ft BGL)	Sample	Sample Type	Chain of Custody	Shipping Date	Sample Description
6/7/11	11:22	MW-J	56-66	AGMWJ-W-30287	MW	2969	6/7/11	Depth to water = 39.15 ft. Depth of 2-in. well = 66 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 61 ft.
6/7/11	11:30	QC	–	AGQCTB-W-30315	TB	2969	6/7/11	Trip blank sent to the AGEM Laboratory for organic analysis with water samples listed on chain-of-custody forms 2968 and 2969.
6/7/11	12:00	DW98	–	AGDW98-NS-Jun2011	DW	–	–	Well not sampled. Access denied by owner.
6/7/11	12:27	MW-L	70-80	AGMWL-W-30288	MW	2969	6/7/11	Depth to water = 41.42 ft. Depth of 2-in. well = 77.20 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 75 ft.

TABLE A.2 Field measurements made during sitewide monitoring in June 2011.

Location	Sample	Sample Date	Depth (ft BGL)	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
GW1	AGGW1-W-30298	6/6/11	43-53	20.2	7.3	1756	10.00	70
GW2	AGGW2-W-30299	6/6/11	43-53	18.7	7.4	1115	9.67	72
GW3	AGGW3-W-30300	6/6/11	43-53	18.4	7.5	1239	9.10	100
GW4	AGGW4-W-30301	6/6/11	43-53	19.1	7.4	778	9.00	102
GW5	AGGW5-W-30302	6/6/11	43-53	17.3	7.2	1339	8.67	109
KMW02	AGKMW2-W-30283	6/6/11	57-97	10.4	7.1	797	7.85	174
KMW03	AGKMW3-W-30284	6/6/11	74-89	16.3	7.1	753	7.28	162
MW-C	AGMWC-W-30285	6/6/11	35-55	18.1	7.1	1446	8.08	81
MW-M	AGMWM-W-30289	6/6/11	59-69	17.2	6.9	772	6.28	95
MW-P	AGMWP-W-30290	6/6/11	35.42-54.92	15.6	7.1	1218	8.68	166
MW-Q	AGMWQ-W-30291	6/6/11	43.28-62.78	12.2	7.2	602	7.17	236
MW-R	AGMWR-W-30292	6/6/11	44.45-63.95	15.6	7.2	747	7.52	269
MW-H	AGMWH-W-30286	6/7/11	43-53	15.1	7.0	1401	4.34	163
MW-J	AGMWJ-W-30287	6/7/11	56-66	13.1	7.1	870	7.72	154
MW-L	AGMWL-W-30288	6/7/11	70-80	15.8	7.0	1261	5.29	150
PWS-3	AGPWS3-W-30295	6/7/11	65-125	14.5	7.3	785	5.88	262
PWS-4	AGPWS4-W-30296	6/7/11	88-127	15.8	7.3	859	7.70	185
SB23S	AGSB23S-W-30293	6/7/11	49-55	15.0	7.0	715	10.27	139
SB36	AGSB36-W-30294	6/7/11	42.7-62.7	16.3	6.7	822	7.44	176

TABLE A.3 Analytical results from the AGEM Laboratory for quality control samples collected to monitor sample collection and handling activities at Agra in June 2011.

			Concentration (µg/L)		
Sample Date	Sample	Type	Carbon Tetrachloride	Chloroform	Methylene Chloride
6/6/11	AGQCIR-W-30305	Equipment rinsate	ND[a]	ND	ND
6/6/11	AGQCIR-W-30306	Equipment rinsate	ND	ND	ND
6/7/11	AGQCTB-W-30315	Trip blank	ND	ND	ND

[a] ND, not detected at an intrument detection limit of 0.1 µg/L.

TABLE A.4 Analytical results from the AGEM Laboratory for dual analyses of samples collected at Agra in June 2011.

Sample Date	Location	Sample	Analysis Type	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
6/6/11	GW1	AGGW1-W-30298	Primary sample	37	4.9	ND[a]
6/6/11	GW1	AGGW1-W-30298DUP	Duplicate analysis	38	5.0	ND
6/6/11	KMW02	AGKMW2-W-30283	Primary sample	ND	ND	ND
6/6/11	KMW02	AGKMW2DUP-W-30303	Replicate	ND	ND	ND
6/7/11	PWS-3	AGPWS3-W-30295	Primary sample	9.8	0.4 J[b]	ND
6/7/11	PWS-3	AGPWS3-W-30295DUP	Duplicate analysis	10	ND	ND
6/7/11	SB36	AGSB36-W-30294	Primary sample	9.6	0.6 J	ND
6/7/11	SB36	AGSB36DUP-W-30304	Replicate	9.3	0.6 J	ND

[a] ND, contaminant not detected at an instrument detection limit of 0.1 µg/L.

[b] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L.

TABLE A.5 Analytical results for groundwater samples collected in June 2011 and submitted for verification organic analysis.[a]

			Concentration (µg/L)					
			AGEM Laboratory			TestAmerica, Inc.		
Location	Sample	Sample Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride
GW3	AGGW3-W-30300	6/6/11	1,777	15	ND[b]	1600	12	ND
MW-C	AGMWC-W-30285	6/6/11	ND	ND	ND	0.16 J[c] B[d]	ND	ND
MW-P	AGMWP-W-30290	6/6/11	222	5.9	ND	240	6.1	ND
PWS-4	AGPWS4-W-30296	6/7/11	33	1.0	ND	24	0.95	ND
QC	AGQCTB-W-30315	6/7/11	ND	ND	ND	0.064 J B	ND	ND

[a] TestAmerica verification data are in Supplement 2 (on CD).

[b] ND, contaminant not detected at an instrument detection limit of 0.1 µg/L.

[c] Qualifier J indicates an estimated concentration below the method quantitation limit of 1.0 µg/L for analyses at the AGEM Laboratory or 0.5 µg/L for analyses at TestAmerica, Inc.

[d] Qualifier B indicates that the contaminant was present in the assoicated laboratory method blank.

Appendix B:

Historical Annual Site Monitoring Data

TABLE B.1 Summary of results for sitewide groundwater monitoring wells, 2005-2011.[a]

						2005 Targeted Investigation CCC/USDA				2008 Pre-IM Plume Update/Baseline CCC/USDA				2009 First Sitewide Monitoring CCC/USDA			
								Concentration (µg/L)				Concentration (µg/L)				Concentration (µg/L)	
	Well	Screen Interval (ft BGL)	Filter Pack Interval (ft BGL)	Total Depth (ft TOC)	KGS Registration Number	Sample Date	Depth to Water (ft TOC)	Carbon Tetrachloride	Chloroform	Sample Date	Depth to Water (ft TOC)	Carbon Tetrachloride	Chloroform	Sample Date	Depth to Water (ft TOC)	Carbon Tetrachloride	Chloroform
Joint	KMW02	57-97	20-97	99	45580	5/19/05	47.7	0.4 J[b]	0.3 J	10/29/08	45	ND[c]	ND	6/16/09	41.8	0.2 J	0.3 J
Joint	MW-C	35-55	33-55	55	118623	5/22/05	43.59	ND	ND	10/29/08	40.4	ND	ND	6/15/09	39	ND	ND
Joint	MW-H	43-53	41-53	53	118620	5/25/05	46.26	ND	0.7 J	10/28/08	43.3	ND	ND	6/15/09	42.1	ND	0.3 J
Joint	MW-J	56-66	54-66	66	118618	5/21/05	44.2	13	ND	10/29/08	40	32	0.3 J	6/16/09	39.45	13	0.1 J
Joint	MW-L	70-80	68-80	80	118616	5/22/05	46.21	64	1.7	10/28/08	43.6	21	0.9 J	6/16/09	42.05	23	1.1
Joint	MW-M	59-69	57-75	75	118510	5/25/05	46.52	112	1.9	10/29/08	44.6	106	2.4	6/15/09	42.8	84	1.5
Joint	MW-R	44.45-63.95	38-66	66	353498	5/20/05	46.88	ND	ND	10/28/08	41.5	ND	ND	6/15/09	39.22	ND	ND
Joint	PWS-3	65-125	–	125	–	6/3/05	–	ND	ND	–	–	–	–	6/16/09	–	7.6	ND
Joint	PWS-4	88-127	–	127	–	–	–	–	–	–	–	–	–	–	–	–	–
Joint	SB23S	49-55	48-55	55	321229	5/20/05	34	1.5	ND	–	–	–	–	6/16/09	30.5	59	0.8 J
Joint	SB36	42.7-62.7	40-64.7	62.7	108165	6/2/05	40.73	5.1	0.4 J	–	–	–	–	6/16/09	37.15	5.1	0.4 J
Joint	DW98	–	–	–	–	6/3/05	–	0.3 J	0.2 J	–	–	–	–	6/16/09	39.4	0.4 J	0.4 J
Argonne	KMW03	74-89	24-89	89	45583	5/21/05	46.71	ND	ND	10/28/08	43.3	2.1	ND	6/16/09	39.47	ND	ND
Argonne	MW-P	35.42-54.92	31-59	59	353496	6/13/05	46.38	423	3.5	10/28/08	42.35	318	5.5	6/16/09	38.65	260	11
Argonne	MW-Q	43.28-62.78	38-69	69	353497	5/21/05	46.58	0.5 J	ND	10/28/08	42.3	1.3	ND	6/16/09	39.11	0.8 J	ND
Argonne	GW-1	43-53	41-53	53	426347	–	–	–	–	–	–	–	–	5/20/09	38.75	114	8.1
Argonne	GW-2	43-53	41-53	53	426346	–	–	–	–	–	–	–	–	5/20/09	39.15	6,090	46
Argonne	GW-3	43-53	41-53	53	426345	–	–	–	–	–	–	–	–	5/20/09	39	9,198	28
Argonne	GW-4	43-53	41-53	53	426344	–	–	–	–	–	–	–	–	5/20/09	40.1	127	2.3
Argonne	GW-5	43-53	41-53	53	426343	–	–	–	–	–	–	–	–	5/20/09	39.05	ND	ND
Pro-Ag	KMW01	43-53	20-63	65	45581	5/18/05	49.34	54.4	2.7	10/29/08	43.5	27	2.3	–	–	–	–
Pro-Ag	MW-2	40-60	38-60	60	118626	5/24/05	48.93	59	2.4	10/29/08	45.9	17	1.6	–	–	–	–
Pro-Ag	MW-F	65-75	63-85	85	118622	5/25/05	48.83	445	4.4	10/29/08	45.8	361	2.7	–	–	–	–
Pro-Ag	MW-G	89-99	87-100	100	118621	5/24/05	47.3	25	2.3	10/28/08	44.5	ND	ND	–	–	–	–
Pro-Ag	MW-I	36-71	34-71	71	426344	5/16/05	46.51	0.2 J	ND	10/28/08	42.9	ND	0.7 J	–	–	–	–
Pro-Ag	MW-O	38-58	38-58	58	119090	5/22/05	45.75	0.9 J	ND	10/28/08	42.7	1.3	ND	–	–	–	–
Pro-Ag	PMW-01	49-59	47-59	59	427877	–	–	–	–	–	–	–	–	9/28/09	–	144	5.6
Pro-Ag	PMW-02	49-59	47-59	59	427825	–	–	–	–	–	–	–	–	9/28/09	–	33.1	2.2
Pro-Ag	PMW-03	52.5-62.5	50.5-62.5	62.5	427824	–	–	–	–	–	–	–	–	9/28/09	–	19	ND
Pro-Ag	PMW-04	53-63	51-63	63	427963	–	–	–	–	–	–	–	–	9/28/09	–	98.2	1.2
Pro-Ag	PMW-05	54.5-64.5	52.5-64.5	64.5	427962	–	–	–	–	–	–	–	–	9/28/09	–	191	2.7
Pro-Ag	PMW-06	49-59	47-59	59	427964	–	–	–	–	–	–	–	–	9/28/09	–	149	2.5
Pro-Ag	PMW-07	70-75	68-75	75	427961	–	–	–	–	–	–	–	–	9/28/09	–	12.2	2.8
Pro-Ag	PMW-09	55-65	53-65	65	433967	–	–	–	–	–	–	–	–	–	–	–	–
Pro-Ag	PMW-10	45.5-55.5	43.5-55.5	55.5	433970	–	–	–	–	–	–	–	–	–	–	–	–

TABLE B.1 (Cont.)

