ANL/EVS/AGEM/TR-11-11

Annual Report of Groundwater Monitoring at Everest, Kansas, in 2011

Environmental Science Division

United States Department of Agriculture

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

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

December 2011

USDA
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Notation

AGEM	Applied Geosciences and Environmental Management
AMSL	above mean sea level
°C	degree(s) Celsius
CCC	Commodity Credit Corporation
CD	compact disc
COC	chain of custody
DO	dissolved oxygen
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
gpm	gallon(s) per minute
in.	inch(es)
KDHE	Kansas Department of Health and Environment
L	liter(s)
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
µS/cm	microsiemen(s) per centimeter
mg/L	milligram(s) per liter
mi	mile(s)
mL	milliliter(s)
mV	millivolt(s)
ORP	oxidation-reduction potential
TOC	top of casing
USDA	U.S. Department of Agriculture
VOC	volatile organic compound
yr	year(s)

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1 Introduction

Everest, Kansas, is a small rural community (population approximately 300) located in the southeast corner of Brown County, in the northeastern corner of Kansas (Figure 1.1). Everest lies on State Highway 20, approximately 6 mi east of Horton (population 1,885) and 12 mi south of Hiawatha (population 3,603), the county seat. Atchison (population 10,656) is about 23 mi southeast of Everest. Everest is located within Section 29, Township 4 South, Range 18 East, at the approximate latitude 39°40′37″ North and longitude 95°25′20″ West (USGS 1979).

Carbon tetrachloride and chloroform contamination in groundwater at Everest was initially identified in 1997 as a result of testing performed under the Commodity Credit Corporation/U.S. Department of Agriculture (CCC/USDA) private well sampling program conducted by the Kansas Department of Health and Environment (KDHE). The KDHE collected samples from seven private wells in and near Everest. Carbon tetrachloride and chloroform were found in only one of the wells, the Donnie Nigh domestic well (owned at that time by Tim Gale), approximately 3/8 mi northwest of the former Everest CCC/USDA facility. Carbon tetrachloride and chloroform were detected at 121 µg/L and 4 µg/L, respectively. Nitrate was found at 12.62 mg/L. The USDA subsequently connected the Nigh residence to the Everest public water supply system.

Prior to 1986, commercial grain fumigants containing carbon tetrachloride were commonly used by the CCC/USDA, as well as private and commercial grain storage operations, to preserve grain. In 1997-1998, the KDHE (1998a,b) conducted preliminary investigations to determine potential sources of the identified carbon tetrachloride contamination. Potential sources included the former CCC/USDA grain storage facility in the western portion of Everest, Collins Fertilizer and Chemical Company (formerly EDCO Grain, Inc.) in the central portion of town, and a former CCC/USDA grain storage facility located approximately 0.5 mi northeast of town. Historical aerial photos also identified grain storage structures on the Nigh property.

Because the identified carbon tetrachloride contamination could, in part, potentially be linked to historical use of carbon tetrachloride-based fumigants at its former facility, in 2000 the CCC/USDA assumed responsibility for investigation of the carbon tetrachloride contamination at Everest. The CCC/USDA involvement began with development and implementation of a work

plan for a Phase I site characterization (Argonne 2000). That investigation and subsequent investigations (Argonne 2001, 2003, 2006a,d) were performed by the Environmental Science Division of Argonne National Laboratory. The results of the environmental investigations at Everest have been reported in detail previously (Table 1.1).

The key results and findings of prior investigations at Everest indicate the following:

1. Concentrations of carbon tetrachloride and chloroform in both near-surface and subsurface vadose zone soils at the former Everest CCC/USDA facility are below KDHE risk-based screening levels.

2. Analyses of near-surface soil samples and vegetation samples suggest that a source of carbon tetrachloride contamination to the groundwater might be associated with the site of private grain storage bins formerly located on the Nigh property, as identified in historical aerial photos.