		2010 Second Sitewide Monitoring Pro-Ag (Official Results)			2010 Second Sitewide Monitoring Argonne Split Sampling Results				2011 Third Sitewide Monitoring CCC/USDA			
			Concentration (µg/L)				Concentration (µg/L)				Concentration (µg/L)	
	Well	Sample Date	Carbon Tetrachloride	Chloroform	Sample Date	Depth to Water (ft TOC)	Carbon Tetrachloride	Chloroform	Sample Date	Depth to Water (ft TOC)	Carbon Tetrachloride	Chloroform
Joint	KMW02	8/4/10	ND	ND	8/4/10	43.06	ND	0.2 J	6/6/11	40.41	ND	ND
Joint	MW-C	8/3/10	ND[d]	ND	8/3/10	38.5	ND	ND	6/6/11	39.15	ND	ND
Joint	MW-H	8/3/10	ND	ND	8/3/10	41.25	ND	ND	6/7/11	41.62	ND	ND
Joint	MW-J	8/3/10	30.7	ND	8/3/10	39.5	28	0.3 J	6/7/11	39.15	18	ND
Joint	MW-L	8/3/10	80.4	ND	8/3/10	41.55	60	2.1	6/7/11	41.42	82	2.1
Joint	MW-M	8/3/10	158	ND	8/3/10	42.35	104	1.9	6/6/11	41.46	97	1.9
Joint	MW-R	8/3/10	ND	ND	8/3/10	38.7	ND	ND	6/6/11	38.71	ND	ND
Joint	PWS-3	8/5/10	6.97	ND	8/5/10	–	9.1	ND	6/7/11	–	9.8	0.4 J
Joint	PWS-4	–	–	–	8/3/10	–	26	0.8 J	6/7/11	–	33	1.0
Joint	SB23S	8/5/10	53.2	ND	8/5/10	29.3	73	0.8 J	6/7/11	27.9	70	0.9 J
Joint	SB36	8/5/10	4.86	ND	8/5/10	37.3	6.4	ND	6/7/11	34.96	9.6	0.6 J
Joint	DW98	8/5/10	ND	ND	8/5/10	38.5	ND	ND	–	e		
Argonne	KMW03		–	–	6/16/10	40.48	ND	ND	6/6/11	39.65	ND	ND
Argonne	MW-P		–	–	6/16/10	38.59	259	6.0	6/6/11	38.08	222	5.9
Argonne	MW-Q		–	–	–	–	–	–	6/6/11	38.34	0.5 J	ND
Argonne	GW-1		–	–	6/16/10	37.32	26	4.1	6/6/11	38.05	37	4.9
Argonne	GW-2		–	–	6/16/10	39.3	500	13	6/6/11	39.28	2,900	20
Argonne	GW-3		–	–	6/16/10	37.7	119	7.1	6/6/11	37.88	1,777	15
Argonne	GW-4		–	–	6/16/10	39.25	97	ND	6/6/11	39	112	1.4
Argonne	GW-5		–	–	6/16/10	38.3	ND	ND	6/6/11	38.06	0.4 J	ND
Pro-Ag	KMW01	8/3/10	24	1.2	8/3/10	41.35	24	2.9	–	–	–	–
Pro-Ag	MW-2	8/3/10	10.9	ND	8/3/10	40.26	11	1.5	–	–	–	–
Pro-Ag	MW-F	8/3/10	249	ND	8/3/10	43.7	232	1.6	–	–	–	–
Pro-Ag	MW-G	8/3/10	13.6	ND	8/3/10	42.9	13	2.5	–	–	–	–
Pro-Ag	MW-I	8/3/10	ND	ND	8/3/10	41.75	ND	1.4	–	–	–	–
Pro-Ag	MW-O	8/3/10	ND	ND	8/3/10	40.7	0.9 J	ND	–	–	–	–
Pro-Ag	PMW-01	8/4/10	147	5.18	8/4/10	43.87	119	5.9	–	–	–	–
Pro-Ag	PMW-02	8/4/10	22.8	ND	8/4/10	41	28	1.3	–	–	–	–
Pro-Ag	PMW-03	8/4/10	12.1	ND	8/4/10	43.35	16	1.0	–	–	–	–
Pro-Ag	PMW-04	8/4/10	131	ND	8/4/10	40.87	117	2.1	–	–	–	–
Pro-Ag	PMW-05	8/4/10	174	2.06	8/4/10	41.35	158	3.0	–	–	–	–
Pro-Ag	PMW-06	8/4/10	124	ND	8/4/10	43.95	82	2.4	–	–	–	–
Pro-Ag	PMW-07	8/4/10	49.5	ND	8/4/10	44.85	56	1.2	–	–	–	–
Pro-Ag	PMW-09	8/3/10	214	4.97	8/3/10	41.72	199[f]	5.6	–	–	–	–
Pro-Ag	PMW-10	8/4/10	2.9	ND	8/4/10	42.86	3.6	1.8	–	–	–	–

[a] Abbreviations: BGL, below ground level; KGS, Kansas Geological Survey; TOC, below top of casing.

[b] Qualifier J indicates an estimated concentration below the method quantitation limit.

[c] ND, not detected.

[d] Value of 10.9 reported in a table. Data sheets show no detection.

[e] Access denied.

[f] Outside calibration range. Insufficient sample volume for reanalysis.

Supplement 1:

Waste Characterization Data

MATRIX: Purge Water
RECEIVING LAB: ANL
PROJECT/SITE: AGRA KS
SAMPLER(S) (Signature) Travis Kaulen

ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone): Dave Sargunter 630 409 7114

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC									REMARKS
June 22, 2011	AG PURGE-W-30316	4	4									4 x 20 mL for VOC
June 22, 2011	AGQCTB-W-30317	2	2									2 x 20 mL for VOC

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6-22-11	17:00					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
				6/23/11	9:10am	T=4°C

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (12-94)

Date Analyzed: 06/23/2011 (B)

	$CHCl_3$ (ppb)	CCl_4 (ppb)
LAB STD (20 ppb)	20	20
LAB BLANK	ND	ND
AG-PURGE-W-30316	ND	2.6
AG-QCTB-W-30317	ND	ND

Area Percent Report

Data File : D:\DATA\HA\HA62302.D
Acq On : 23 Jun 2011 11:05
Sample : AGPURGE-W-30316
Misc :

Vial: 2
Operator: CMR
Inst : Instrumen
Multiplr: 1.00
Sample Amount: 0.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\CAL42B.M (RTE Integrator)
Title : BROMOETHANE
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 10000 Area counts
Max Peaks: 50
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	9.109	1041	1055	1070	rVB2	41362	135747	26.95%	9.827%
2	10.000	1198	1211	1224	rBV	195658	503715	100.00%	36.463%
3	16.521	2340	2352	2365	rBV	140600	292483	58.07%	21.172%
4	18.813	2743	2753	2765	rVB	219305	449485	89.23%	32.538%

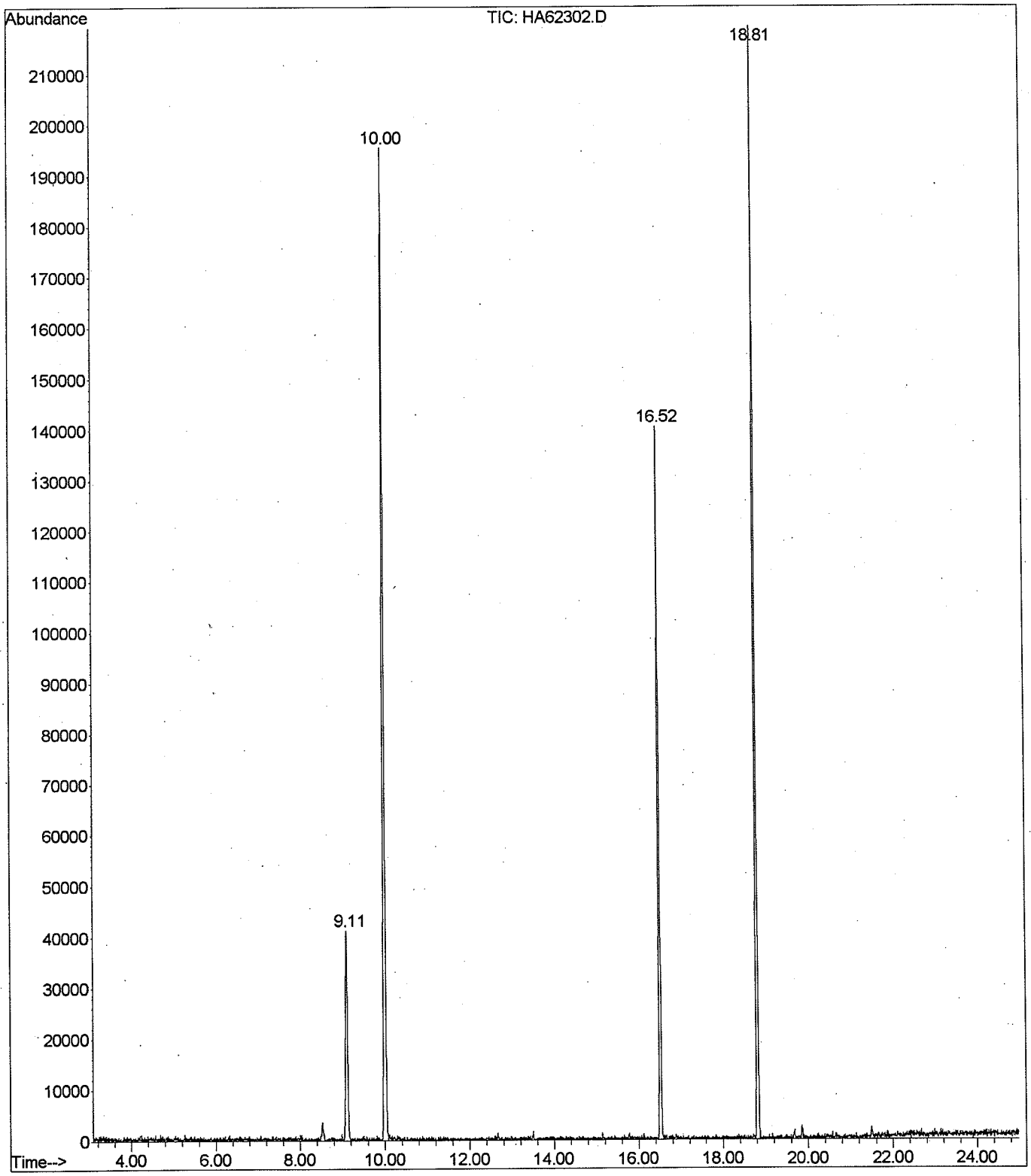
Sum of corrected areas: 1381430

Area Percent Report

Data File : D:\DATA\HA\HA62302.D
Acq On : 23 Jun 2011 11:05
Sample : AGPURGE-W-30316
Misc :

Vial: 2
Operator: CMR
Inst : Instrumen
Multiplr: 1.00
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\CAL42B.M (RTE Integrator)
Title : BROMOETHANE



Information from Data File:

File: D:\DATA\HA\HA62302.D
Operator: CMR
Date Acquired: 23 Jun 2011 11:05
Method File: CAL42B
Sample Name: AGPURGE-W-30316
Misc Info:
Vial Number: 2

Search Libraries: C:\Database\NBS75K.L Minimum Quality: 0

Unknown Spectrum: Apex
Integration Events: RTE Integrator - RTEINT.P

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
1	9.11	9.83	C:\Database\NBS75K.L			
			6-Chloromethyl-5-methylidene-an...	15108	066728-04-9	83
			Carbon Tetrachloride	10047	000056-23-5	64
			Carbon Tetrachloride	66870	000056-23-5	43
2	10.00	36.46	C:\Database\NBS75K.L			
			Benzene, fluoro-	1083	000462-06-6	90
			Benzene, fluoro-	63110	000462-06-6	90
			Benzene, fluoro-	63109	000462-06-6	87
3	16.52	21.17	C:\Database\NBS75K.L			
			Benzene, 1-bromo-3-fluoro-	16034	001073-06-9	96
			Benzene, 1-bromo-2-fluoro-	16035	001072-85-1	91
			Benzene, 1-bromo-2-fluoro-	68408	001072-85-1	91
4	18.81	32.54	C:\Database\NBS75K.L			
			1,4-Dichlorobenzene-d4	9593	003855-82-1	91
			Benzene-1,2,3,4-d4-, 5,6-dichloro-	9592	002199-69-1	78
			JP 60	10046	013074-39-0	9

Operator CMR
Number of Compounds 19.
Sample Name GPURGE-W-30316
Data File Name HA62302.D
Date Acquired 6/23/2011 11:05

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	0.00	61	0.00	0	
2)	Methylene Chloride	0.00	84	0.00	0	
3)	Ethene, 1,2-dichloro-, (E)-	0.00	61	0.00	0	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	0.00	83	0.00	0	
6)	Carbon Tetrachloride	9.11	116.9	5.17	49569	
7)	Benzene	0.00	78	0.00	0	
8)	Benzene, fluoro-	10.00	96.1	4.65	266744	Internal Std
9)	Trichloroethylene	0.00	129.9	0.00	0	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	0.00	91	0.00	0	
12)	Ethane, 1,1,2-trichloro-	0.00	97	0.00	0	
13)	Tetrachloroethylene	0.00	165.8	0.00	0	
14)	Methane, dibromochloro-	0.00	128.9	0.00	0	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.52	95.1	4.04	66231	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	0.00	83	0.00	0	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.81	150	5.65	131200	Internal Std

Area Percent Report

Data File : D:\DATA\HA\HA62303.D
Acq On : 23 Jun 2011 11:34
Sample : AGQCTB-W-30317
Misc :

Vial: 3
Operator: CMR
Inst : Instrumen
Multiplr: 1.00
Sample Amount: 0.00

MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\CAL42B.M (RTE Integrator)
Title : BROMOETHANE
Smoothing : ON
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 10000 Area counts
Max Peaks: 50
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	10.000	1192	1211	1228	rBV	185728	463792	100.00%	39.681%
2	12.669	1668	1678	1687	rBV	12265	28677	6.18%	2.454%
3	16.527	2340	2353	2366	rBV	127949	265584	57.26%	22.723%
4	18.813	2743	2753	2769	rBB2	193253	410752	88.56%	35.143%

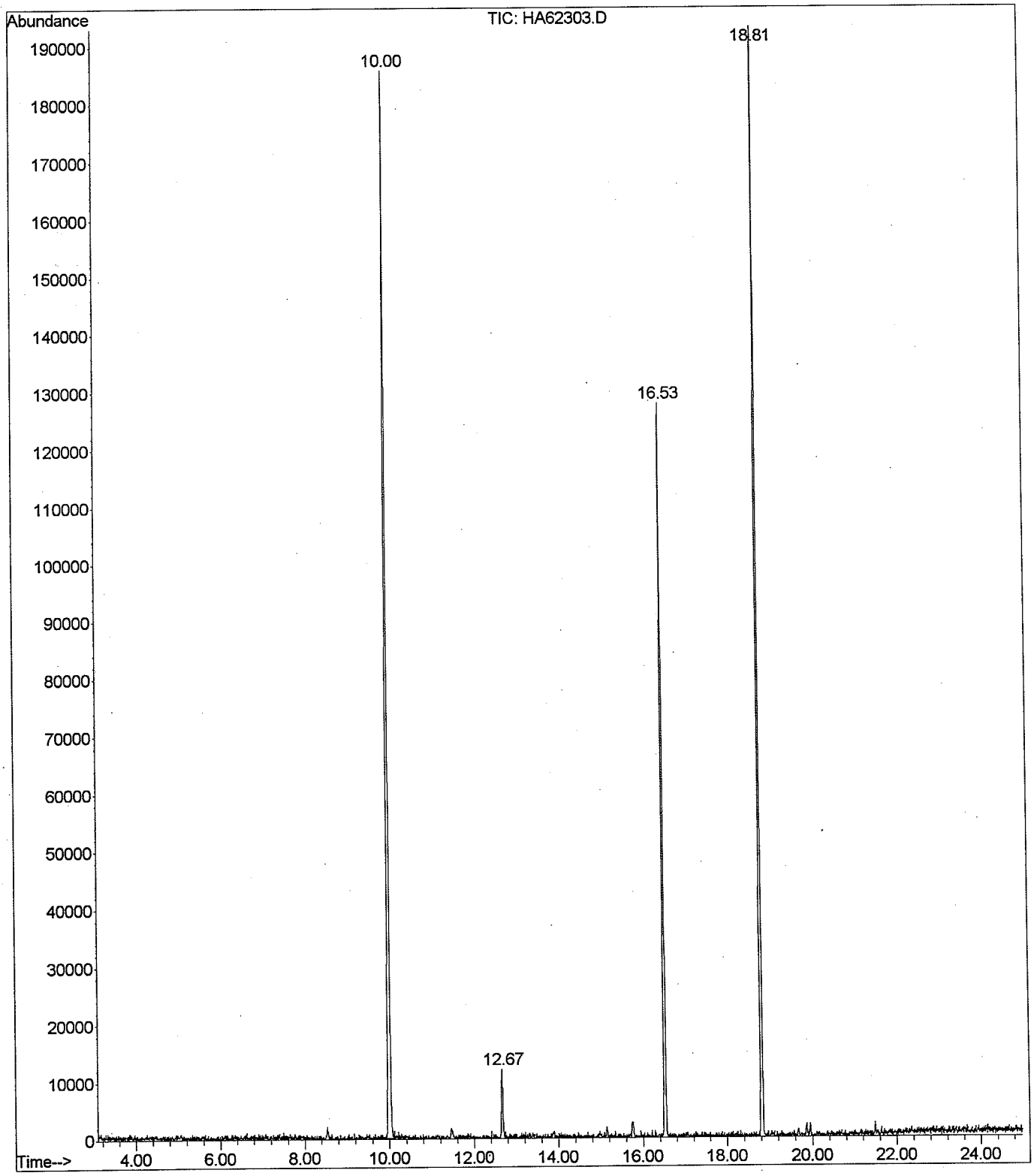
Sum of corrected areas: 1168805

Area Percent Report

Data File : D:\DATA\HA\HA62303.D
Acq On : 23 Jun 2011 11:34
Sample : AGQCTB-W-30317
Misc :

Vial: 3
Operator: CMR
Inst : Instrumen
Multiplr: 1.00
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\CAL42B.M (RTE Integrator)
Title : BROMOETHANE



Information from Data File:

File: D:\DATA\HA\HA62303.D
Operator: CMR
Date Acquired: 23 Jun 2011 11:34
Method File: CAL42B
Sample Name: AGQCTB-W-30317
Misc Info:
Vial Number: 3

Search Libraries: C:\Database\NBS75K.L Minimum Quality: 0

Unknown Spectrum: Apex
Integration Events: RTE Integrator - RTEINT.P

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
1	10.00	39.68	C:\Database\NBS75K.L			
			Benzene, fluoro-	1083	000462-06-6	91
			Benzene, fluoro-	63110	000462-06-6	90
			Benzene, fluoro-	63109	000462-06-6	87
2	12.67	2.45	C:\Database\NBS75K.L			
			Toluene	63030	000108-88-3	90
			Toluene	63029	000108-88-3	90
			Toluene	965	000108-88-3	90
3	16.53	22.72	C:\Database\NBS75K.L			
			Benzene, 1-bromo-2-fluoro-	16035	001072-85-1	94
			Benzene, 1-bromo-3-fluoro-	68407	001073-06-9	94
			Benzene, 1-bromo-3-fluoro-	16034	001073-06-9	93
4	18.81	35.14	C:\Database\NBS75K.L			
			1,4-Dichlorobenzene-d4	9593	003855-82-1	94
			Benzene-1,2,3,4-d4-, 5,6-dichloro-	9592	002199-69-1	91
			p-Nitrophenacyl bromide	32475	000099-81-0	12

Operator CMR
Number of Compounds 19.
Sample Name \GQCTB-W-30317
Data File Name HA62303.D
Date Acquired 6/23/2011 11:34

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	0.00	61	0.00	0	
2)	Methylene Chloride	0.00	84	0.00	0	
3)	Ethene, 1,2-dichloro-, (E)-	0.00	61	0.00	0	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	0.00	83	0.00	0	
6)	Carbon Tetrachloride	0.00	116.9	0.00	0	
7)	Benzene	0.00	78	0.00	0	
8)	Benzene, fluoro-	10.00	96.1	4.38	244940	Internal Std
9)	Trichloroethylene	0.00	129.9	0.00	0	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	12.67	91	0.00	14543	
12)	Ethane, 1,1,2-trichloro-	0.00	97	0.00	0	
13)	Tetrachloroethylene	0.00	165.8	0.00	0	
14)	Methane, dibromochloro-	0.00	128.9	0.00	0	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.53	95.1	3.76	59278	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	0.00	83	0.00	0	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.81	150	5.31	117680	Internal Std

Supplement 2:

Sample Documentation from TestAmerica Laboratories, Inc.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 200-5447-1

SDG Number: 200-5447

Job Description: Agra (200-5447)

Contract Number: EP-W-09-044

For:

Argonne National Laboratory
9700 South Cass Avenue
Building 203
Office B-149
Argonne, IL 60439

Attention: Mr. Clyde Dennis

Approved for release.
Kirk F Young
Project Manager I
6/15/2011 8:09 AM

Kirk F Young
Project Manager I
kirk.young@testamericainc.com
06/15/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

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CASE NARRATIVE

Client: Argonne National Laboratory

Project: Agra (200-5447)

Report Number: 200-5447-1

Enclosed is the data set for the referenced project work. With the exceptions noted as flags or footnotes, standard analytical protocols were followed in performing the analytical work and the applied control limits were met.

Calculations were performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Receipt

The samples were received on 06/08/2011. Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. The samples, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

SOM01.2 Volatile Organics (Trace Level Water)

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Samples AGGW3-W-30300 and AGMWP-W-30290 were analyzed at a dilution based on the results of preliminary screening. An additional, more concentrated analysis was performed on each sample in order to provide for a lower reporting limit for those analytes that were not identified in the primary analysis. An additional, dilution analysis was performed on sample AGPWS4-W-30296 in order to provide for quantification within the range of calibrated instrument response. Both sets of results for the analysis of samples AGGW3-W-30300, AGMWP-W-30290, and AGPWS4-W-30296 are included in this submittal.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of each method blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of one of the instrument blanks associated with the analytical work did yield a high recovery of one of the DMCs, benzene-d_6. In the analysis of the instrument blank identified as VIBLKJQ the recovery of benzene-d_6 approximated 136 percent. There was an acceptable recovery of all other DMCs in that analysis. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone, carbon disulfide, trans-1,2-dichloroethene, methyl tert-butyl ether,

chloroform, carbon tetrachloride, and trichloroethene were identified in the analysis of one of the method blanks associated with the analytical work, and trace concentrations of carbon disulfide, trans-1,2-dichloroethene, and carbon tetrachloride were identified in the analysis of the second method blank. The concentration of each compound in each analysis was below the established reporting limit, and each analysis did meet the technical acceptance criteria for a compliant method blank analysis. Trace concentrations of carbon disulfide and trans-1,2-dichloroethene were identified in the analysis of the storage blank associated with the sample set. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. To varying extent, trace concentrations of carbon disulfide, trans-1,2-dichloroethene, methyl tert-butyl ether, and carbon tetrachloride were identified in the analysis of the instrument blanks associated with the sample set. The concentration of each compound in each analysis was below the established reporting limit, and each analysis did meet the technical acceptance criteria for a compliant instrument blank analysis. Present in the method blank, storage blank, and instrument blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the opening/continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d_6, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented at the end of this submittal.

DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-5447-1
Sdg Number: 200-5447

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.

MATRIX: Water
RECEIVING LAB: Test America
PROJECT/SITE: Agra, KS
SAMPLER(S) (Signature)

ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone): Dave Surgnier 630 408 7114

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC									REMARKS
6/6/2011	AGMWP-W-30290	2	2									2x40ml for voc to ~~[illegible]~~ TestAmerica
6/6/2011	AGGW3-W-30300	2	2									
6/6/2011	AGMWC-W-30285	2	2									
6/7/2011	AGPWS4-W-30296	2	2									
6/7/2011	AGQCTB-W-30315	2	2									2x40ml for voc to ~~[illegible]~~ Test America

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	6/7/2011	13:13	6/8/11 1015				

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
✓		Custody seal was intact when shipment received.
✓		Sample containers were intact when received.
✓		Shipment was at required temperature when received.
✓		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-166 (12-94)

Burlington Facility
Internal Chain of Custody Log (ICOC)

Project Information:

Login # 200-5447	**Method:** SOM01.2_Vol_Tr
Client: ARG LAB	**LAB IDs:** 200-5447-1 THRU -5

Samples associated with this login were placed into storage on 6/8/2011 *(Date)* 1130 *(Time[2])* **by:** *Sample Custodian Signature*

Storage Location: VOA FRIDGE A, SHELF 13 *Specify storage location (refrigerator, freezer ID or lab location) for original sample containers*

Storage Condition: X Refrigeration __ Frozen Ambient

Internal Transfer Information

Sample Type		Lab ID(s)	Transfer	Transfer	Purpose of Transfer			Relinquished	Received	Storage Location
Original	Prepared[1]		Date	Time[2]	Prep	Analysis	Storage	By:	By:	Prepared Sample[1]
✓		5447 1-5	6/8/11	1200	✓			JH	JH	Screen
✓		"	6/8/11	1210			✓	JH	JH	Storage
✓		"	6/8/11	1430		✓		JH	JH	Analysis
✓		"	6/8/11	1450			✓	JH	JH	Storage

[1] Extract, digestate, or any other prepared sample that is no longer in original sample container

[2] Military Time

Burlington Facility
Internal Chain of Custody Log (ICOC)

Project Information:	
Login # 200-5447	Method: SOM01.2_Vol_Tr
Client: ARG LAB	LAB IDs: 200-5447-6

Samples associated with this login were placed into storage on 6/8/2011 (Date) 1130 (Time[2]) by: [signature] *Sample Custodian Signature*

Storage Location: VOA FRIDGE A, SHELF 13 *Specify storage location (refrigerator, freezer ID or lab location) for original sample containers*

Storage Condition: X Refrigeration __ Frozen Ambient

Internal Transfer Information

Sample Type		Lab ID(s)	Transfer	Transfer	Purpose of Transfer			Relinquished	Received	Storage Location
Original	Prepared[1]		Date	Time[2]	Prep	Analysis	Storage	By:	By:	Prepared Sample[1]
✓		5447-6	6/8/11	1430		✓		[signature]	[signature]	Analysis
✓		"	6/8/11	1450			✓	[signature]	[signature]	Storage
✓		"	6/10/11	1045		✓		[signature]	[signature]	re-analysis
✓		"	6/10/11	1050			✓	[signature]	[signature]	Storage

[1] Extract, digestate, or any other prepared sample that is no longer in original sample container

[2] Military Time

Shipping and Receiving Documents

fedex.com 1.800.GoFedEx 1.800.463.3339

Agra TA Doc

FedEx Express **US Airbill** 8717 3523 5134 0200 Form ID No. **FedEx Retrieval (**

1 From

Date 6-7 2011 Sender's FedEx Account Number 0604103520

Sender's Name Trang Kamler Phone 630 444 7255

Company Argonne National Lab

Address 4101 Cass Ave Dept./Floor/Suite/Room

City Lemont State IL ZIP 60439

2 Your Internal Billing Reference TA 77 [illegible] 2011 117

3 To

Recipient's Name K. K. Yang Phone [illegible]

Company Tech Ceramics

1 ☐ HOLD Weekday Print FedEx location address below. NOT available for FedEx First Overnight.

31 ☐ HOLD Saturday Print FedEx location address below. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Address 30 Commerce Drive Suite 11

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address

Print FedEx location address here if a HOLD option is selected.

City Bedford State VT ZIP 05463

4a Express Package Service * To most locations. *Packages up to*

1 ☐ FedEx Priority Overnight Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

5 ☐ FedEx Standard Overnight Next business afternoon.* Saturday Delivery NOT available

6 ☐ FedEx First Ove Earliest next business delivery to select loca Saturday Delivery NO

3 ☐ FedEx 2Day Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver Third business day.* Saturday Delivery NOT available

4b Express Freight Service ** To most locations. *Packages over*

7 ☐ FedEx 1Day Freight Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.

8 ☐ FedEx 2Day Freight Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected

83 ☐ FedEx 3Day Freight Third business day.** Saturday Delivery NOT av

5 Packaging * Declared value limit $500.

6 ☐ FedEx Envelope* 2 ☐ FedEx Pak* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak. 3 ☐ FedEx Box 4 ☐ FedEx Tube 1 ☐

6 Special Handling and Delivery Signature Options

3 ☐ **SATURDAY DELIVERY**

☐ No Signature Required Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature Someone at recipient's address may sign for delivery. Fee applies.

34 ☐ Indirect Signature If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee appli.

Does this shipment contain dangerous goods?

One box must be checked.

7 ☐ No 4 ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. 6 ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain Re Acct.

1 ☒ Sender Acct. No. in Section 1 will be billed. 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Ca

Total Packages Total Weight lbs Credit Card Auth

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

55

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06/15/2011

Login Sample Receipt Checklist

Client: Argonne National Laboratory

Job Number: 200-5447-1
SDG Number: 200-5447

Login Number: 5447
List Number: 1
Creator: Marion, Greg T

List Source: TestAmerica Burlington

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	NO CUSTODY SEAL NUMBERS
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.5 °C, IR GUN ID 96, CF 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	No sample time on COC, logged in per container labels.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	Sample volumes received unpreserved.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level ifrequired.

Sample Login Acknowledgement

Job 200-5447-1

Client Job Description:	Agra (200-5447)	**Report To:**	Argonne National Laboratory
Purchase Order #:	8E-00302		Jorge Alvarado
Work Order #:	8E-00302		9700 South Cass Avenue Building 203 Office B-149 Argonne, IL 60439
Project Manager:	Kirk F Young		
Job Due Date:	6/22/2011		
Job TAT:	14 Days		
Max Deliverable Level:	IV	**Bill To:**	Argonne National Laboratory Accounts Payable
Earliest Deliverable Due:	6/22/2011		Chief Financial Offices 9700 S. Cass Ave. Building 201 Argonne, IL 60439

Login 200-5447

Sample Receipt:	6/8/2011 10:15:00 AM	**Number of Coolers:**	1
Method of Delivery:	FedEx Priority Overnight	**Cooler Temperature(s) (C°):**	5.5;

Lab Sample # / Method	Client Sample ID / Method Description / Work Location	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
200-5447-1	**AGMWP-W-30290**	**6/6/2011 3:43:00 PM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5447-2	**AGGW3-W-30300**	**6/6/2011 11:43:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5447-3	**AGMWC-W-30285**	**6/6/2011 4:58:00 PM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5447-4	**AGPWS4-W-30296**	**6/7/2011 8:24:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5447-5	**AGQCTB-W-30315**	**6/7/2011 11:30:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5447-6	**VHBLK01**	**6/8/2011 11:15:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

* Method on-hold

** Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry

METHODOLOGY SUMMARY

Laboratory:	TestAmerica Laboratories	Project No:	
Location:	South Burlington, Vermont	SDG No:	200-5447

VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJI	93	92	69	94	84	93	121
02	AGMWC-W-30285	100	100	78	166 *	102	105	110
03	AGPWS4-W-30296	90	87	71	213 *	102	104	116
04	AGMWP-W-30290DL	89	89	67	105	99	98	112
05	AGMWP-W-30290	99	101	77	99	101	111	110
06	AGPWS4-W-30296DL	82	84	64	146	84	90	88
07	AGGW3-W-30300DL	82	80	63	166 *	88	91	96
08	AGGW3-W-30300	77	75	59	158 *	83	90	102
09	AGQCTB-W-30315	79	80	63	82	87	85	94
10	VBLKJK	100	103	82	89	102	109	109
11	VHBLK01	87	89	73	90	100	106	109

			QC LIMITS
VDMC1	(VCL)	= Vinyl Chloride-d3	(65-131)
VDMC2	(CLA)	= Chloroethane-d5	(71-131)
VDMC3	(DCE)	= 1,1-Dichloroethene-d2	(55-104)
VDMC4	(BUT)	= 2-Butanone-d5	(49-155)
VDMC5	(CLF)	= Chloroform-d	(78-121)
VDMC6	(DCA)	= 1,2-Dichloroethane-d4	(78-129)
VDMC7	(BEN)	= Benzene-d6	(77-124)

Column to be used to flag recovery values
* Values outside of contract required QC limits

2B - FORM II VOA-2
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJI	88	108	97	95	81	103		0
02	AGMWC-W-30285	88	102	103	171 *	104	109		2
03	AGPWS4-W-30296	99	101	101	205 *	108	110		2
04	AGMWP-W-30290DL	94	85	88	99	99	103		0
05	AGMWP-W-30290	87	98	100	105	101	107		0
06	AGPWS4-W-30296DL	69 *	83	85	153 *	82	88		2
07	AGGW3-W-30300DL	78 *	87	73	154 *	84	96		3
08	AGGW3-W-30300	85	94	88	159 *	87	78 *		3
09	AGQCTB-W-30315	65 *	88	88	81	88	95		1
10	VBLKJK	81	100	101	93	92	105		0
11	VHBLK01	89	100	92	91	92	109		0

			QC LIMITS
VDMC8	(DPA)	= 1,2-Dichloropropane-d6	(79-124)
VDMC9	(TOL)	= Toluene-d8	(77-121)
VDMC10	(TDP)	= trans-1,3-Dichloropropene-d4	(73-121)
VDMC11	(HEX)	= 2-Hexanone-d5	(28-135)
VDMC12	(TCA)	= 1,1,2,2-Tetrachloroethane-d2	(73-125)
VDMC13	(DCZ)	= 1,2-Dichlorobenzene-d4	(80-131)

Column to be used to flag recovery values
* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Lab File ID: JCWA06.D Lab Sample ID: MB 200-19349/6