3. A groundwater plume of carbon tetrachloride at concentrations in excess of the maximum contaminant level of 5.0 µg/L extends downgradient from the former CCC/USDA facility. Both the monitoring data for carbon tetrachloride and the low groundwater flow rates estimated for the Everest aquifer unit (Argonne 2003, 2006a,d, 2008, 2010a, 2011) indicate slow contaminant migration.

4. Contaminant migration in the aquifer unit occurs via a complex network of generally saturated, discontinuous sandy channels, stringers, and lenses within relatively less permeable and variably saturated sandy clay till.

5. The results of test pumping (< 1.5 gpm sustainable) and hydraulic conductivity estimates obtained from grain size analyses, aquifer pump testing, and slug testing (generally < 3 ft/day) indicate that pumping to actively withdraw groundwater is not viable across most of the contaminant plume. The KDHE concurred that groundwater extraction is not a viable treatment method and encouraged the CCC/USDA to evaluate innovative technologies (KDHE 2006).

6. The contaminant plume will ultimately be discharged to an intermittent stream southwest of the study area, limiting the potential for further westward migration of contaminated groundwater.

7. No current domestic wells are impacted or threatened.

8. The Everest municipal water system supplies drinking water to all residents of the town of Everest and to all private residences outside the city limits that are in the general vicinity of the existing groundwater plume.

9. Results of indoor air sampling in 10 homes in August 2010 indicate no potential threat to human health due to indoor air contaminated as a result of activities at the former CCC/USDA facility.

On the basis of the accumulated findings, in March 2009 the CCC/USDA developed a plan for annual monitoring of the groundwater and surface water (Argonne 2009). Under this plan, approved by the KDHE (2009), monitoring wells are sampled by using the low-flow procedure, and surface water samples are collected at five locations along the intermittent creek. Vegetation sampling is conducted as a secondary indicator of plume migration. Sample preservation, shipping, and analysis activities are consistent with previous work at Everest.

Annual sampling under the monitoring plan occurred previously in 2009 and 2010. The results of these sampling events for volatile organic compounds (VOCs) and water level measurements were consistent with previous observations (Argonne 2003, 2006a,d, 2008). No carbon tetrachloride was detected in surface water of the intermittent creek or in tree branch samples collected at locations along the creek banks. The complete results were reported previously (Argonne 2010a, 2011).

This report presents the results of the third annual sampling event, conducted in 2011. Included in the 2011 monitoring were the following:

- Groundwater sampling on April 27-28, 2011.

- Surface water sampling on April 29, 2011.

- Vegetation sampling on July 29, 2011.

The activities are described in Section 2, and the results are discussed in Section 3. Conclusions and recommendations are presented in Section 4.

TABLE 1.1 Summary of environmental investigation reports at Everest, Kansas.

Report	Reference
KDHE reports	
Site reconnaissance and evaluation for the Everest CCC/USDA site	KDHE 1998a
Site reconnaissance and evaluation for the Everest East CCC/USDA site	KDHE 1998b
CCC/USDA reports	
Work plan for Phase I investigation	Argonne 2000
Phase I report and Phase II work plan	Argonne 2001
Phase II report	Argonne 2003
Scoping memo of options for restoration of the Everest aquifer unit	Argonne 2005
Phase III targeted investigation report	Argonne 2006a
Cross section analysis and recommendations for further studies	Argonne 2006b
Plan for aquifer hydraulic testing and groundwater sampling in January-February 2006	Argonne 2006c
Results of aquifer pumping and groundwater sampling in January-March 2006	Argonne 2006d
Recommendations for new monitoring wells	Argonne 2007a
Recommendations for remedial action	Argonne 2007b
Results of groundwater monitoring in April 2008	Argonne 2008
Monitoring plan	Argonne 2009
Results of groundwater monitoring and vegetation sampling in 2009	Argonne 2010a
Work plan for indoor air sampling	Argonne 2010b
Results of groundwater monitoring in 2010	Argonne 2011