Instrument ID: J.i

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 06/08/2011

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1516

GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	AGMWC-W-30285	200-5447-3	JCWA07.D	1552
02	AGPWS4-W-30296	200-5447-4	JCWA08.D	1618
03	VIBLKJQ	VIBLK 200-19349/9	JCWA09.D	1643
04	AGMWP-W-30290DL	200-5447-1	JCWA10.D	1708
05	AGMWP-W-30290	200-5447-1	JCWA11.D	1733
06	VIBLKJR	VIBLK 200-19349/12	JCWA12.D	1759
07	AGPWS4-W-30296DL	200-5447-4	JCWA13.D	1824
08	AGGW3-W-30300DL	200-5447-2	JCWA14.D	1849
09	AGGW3-W-30300	200-5447-2	JCWA15.D	1914
10	VIBLKJS	VIBLK 200-19349/16	JCWA16.D	1939
11	AGQCTB-W-30315	200-5447-5	JCWA17.D	2004

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Lab File ID: JCWB03.D Lab Sample ID: MB 200-19391/3

Instrument ID: J.i

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 06/10/2011

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1037

GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK01	200-5447-6	JCWB04.D	1115

COMMENTS:

5A - FORM V VOA
VOLATILE ORGANICS INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Lab File Id: JCW03.D BFB Injection Date: 06/02/2011

Instrument Id: J.i BFB Injection Time: 1036

GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.4
75	30.0 - 80.0% of mass 95	48.1
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.3 (0.3)1
174	50.0 - 120% of mass 95	97.3
175	5.0 - 9.0% of mass 174	7.4 (7.6)1
176	95.0 - 101% of mass 174	92.8 (95.3)1
177	5.0 - 9.0% of mass 176	6.2 (6.7)2

1 - Value is %mass 174 2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JH	IC 200-18988/5	JCW05.D	06/02/2011	1121
02	VSTD001JH	IC 200-18988/6	JCW06.D	06/02/2011	1146
03	VSTD005JH	ICIS 200-18988/7	JCW07.D	06/02/2011	1211
04	VSTD010JH	IC 200-18988/8	JCW08.D	06/02/2011	1236
05	VSTD020JH	IC 200-18988/9	JCW09.D	06/02/2011	1301

5A - FORM V VOA
VOLATILE ORGANICS INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Lab File Id: JCWA02.D BFB Injection Date: 06/08/2011

Instrument Id: J.i BFB Injection Time: 1300

GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.0
75	30.0 - 80.0% of mass 95	47.2
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.4 (0.4)1
174	50.0 - 120% of mass 95	97.8
175	5.0 - 9.0% of mass 174	7.0 (7.2)1
176	95.0 - 101% of mass 174	97.2 (99.3)1
177	5.0 - 9.0% of mass 176	6.5 (6.7)2

1 - Value is %mass 174 2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JI	CCVIS 200-19349/3	JCWA03.D	06/08/2011	1321
02	VBLKJI	MB 200-19349/6	JCWA06.D	06/08/2011	1516
03	AGMWC-W-30 285	200-5447-3	JCWA07.D	06/08/2011	1552
04	AGPWS4-W-3 0296	200-5447-4	JCWA08.D	06/08/2011	1618
05	VIBLKJQ	VIBLK 200-19349/9	JCWA09.D	06/08/2011	1643
06	AGMWP-W-30 290DL	200-5447-1	JCWA10.D	06/08/2011	1708
07	AGMWP-W-30 290	200-5447-1	JCWA11.D	06/08/2011	1733
08	VIBLKJR	VIBLK 200-19349/12	JCWA12.D	06/08/2011	1759
09	AGPWS4-W-3 0296DL	200-5447-4	JCWA13.D	06/08/2011	1824
10	AGGW3-W-30 300DL	200-5447-2	JCWA14.D	06/08/2011	1849
11	AGGW3-W-30 300	200-5447-2	JCWA15.D	06/08/2011	1914
12	VIBLKJS	VIBLK 200-19349/16	JCWA16.D	06/08/2011	1939
13	AGQCTB-W-3 0315	200-5447-5	JCWA17.D	06/08/2011	2004
14	VSTD005IJ	CCVC 200-19349/19	JCWA19.D	06/08/2011	2053

5A - FORM V VOA
VOLATILE ORGANICS INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Lab File Id: JCWB01.D BFB Injection Date: 06/10/2011

Instrument Id: J.i BFB Injection Time: 0953

GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.7
75	30.0 - 80.0% of mass 95	51.0
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.7 (0.7)1
174	50.0 - 120% of mass 95	94.4
175	5.0 - 9.0% of mass 174	7.3 (7.7)1
176	95.0 - 101% of mass 174	90.4 (95.8)1
177	5.0 - 9.0% of mass 176	5.8 (6.4)2

1 - Value is %mass 174 2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JK	CCVIS 200-19391/2	JCWB02.D	06/10/2011	1012
02	VBLKJK	MB 200-19391/3	JCWB03.D	06/10/2011	1037
03	VHBLK01	200-5447-6	JCWB04.D	06/10/2011	1115
04	VSTD005KJ	CCVC 200-19391/5	JCWB05.D	06/10/2011	1152

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD#####): VSTD005JI Date Analyzed: 06/08/2011

Lab File ID (Standard): JCWA03.D Time Analyzed: 1321

Instrument ID: J.i Heated Purge: (Y/N) N

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	561996	8.93	699784	5.58	275082	11.76
	UPPER LIMIT	786794	9.26	979698	5.91	385115	12.09
	LOWER LIMIT	337198	8.60	419870	5.25	165049	11.43
	EPA SAMPLE NO.						
01	VBLKJI	495626	8.93	655673	5.57	209046	11.76
02	AGMWC-W-30285	422381	8.93	522676	5.58	228258	11.76
03	AGPWS4-W-30296	457791	8.93	562098	5.58	220529	11.76
04	VIBLKJQ	387347	8.93	564729	5.58	220078	11.76
05	AGMWP-W-30290DL	443869	8.93	551520	5.58	197223	11.76
06	AGMWP-W-30290	401874	8.93	501295	5.58	198431	11.76
07	VIBLKJR	441989	8.93	545929	5.58	210365	11.76
08	AGPWS4-W-30296 DL	450153	8.93	548778	5.58	230918	11.76
09	AGGW3-W-30300DL	526863	8.93	626712	5.58	253643	11.76
10	AGGW3-W-30300	512034	8.93	657583	5.58	251723	11.76
11	VIBLKJS	457066	8.93	556752	5.58	228692	11.76
12	AGQCTB-W-30315	463287	8.93	580959	5.58	197070	11.76

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD#####): VSTD005JK Date Analyzed: 06/10/2011

Lab File ID (Standard): JCWB02.D Time Analyzed: 1012

Instrument ID: J.i Heated Purge: (Y/N) N

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	367749	8.93	437214	5.58	182825	11.76
	UPPER LIMIT	514849	9.26	612100	5.91	255955	12.09
	LOWER LIMIT	220649	8.60	262328	5.25	109695	11.43
	EPA SAMPLE NO.						
01	VBLKJK	326017	8.93	400857	5.58	167628	11.76
02	VHBLK01	375479	8.93	461269	5.58	179992	11.76

IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGGW3-W-30300

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA15.D

Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene Chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	0.19	J B
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	12	B
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon tetrachloride	1700	E B
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGGW3-W-30300

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA15.D

Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGGW3-W-30300

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA15.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 10.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	30	B X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGGW3-W-30300DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA14.D

Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 110.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	55	U
74-87-3	Chloromethane	55	U
75-01-4	Vinyl chloride	55	U
74-83-9	Bromomethane	55	U
75-00-3	Chloroethane	55	U
75-69-4	Trichlorofluoromethane	55	U
75-35-4	1,1-Dichloroethene	55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	55	U
67-64-1	Acetone	550	U
75-15-0	Carbon disulfide	55	U
79-20-9	Methyl acetate	55	U
75-09-2	Methylene Chloride	55	U
156-60-5	trans-1,2-Dichloroethene	55	U
1634-04-4	Methyl tert-butyl ether	2.4	J D B
75-34-3	1,1-Dichloroethane	55	U
156-59-2	cis-1,2-Dichloroethene	55	U
78-93-3	2-Butanone	550	U
74-97-5	Bromochloromethane	55	U
67-66-3	Chloroform	17	J D B
71-55-6	1,1,1-Trichloroethane	55	U
110-82-7	Cyclohexane	55	U
56-23-5	Carbon tetrachloride	1600	D B
71-43-2	Benzene	55	U
107-06-2	1,2-Dichloroethane	55	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGGW3-W-30300DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA14.D

Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 110.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	55	U
108-87-2	Methylcyclohexane	55	U
78-87-5	1,2-Dichloropropane	55	U
75-27-4	Bromodichloromethane	55	U
10061-01-5	cis-1,3-Dichloropropene	55	U
108-10-1	4-Methyl-2-pentanone	550	U
108-88-3	Toluene	0.67	J D
10061-02-6	trans-1,3-Dichloropropene	55	U
79-00-5	1,1,2-Trichloroethane	55	U
127-18-4	Tetrachloroethene	55	U
591-78-6	2-Hexanone	550	U
124-48-1	Dibromochloromethane	55	U
106-93-4	1,2-Dibromoethane	55	U
108-90-7	Chlorobenzene	55	U
100-41-4	Ethylbenzene	55	U
95-47-6	o-Xylene	55	U
179601-23-1	m,p-Xylene	55	U
100-42-5	Styrene	55	U
75-25-2	Bromoform	55	U
98-82-8	Isopropylbenzene	55	U
79-34-5	1,1,2,2-Tetrachloroethane	55	U
541-73-1	1,3-Dichlorobenzene	55	U
106-46-7	1,4-Dichlorobenzene	55	U
95-50-1	1,2-Dichlorobenzene	55	U
96-12-8	1,2-Dibromo-3-Chloropropane	55	U
120-82-1	1,2,4-Trichlorobenzene	55	U
87-61-6	1,2,3-Trichlorobenzene	55	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGGW3-W-30300DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA14.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 110.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	340	B X D J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGMWC-W-30285

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA07.D

Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.18	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.034	J B
1634-04-4	Methyl tert-butyl ether	0.033	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.16	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGMWC-W-30285

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-3
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA07.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.018	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.040	J
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.025	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGMWC-W-30285

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA07.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.5	B X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGMWP-W-30290

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-1
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA11.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.5
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.75	U
74-87-3	Chloromethane	0.75	U
75-01-4	Vinyl chloride	0.75	U
74-83-9	Bromomethane	0.75	U
75-00-3	Chloroethane	0.75	U
75-69-4	Trichlorofluoromethane	0.75	U
75-35-4	1,1-Dichloroethene	0.75	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.75	U
67-64-1	Acetone	7.5	U
75-15-0	Carbon disulfide	0.20	J B
79-20-9	Methyl acetate	0.75	U
75-09-2	Methylene Chloride	0.75	U
156-60-5	trans-1,2-Dichloroethene	0.75	U
1634-04-4	Methyl tert-butyl ether	0.053	J B
75-34-3	1,1-Dichloroethane	0.75	U
156-59-2	cis-1,2-Dichloroethene	0.75	U
78-93-3	2-Butanone	7.5	U
74-97-5	Bromochloromethane	0.75	U
67-66-3	Chloroform	6.1	B
71-55-6	1,1,1-Trichloroethane	0.75	U
110-82-7	Cyclohexane	0.75	U
56-23-5	Carbon tetrachloride	250	E B
71-43-2	Benzene	0.75	U
107-06-2	1,2-Dichloroethane	0.75	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

AGMWP-W-30290

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA11.D

Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.5

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.75	U
108-87-2	Methylcyclohexane	0.75	U
78-87-5	1,2-Dichloropropane	0.75	U
75-27-4	Bromodichloromethane	0.75	U
10061-01-5	cis-1,3-Dichloropropene	0.75	U
108-10-1	4-Methyl-2-pentanone	7.5	U
108-88-3	Toluene	0.75	U
10061-02-6	trans-1,3-Dichloropropene	0.75	U
79-00-5	1,1,2-Trichloroethane	0.75	U
127-18-4	Tetrachloroethene	0.75	U
591-78-6	2-Hexanone	7.5	U
124-48-1	Dibromochloromethane	0.75	U
106-93-4	1,2-Dibromoethane	0.75	U
108-90-7	Chlorobenzene	0.75	U
100-41-4	Ethylbenzene	0.75	U
95-47-6	o-Xylene	0.75	U
179601-23-1	m,p-Xylene	0.75	U
100-42-5	Styrene	0.75	U
75-25-2	Bromoform	0.75	U
98-82-8	Isopropylbenzene	0.75	U
79-34-5	1,1,2,2-Tetrachloroethane	0.75	U
541-73-1	1,3-Dichlorobenzene	0.75	U
106-46-7	1,4-Dichlorobenzene	0.75	U
95-50-1	1,2-Dichlorobenzene	0.75	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.75	U
120-82-1	1,2,4-Trichlorobenzene	0.75	U
87-61-6	1,2,3-Trichlorobenzene	0.75	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGMWP-W-30290

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA11.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.5

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	5.3	B X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGMWP-W-30290DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-1
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA10.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 14.7
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	7.4	U
74-87-3	Chloromethane	7.4	U
75-01-4	Vinyl chloride	7.4	U
74-83-9	Bromomethane	7.4	U
75-00-3	Chloroethane	7.4	U
75-69-4	Trichlorofluoromethane	7.4	U
75-35-4	1,1-Dichloroethene	7.4	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.4	U
67-64-1	Acetone	74	U
75-15-0	Carbon disulfide	1.6	J D B
79-20-9	Methyl acetate	7.4	U
75-09-2	Methylene Chloride	7.4	U
156-60-5	trans-1,2-Dichloroethene	7.4	U
1634-04-4	Methyl tert-butyl ether	7.4	U
75-34-3	1,1-Dichloroethane	7.4	U
156-59-2	cis-1,2-Dichloroethene	7.4	U
78-93-3	2-Butanone	74	U
74-97-5	Bromochloromethane	7.4	U
67-66-3	Chloroform	7.3	J D B
71-55-6	1,1,1-Trichloroethane	7.4	U
110-82-7	Cyclohexane	7.4	U
56-23-5	Carbon tetrachloride	240	D B
71-43-2	Benzene	7.4	U
107-06-2	1,2-Dichloroethane	7.4	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGMWP-W-30290DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-1
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA10.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 14.7
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	7.4	U
108-87-2	Methylcyclohexane	7.4	U
78-87-5	1,2-Dichloropropane	7.4	U
75-27-4	Bromodichloromethane	7.4	U
10061-01-5	cis-1,3-Dichloropropene	7.4	U
108-10-1	4-Methyl-2-pentanone	74	U
108-88-3	Toluene	7.4	U
10061-02-6	trans-1,3-Dichloropropene	7.4	U
79-00-5	1,1,2-Trichloroethane	7.4	U
127-18-4	Tetrachloroethene	7.4	U
591-78-6	2-Hexanone	74	U
124-48-1	Dibromochloromethane	7.4	U
106-93-4	1,2-Dibromoethane	7.4	U
108-90-7	Chlorobenzene	7.4	U
100-41-4	Ethylbenzene	7.4	U
95-47-6	o-Xylene	7.4	U
179601-23-1	m,p-Xylene	7.4	U
100-42-5	Styrene	7.4	U
75-25-2	Bromoform	7.4	U
98-82-8	Isopropylbenzene	7.4	U
79-34-5	1,1,2,2-Tetrachloroethane	7.4	U
541-73-1	1,3-Dichlorobenzene	7.4	U
106-46-7	1,4-Dichlorobenzene	7.4	U
95-50-1	1,2-Dichlorobenzene	7.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	7.4	U
120-82-1	1,2,4-Trichlorobenzene	7.4	U
87-61-6	1,2,3-Trichlorobenzene	7.4	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGMWP-W-30290DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA10.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 14.7

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	51	B X D J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGPWS4-W-30296

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-4
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA08.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.12	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.034	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.95	B
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	26	E B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGPWS4-W-30296

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-4
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA08.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.015	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGPWS4-W-30296

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA08.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.7	B X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGPWS4-W-30296DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-4
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA13.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 2.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	1.0	U
79-20-9	Methyl acetate	1.0	U
75-09-2	Methylene Chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	0.049	J D B
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	10	U
74-97-5	Bromochloromethane	1.0	U
67-66-3	Chloroform	0.79	J D B
71-55-6	1,1,1-Trichloroethane	1.0	U
110-82-7	Cyclohexane	1.0	U
56-23-5	Carbon tetrachloride	24	D B
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGPWS4-W-30296DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA13.D

Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 2.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	1.0	U
108-87-2	Methylcyclohexane	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
95-47-6	o-Xylene	1.0	U
179601-23-1	m,p-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGPWS4-W-30296DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA13.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 2.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	5.8	B X D J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGQCTB-W-30315

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-5
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA17.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.8	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.064	J B
71-43-2	Benzene	0.010	J
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
AGQCTB-W-30315

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-5
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA17.D
Level: (TRACE/LOW/MED) TRACE Date Received: 06/08/2011
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.023	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.026	J
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
AGQCTB-W-30315

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-5

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA17.D

Level: (TRACE or LOW/MED) TRACE Date Received: 06/08/2011

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	2.9	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	0.51	J N
03	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

6A - FORM VI VOA-1
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date(s): 06/02/2011 06/02/2011

Heated Purge: (Y/N) N Calibration Time(s): 1121 1301

Purge Volume: 25.0 (mL)

GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: RRF0.5 = JCW05.D RRF1.0 = JCW06.D

RRF5.0 = JCW07.D RRF10 = JCW08.D RRF20 = JCW09.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.532	0.545	0.577	0.623	0.614	0.578	7.0
Chloromethane	0.327	0.309	0.308	0.327	0.316	0.318	2.9
Vinyl chloride	0.355	0.326	0.328	0.352	0.350	0.342	4.1
Bromomethane	0.252	0.209	0.208	0.214	0.203	0.217	9.1
Chloroethane	0.190	0.148	0.183	0.196	0.186	0.181	10.6
Trichlorofluoromethane	0.709	0.602	0.625	0.680	0.664	0.656	6.6
1,1-Dichloroethene	0.272	0.226	0.263	0.282	0.269	0.262	8.2
1,1,2-Trichloro-1,2,2-trifluoroethane	0.338	0.308	0.305	0.331	0.319	0.320	4.5
Acetone	0.034	0.024	0.016	0.016	0.016	0.021	37.2
Carbon disulfide	1.140	0.766	0.694	0.735	0.662	0.799	24.3
Methyl acetate	0.048	0.039	0.047	0.047	0.036	0.044	12.6
Methylene Chloride	0.250	0.258	0.261	0.277	0.223	0.254	7.8
trans-1,2-Dichloroethene	0.348	0.339	0.332	0.356	0.295	0.334	7.0
Methyl tert-butyl ether	0.438	0.420	0.452	0.469	0.420	0.440	4.8
1,1-Dichloroethane	0.504	0.486	0.503	0.476	0.461	0.486	3.8
cis-1,2-Dichloroethene	0.317	0.317	0.283	0.296	0.296	0.302	4.9
2-Butanone	0.020	0.022	0.022	0.022	0.024	0.022	5.9
Bromochloromethane	0.116	0.124	0.108	0.111	0.109	0.114	5.9
Chloroform	0.567	0.544	0.505	0.527	0.529	0.534	4.3
1,1,1-Trichloroethane	0.753	0.772	0.632	0.632	0.620	0.682	10.9
Cyclohexane	0.549	0.670	0.469	0.460	0.466	0.523	17.3
Carbon tetrachloride	0.718	0.745	0.606	0.611	0.607	0.657	10.4
Benzene	1.403	1.615	1.234	1.224	1.210	1.337	13.0
1,2-Dichloroethane	0.244	0.261	0.256	0.256	0.268	0.257	3.4
Trichloroethene	0.417	0.465	0.407	0.349	0.395	0.407	10.3
Methylcyclohexane	0.438	0.484	0.453	0.380	0.452	0.441	8.7

Report 1,4-Dioxane for Low-Medium VOA analysis only

6B - FORM VI VOA-2
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date(s): 06/02/2011 06/02/2011

Heated Purge: (Y/N) N Calibration Time(s): 1121 1301

Purge Volume: 25.0 (mL)

GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: RRF0.5 = JCW05.D RRF1.0 = JCW06.D

RRF5.0 = JCW07.D RRF10 = JCW08.D RRF20 = JCW09.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
1,2-Dichloropropane	0.257	0.299	0.291	0.222	0.286	0.271	11.7
Bromodichloromethane	0.406	0.429	0.400	0.341	0.400	0.395	8.2
cis-1,3-Dichloropropene	0.407	0.452	0.450	0.396	0.478	0.437	7.8
4-Methyl-2-pentanone	0.062	0.083	0.075	0.060	0.076	0.071	13.7
Toluene	1.525	1.620	1.594	1.587	1.638	1.593	2.7
trans-1,3-Dichloropropene	0.293	0.358	0.347	0.341	0.329	0.334	7.5
1,1,2-Trichloroethane	0.188	0.187	0.172	0.161	0.178	0.177	6.4
Tetrachloroethene	0.360	0.398	0.303	0.364	0.373	0.360	9.7
2-Hexanone	0.042	0.049	0.040	0.050	0.050	0.046	10.4
Dibromochloromethane	0.254	0.253	0.217	0.250	0.255	0.246	6.6
1,2-Dibromoethane	0.142	0.169	0.138	0.157	0.160	0.153	8.6
Chlorobenzene	1.026	1.082	0.997	1.035	1.005	1.029	3.3
Ethylbenzene	1.781	1.894	1.834	1.852	1.964	1.865	3.7
o-Xylene	0.659	0.740	0.706	0.735	0.695	0.707	4.6
m,p-Xylene	0.716	0.754	0.757	0.773	0.786	0.757	3.5
Styrene	0.913	1.081	1.091	1.121	1.077	1.057	7.8
Bromoform	0.229	0.241	0.222	0.233	0.243	0.234	3.6
Isopropylbenzene	1.719	2.038	1.897	1.948	2.017	1.924	6.6
1,1,2,2-Tetrachloroethane	0.140	0.148	0.129	0.138	0.145	0.140	5.2
1,3-Dichlorobenzene	1.567	1.698	1.572	1.602	1.562	1.600	3.6
1,4-Dichlorobenzene	1.692	1.698	1.428	1.583	1.526	1.585	7.2
1,2-Dichlorobenzene	1.273	1.297	1.123	1.315	1.079	1.217	8.9
1,2-Dibromo-3-Chloropropane	0.035	0.042	0.044	0.043	0.045	0.042	8.7
1,2,4-Trichlorobenzene	0.841	0.781	0.814	0.806	0.709	0.790	6.4
1,2,3-Trichlorobenzene	0.611	0.542	0.559	0.562	0.517	0.558	6.1

6C - FORM VI VOA-3
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date(s): 06/02/2011 06/02/2011

Heated Purge: (Y/N) N Calibration Time(s): 1121 1301

Purge Volume: 25.0 (mL)

GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: RRF0.5 = JCW05.D RRF1.0 = JCW06.D

RRF5.0 = JCW07.D RRF10 = JCW08.D RRF20 = JCW09.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Vinyl Chloride-d3	0.324	0.263	0.270	0.281	0.279	0.283	8.4
Chloroethane-d5	0.244	0.205	0.214	0.222	0.218	0.221	6.5
1,1-Dichloroethene-d2	0.625	0.521	0.536	0.595	0.569	0.569	7.4
2-Butanone-d5	0.022	0.024	0.020	0.021	0.021	0.022	6.5
Chloroform-d	0.614	0.566	0.530	0.549	0.544	0.561	5.8
1,2-Dichloroethane-d4	0.237	0.197	0.203	0.211	0.213	0.212	7.2
Benzene-d6	1.415	1.601	1.208	1.169	1.197	1.318	14.1
1,2-Dichloropropane-d6	0.385	0.437	0.387	0.298	0.317	0.365	15.6
Toluene-d8	1.356	1.646	1.377	1.289	1.370	1.408	9.8
trans-1,3-Dichloropropene-d4	0.315	0.319	0.316	0.307	0.314	0.314	1.3
2-Hexanone-d5	0.026	0.028	0.022	0.028	0.028	0.027	9.9
1,1,2,2-Tetrachloroethane-d2	0.140	0.160	0.123	0.139	0.153	0.143	10.0
1,2-Dichlorobenzene-d4	0.888	0.860	0.697	0.804	0.663	0.782	12.7

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

7A - FORM VII VOA-1
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/08/2011 Time: 1321

Lab File Id: JCWA03.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005JI Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.578	0.524	0.010	-9.4	40.0
Chloromethane	0.318	0.289	0.010	-9.1	40.0
Vinyl chloride	0.342	0.303	0.010	-11.4	30.0
Bromomethane	0.217	0.194	0.100	-10.8	30.0
Chloroethane	0.181	0.178	0.010	-1.4	40.0
Trichlorofluoromethane	0.656	0.578	0.010	-11.8	40.0
1,1-Dichloroethene	0.262	0.250	0.100	-4.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.320	0.290	0.010	-9.4	40.0
Acetone	0.021	0.013	0.010	-37.3	40.0
Carbon disulfide	0.799	0.755	0.010	-5.5	40.0
Methyl acetate	0.044	0.043	0.010	-1.5	40.0
Methylene Chloride	0.254	0.249	0.010	-1.9	40.0
trans-1,2-Dichloroethene	0.334	0.337	0.010	0.9	40.0
Methyl tert-butyl ether	0.440	0.404	0.010	-8.0	40.0
1,1-Dichloroethane	0.486	0.526	0.200	8.2	30.0
cis-1,2-Dichloroethene	0.302	0.324	0.010	7.3	40.0
2-Butanone	0.022	0.024	0.010	9.2	40.0
Bromochloromethane	0.114	0.116	0.050	2.1	30.0
Chloroform	0.534	0.541	0.200	1.3	30.0
1,1,1-Trichloroethane	0.682	0.721	0.100	5.7	30.0
Cyclohexane	0.523	0.646	0.010	23.6	40.0
Carbon tetrachloride	0.657	0.687	0.100	4.5	30.0
Benzene	1.337	1.566	0.400	17.1	30.0
1,2-Dichloroethane	0.257	0.241	0.100	-6.4	30.0
Trichloroethene	0.407	0.435	0.300	6.9	30.0
Methylcyclohexane	0.441	0.497	0.010	12.6	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/08/2011 Time: 1321

Lab File Id: JCWA03.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005JI Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.271	0.302	0.010	11.7	40.0
Bromodichloromethane	0.395	0.388	0.200	-1.8	30.0
cis-1,3-Dichloropropene	0.437	0.470	0.200	7.6	30.0
4-Methyl-2-pentanone	0.071	0.073	0.010	3.1	40.0
Toluene	1.593	1.722	0.400	8.1	30.0
trans-1,3-Dichloropropene	0.334	0.343	0.100	2.7	30.0
1,1,2-Trichloroethane	0.177	0.163	0.100	-8.2	30.0
Tetrachloroethene	0.360	0.395	0.100	9.9	30.0
2-Hexanone	0.046	0.047	0.010	2.4	40.0
Dibromochloromethane	0.246	0.252	0.100	2.6	30.0
1,2-Dibromoethane	0.153	0.160	0.010	4.4	40.0
Chlorobenzene	1.029	1.049	0.500	2.0	30.0
Ethylbenzene	1.865	1.950	0.100	4.6	30.0
o-Xylene	0.707	0.713	0.300	0.9	30.0
m,p-Xylene	0.757	0.780	0.300	3.1	30.0
Styrene	1.057	1.099	0.300	4.0	30.0
Bromoform	0.234	0.239	0.050	2.3	30.0
Isopropylbenzene	1.924	2.053	0.010	6.7	40.0
1,1,2,2-Tetrachloroethane	0.140	0.127	0.100	-9.5	30.0
1,3-Dichlorobenzene	1.600	1.666	0.400	4.1	30.0
1,4-Dichlorobenzene	1.585	1.600	0.400	1.0	30.0
1,2-Dichlorobenzene	1.217	1.167	0.400	-4.2	30.0
1,2-Dibromo-3-Chloropropane	0.042	0.043	0.010	2.9	40.0
1,2,4-Trichlorobenzene	0.790	0.796	0.200	0.8	30.0
1,2,3-Trichlorobenzene	0.558	0.548	0.200	-1.9	30.0

7C - FORM VII VOA-3
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/08/2011 Time: 1321

Lab File Id: JCWA03.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005JI Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.283	0.250	0.010	-11.9	30.0
Chloroethane-d5	0.221	0.197	0.010	-10.4	40.0
1,1-Dichloroethene-d2	0.569	0.513	0.010	-9.9	30.0
2-Butanone-d5	0.022	0.021	0.010	-2.1	40.0
Chloroform-d	0.561	0.576	0.010	2.7	30.0
1,2-Dichloroethane-d4	0.212	0.193	0.010	-9.1	30.0
Benzene-d6	1.318	1.528	0.010	15.9	30.0
1,2-Dichloropropane-d6	0.365	0.400	0.010	9.7	40.0
Toluene-d8	1.408	1.486	0.010	5.6	30.0
trans-1,3-Dichloropropene-d4	0.314	0.302	0.010	-3.9	30.0
2-Hexanone-d5	0.027	0.026	0.010	-0.4	40.0
1,1,2,2-Tetrachloroethane-d2	0.143	0.137	0.010	-4.3	30.0
1,2-Dichlorobenzene-d4	0.782	0.714	0.010	-8.7	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/08/2011 Time: 2053

Lab File Id: JCWA19.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005IJ Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.578	0.522	0.010	-9.7	50.0
Chloromethane	0.318	0.275	0.010	-13.5	50.0
Vinyl chloride	0.342	0.302	0.010	-11.7	50.0
Bromomethane	0.217	0.191	0.010	-11.8	50.0
Chloroethane	0.181	0.178	0.010	-1.6	50.0
Trichlorofluoromethane	0.656	0.637	0.010	-2.8	50.0
1,1-Dichloroethene	0.262	0.251	0.010	-4.1	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.320	0.310	0.010	-3.3	50.0
Acetone	0.021	0.016	0.010	-26.6	50.0
Carbon disulfide	0.799	0.661	0.010	-17.3	50.0
Methyl acetate	0.044	0.033	0.010	-24.2	50.0
Methylene Chloride	0.254	0.222	0.010	-12.8	50.0
trans-1,2-Dichloroethene	0.334	0.291	0.010	-12.9	50.0
Methyl tert-butyl ether	0.440	0.408	0.010	-7.2	50.0
1,1-Dichloroethane	0.486	0.438	0.010	-9.8	50.0
cis-1,2-Dichloroethene	0.302	0.289	0.010	-4.1	50.0
2-Butanone	0.022	0.022	0.010	-0.6	50.0
Bromochloromethane	0.114	0.111	0.010	-2.6	50.0
Chloroform	0.534	0.517	0.010	-3.3	50.0
1,1,1-Trichloroethane	0.682	0.724	0.010	6.1	50.0
Cyclohexane	0.523	0.492	0.010	-5.8	50.0
Carbon tetrachloride	0.657	0.708	0.010	7.8	50.0
Benzene	1.337	1.335	0.010	-0.1	50.0
1,2-Dichloroethane	0.257	0.261	0.010	1.4	50.0
Trichloroethene	0.407	0.384	0.010	-5.6	50.0
Methylcyclohexane	0.441	0.400	0.010	-9.4	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/08/2011 Time: 2053

Lab File Id: JCWA19.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005IJ Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.271	0.236	0.010	-13.0	50.0
Bromodichloromethane	0.395	0.378	0.010	-4.4	50.0
cis-1,3-Dichloropropene	0.437	0.411	0.010	-5.8	50.0
4-Methyl-2-pentanone	0.071	0.067	0.010	-5.4	50.0
Toluene	1.593	1.524	0.010	-4.3	50.0
trans-1,3-Dichloropropene	0.334	0.328	0.010	-1.7	50.0
1,1,2-Trichloroethane	0.177	0.158	0.010	-11.1	50.0
Tetrachloroethene	0.360	0.369	0.010	2.6	50.0
2-Hexanone	0.046	0.044	0.010	-5.2	50.0
Dibromochloromethane	0.246	0.256	0.010	4.1	50.0
1,2-Dibromoethane	0.153	0.148	0.010	-3.5	50.0
Chlorobenzene	1.029	0.971	0.010	-5.6	50.0
Ethylbenzene	1.865	1.762	0.010	-5.5	50.0
o-Xylene	0.707	0.677	0.010	-4.3	50.0
m,p-Xylene	0.757	0.728	0.010	-3.9	50.0
Styrene	1.057	1.032	0.010	-2.4	50.0
Bromoform	0.234	0.248	0.010	6.1	50.0
Isopropylbenzene	1.924	1.864	0.010	-3.1	50.0
1,1,2,2-Tetrachloroethane	0.140	0.130	0.010	-7.3	50.0
1,3-Dichlorobenzene	1.600	1.541	0.010	-3.7	50.0
1,4-Dichlorobenzene	1.585	1.497	0.010	-5.5	50.0
1,2-Dichlorobenzene	1.217	1.232	0.010	1.2	50.0
1,2-Dibromo-3-Chloropropane	0.042	0.045	0.010	7.4	50.0
1,2,4-Trichlorobenzene	0.790	0.767	0.010	-3.0	50.0
1,2,3-Trichlorobenzene	0.558	0.554	0.010	-0.8	50.0

7C - FORM VII VOA-3
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/08/2011 Time: 2053

Lab File Id: JCWA19.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005IJ Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.283	0.250	0.010	-11.9	50.0
Chloroethane-d5	0.221	0.196	0.010	-11.2	50.0
1,1-Dichloroethene-d2	0.569	0.535	0.010	-6.0	50.0
2-Butanone-d5	0.022	0.019	0.010	-12.3	50.0
Chloroform-d	0.561	0.548	0.010	-2.2	50.0
1,2-Dichloroethane-d4	0.212	0.211	0.010	-0.3	50.0
Benzene-d6	1.318	1.312	0.010	-0.5	50.0
1,2-Dichloropropane-d6	0.365	0.283	0.010	-22.5	50.0
Toluene-d8	1.408	1.319	0.010	-6.3	50.0
trans-1,3-Dichloropropene-d4	0.314	0.303	0.010	-3.4	50.0
2-Hexanone-d5	0.027	0.025	0.010	-7.0	50.0
1,1,2,2-Tetrachloroethane-d2	0.143	0.129	0.010	-9.7	50.0
1,2-Dichlorobenzene-d4	0.782	0.793	0.010	1.4	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/10/2011 Time: 1012

Lab File Id: JCWB02.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005JK Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.578	0.578	0.010	0.0	40.0
Chloromethane	0.318	0.295	0.010	-7.2	40.0
Vinyl chloride	0.342	0.321	0.010	-6.3	30.0
Bromomethane	0.217	0.210	0.100	-3.4	30.0
Chloroethane	0.181	0.179	0.010	-0.9	40.0
Trichlorofluoromethane	0.656	0.698	0.010	6.5	40.0
1,1-Dichloroethene	0.262	0.268	0.100	2.0	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.320	0.320	0.010	0.1	40.0
Acetone	0.021	0.017	0.010	-21.2	40.0
Carbon disulfide	0.799	0.712	0.010	-10.9	40.0
Methyl acetate	0.044	0.032	0.010	-25.6	40.0
Methylene Chloride	0.254	0.225	0.010	-11.3	40.0
trans-1,2-Dichloroethene	0.334	0.296	0.010	-11.4	40.0
Methyl tert-butyl ether	0.440	0.426	0.010	-3.0	40.0
1,1-Dichloroethane	0.486	0.467	0.200	-4.0	30.0
cis-1,2-Dichloroethene	0.302	0.308	0.010	2.0	40.0
2-Butanone	0.022	0.023	0.010	4.4	40.0
Bromochloromethane	0.114	0.115	0.050	0.7	30.0
Chloroform	0.534	0.548	0.200	2.6	30.0
1,1,1-Trichloroethane	0.682	0.741	0.100	8.6	30.0
Cyclohexane	0.523	0.515	0.010	-1.5	40.0
Carbon tetrachloride	0.657	0.747	0.100	13.6	30.0
Benzene	1.337	1.375	0.400	2.8	30.0
1,2-Dichloroethane	0.257	0.278	0.100	8.0	30.0
Trichloroethene	0.407	0.403	0.300	-0.9	30.0
Methylcyclohexane	0.441	0.409	0.010	-7.4	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/10/2011 Time: 1012

Lab File Id: JCWB02.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005JK Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.271	0.250	0.010	-7.6	40.0
Bromodichloromethane	0.395	0.399	0.200	0.9	30.0
cis-1,3-Dichloropropene	0.437	0.451	0.200	3.2	30.0
4-Methyl-2-pentanone	0.071	0.064	0.010	-10.5	40.0
Toluene	1.593	1.562	0.400	-1.9	30.0
trans-1,3-Dichloropropene	0.334	0.343	0.100	2.9	30.0
1,1,2-Trichloroethane	0.177	0.170	0.100	-4.3	30.0
Tetrachloroethene	0.360	0.370	0.100	3.0	30.0
2-Hexanone	0.046	0.042	0.010	-8.6	40.0
Dibromochloromethane	0.246	0.259	0.100	5.5	30.0
1,2-Dibromoethane	0.153	0.153	0.010	-0.1	40.0
Chlorobenzene	1.029	0.990	0.500	-3.7	30.0
Ethylbenzene	1.865	1.797	0.100	-3.6	30.0
o-Xylene	0.707	0.675	0.300	-4.6	30.0
m,p-Xylene	0.757	0.734	0.300	-3.1	30.0
Styrene	1.057	1.048	0.300	-0.8	30.0
Bromoform	0.234	0.248	0.050	6.1	30.0
Isopropylbenzene	1.924	1.936	0.010	0.6	40.0
1,1,2,2-Tetrachloroethane	0.140	0.128	0.100	-8.5	30.0
1,3-Dichlorobenzene	1.600	1.616	0.400	1.0	30.0
1,4-Dichlorobenzene	1.585	1.567	0.400	-1.2	30.0
1,2-Dichlorobenzene	1.217	1.300	0.400	6.8	30.0
1,2-Dibromo-3-Chloropropane	0.042	0.044	0.010	4.9	40.0
1,2,4-Trichlorobenzene	0.790	0.788	0.200	-0.3	30.0
1,2,3-Trichlorobenzene	0.558	0.574	0.200	2.7	30.0

7C - FORM VII VOA-3
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/10/2011 Time: 1012

Lab File Id: JCWB02.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005JK Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.283	0.268	0.010	-5.5	30.0
Chloroethane-d5	0.221	0.208	0.010	-5.8	40.0
1,1-Dichloroethene-d2	0.569	0.560	0.010	-1.7	30.0
2-Butanone-d5	0.022	0.020	0.010	-6.0	40.0
Chloroform-d	0.561	0.580	0.010	3.5	30.0
1,2-Dichloroethane-d4	0.212	0.214	0.010	1.1	30.0
Benzene-d6	1.318	1.355	0.010	2.8	30.0
1,2-Dichloropropane-d6	0.365	0.337	0.010	-7.6	40.0
Toluene-d8	1.408	1.376	0.010	-2.3	30.0
trans-1,3-Dichloropropene-d4	0.314	0.304	0.010	-3.1	30.0
2-Hexanone-d5	0.027	0.025	0.010	-6.7	40.0
1,1,2,2-Tetrachloroethane-d2	0.143	0.131	0.010	-8.3	30.0
1,2-Dichlorobenzene-d4	0.782	0.784	0.010	0.2	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/10/2011 Time: 1152

Lab File Id: JCWB05.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005KJ Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.578	0.536	0.010	-7.3	50.0
Chloromethane	0.318	0.263	0.010	-17.1	50.0
Vinyl chloride	0.342	0.301	0.010	-11.9	50.0
Bromomethane	0.217	0.192	0.010	-11.6	50.0
Chloroethane	0.181	0.172	0.010	-4.9	50.0
Trichlorofluoromethane	0.656	0.665	0.010	1.3	50.0
1,1-Dichloroethene	0.262	0.257	0.010	-2.2	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.320	0.309	0.010	-3.6	50.0
Acetone	0.021	0.015	0.010	-31.2	50.0
Carbon disulfide	0.799	0.704	0.010	-11.9	50.0
Methyl acetate	0.044	0.038	0.010	-13.5	50.0
Methylene Chloride	0.254	0.241	0.010	-5.2	50.0
trans-1,2-Dichloroethene	0.334	0.329	0.010	-1.6	50.0
Methyl tert-butyl ether	0.440	0.426	0.010	-3.2	50.0
1,1-Dichloroethane	0.486	0.476	0.010	-2.1	50.0
cis-1,2-Dichloroethene	0.302	0.324	0.010	7.5	50.0
2-Butanone	0.022	0.024	0.010	7.4	50.0
Bromochloromethane	0.114	0.122	0.010	6.9	50.0
Chloroform	0.534	0.528	0.010	-1.2	50.0
1,1,1-Trichloroethane	0.682	0.722	0.010	6.0	50.0
Cyclohexane	0.523	0.527	0.010	0.9	50.0
Carbon tetrachloride	0.657	0.710	0.010	7.9	50.0
Benzene	1.337	1.413	0.010	5.7	50.0
1,2-Dichloroethane	0.257	0.267	0.010	3.8	50.0
Trichloroethene	0.407	0.398	0.010	-2.1	50.0
Methylcyclohexane	0.441	0.442	0.010	0.2	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/10/2011 Time: 1152

Lab File Id: JCWB05.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005KJ Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.271	0.262	0.010	-3.3	50.0
Bromodichloromethane	0.395	0.388	0.010	-1.7	50.0
cis-1,3-Dichloropropene	0.437	0.464	0.010	6.3	50.0
4-Methyl-2-pentanone	0.071	0.067	0.010	-6.1	50.0
Toluene	1.593	1.626	0.010	2.1	50.0
trans-1,3-Dichloropropene	0.334	0.350	0.010	4.9	50.0
1,1,2-Trichloroethane	0.177	0.170	0.010	-4.4	50.0
Tetrachloroethene	0.360	0.383	0.010	6.6	50.0
2-Hexanone	0.046	0.047	0.010	1.4	50.0
Dibromochloromethane	0.246	0.253	0.010	3.1	50.0
1,2-Dibromoethane	0.153	0.156	0.010	1.6	50.0
Chlorobenzene	1.029	1.014	0.010	-1.5	50.0
Ethylbenzene	1.865	1.865	0.010	0.0	50.0
o-Xylene	0.707	0.696	0.010	-1.6	50.0
m,p-Xylene	0.757	0.745	0.010	-1.6	50.0
Styrene	1.057	1.069	0.010	1.1	50.0
Bromoform	0.234	0.249	0.010	6.6	50.0
Isopropylbenzene	1.924	1.970	0.010	2.4	50.0
1,1,2,2-Tetrachloroethane	0.140	0.132	0.010	-6.0	50.0
1,3-Dichlorobenzene	1.600	1.625	0.010	1.5	50.0
1,4-Dichlorobenzene	1.585	1.536	0.010	-3.1	50.0
1,2-Dichlorobenzene	1.217	1.291	0.010	6.0	50.0
1,2-Dibromo-3-Chloropropane	0.042	0.046	0.010	10.1	50.0
1,2,4-Trichlorobenzene	0.790	0.737	0.010	-6.8	50.0
1,2,3-Trichlorobenzene	0.558	0.555	0.010	-0.6	50.0

7C - FORM VII VOA-3
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Instrument ID: J.i Calibration Date: 06/10/2011 Time: 1152

Lab File Id: JCWB05.D Init. Calib. Date(s): 06/02/2011 06/02/2011

EPA Sample No.(VSTD####): VSTD005KJ Init. Calib. Time(s): 1121 1301

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.283	0.246	0.010	-13.3	50.0
Chloroethane-d5	0.221	0.197	0.010	-10.5	50.0
1,1-Dichloroethene-d2	0.569	0.528	0.010	-7.3	50.0
2-Butanone-d5	0.022	0.020	0.010	-8.0	50.0
Chloroform-d	0.561	0.569	0.010	1.6	50.0
1,2-Dichloroethane-d4	0.212	0.213	0.010	0.4	50.0
Benzene-d6	1.318	1.396	0.010	6.0	50.0
1,2-Dichloropropane-d6	0.365	0.356	0.010	-2.3	50.0
Toluene-d8	1.408	1.417	0.010	0.7	50.0
trans-1,3-Dichloropropene-d4	0.314	0.311	0.010	-1.0	50.0
2-Hexanone-d5	0.027	0.025	0.010	-4.2	50.0
1,1,2,2-Tetrachloroethane-d2	0.143	0.138	0.010	-3.3	50.0
1,2-Dichlorobenzene-d4	0.782	0.807	0.010	3.2	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19349/6

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA06.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.5	J
75-15-0	Carbon disulfide	0.18	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.040	J
1634-04-4	Methyl tert-butyl ether	0.028	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.017	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.024	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19349/6

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA06.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.029	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19349/6

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA06.D

Level: (TRACE or LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.0	X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19391/3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWB03.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/10/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.23	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.061	J
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.026	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19391/3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWB03.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/10/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19391/3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWB03.D

Level: (TRACE or LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/10/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.5	X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	0.75	J N
03		Unknown siloxane derivative	10.68	0.54	J
04	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-6

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWB04.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/10/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.20	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.041	J B
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-6
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWB04.D
Level: (TRACE/LOW/MED) TRACE Date Received:
% Moisture: not dec. Date Analyzed: 06/10/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5447-6

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWB04.D

Level: (TRACE or LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/10/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	1066-40-6	Silanol, trimethyl-	4.13	0.76	J N
02		Unknown	6.90	3.4	B X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	1.2	B J N
04		Unknown siloxane derivative	10.68	1.0	B J
05	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VIBLKJQ

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/9
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA09.D
Level: (TRACE/LOW/MED) TRACE Date Received:
% Moisture: not dec. Date Analyzed: 06/08/2011
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)
Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.028	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.047	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VIBLKJQ

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/9

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA09.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VIBLKJQ

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/9

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA09.D

Level: (TRACE or LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.1	B X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VIBLKJR

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/12

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA12.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.11	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.029	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.20	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VIBLKJR

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/12

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA12.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJR

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/12

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA12.D

Level: (TRACE or LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.5	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	0.57	J N
03	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VIBLKJS

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/16

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA16.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.19	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VIBLKJS

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/16

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA16.D

Level: (TRACE/LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJS

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: AGRA Mod. Ref No.: SDG No.: 200-5447

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-19349/16

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCWA16.D

Level: (TRACE or LOW/MED) TRACE Date Received:

% Moisture: not dec. Date Analyzed: 06/08/2011

GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.1	B X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

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