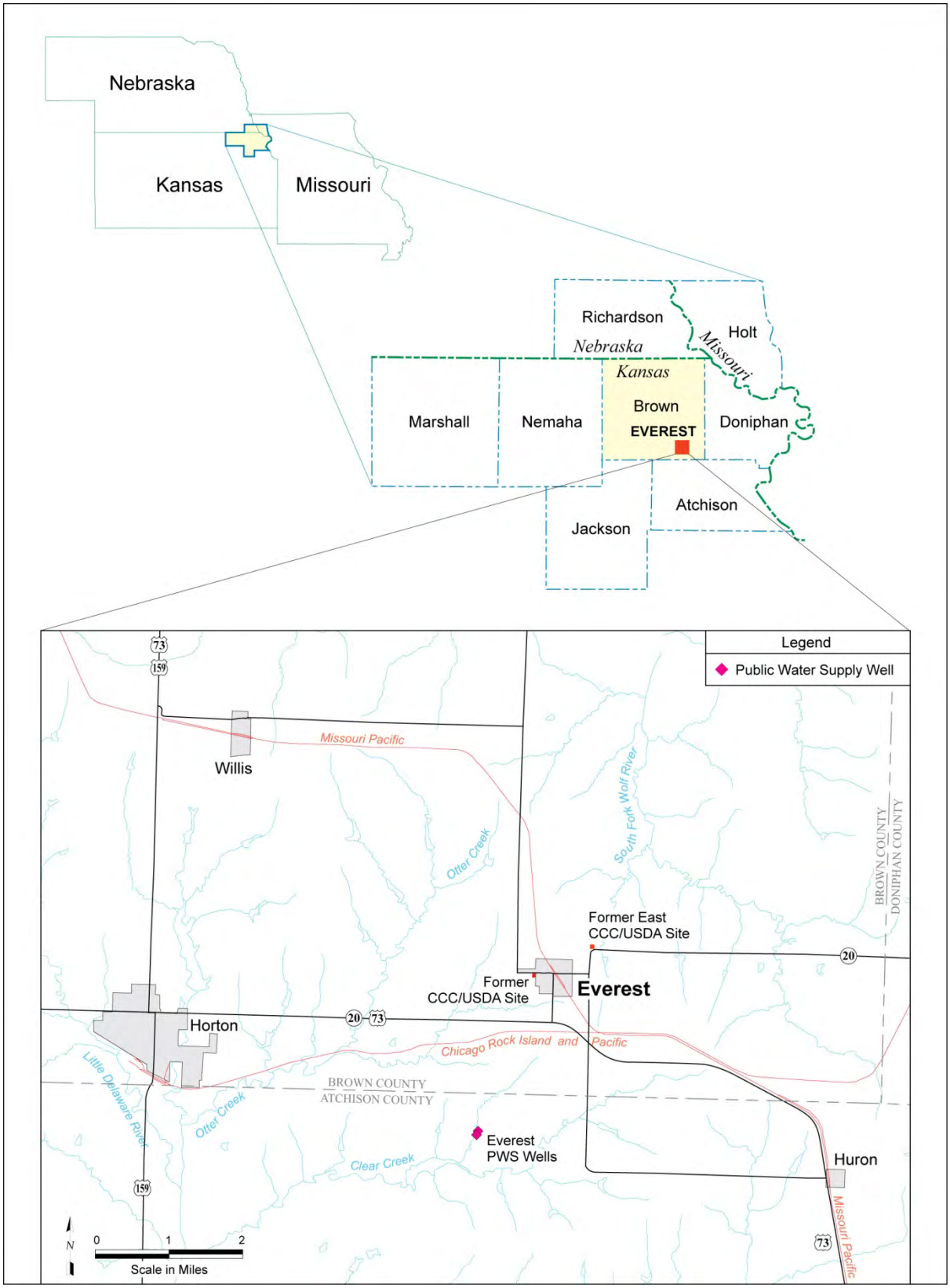


FIGURE 1.1 Location of Everest, Kansas.

2 Sampling and Analysis Activities

2.1 Measurement of Groundwater Levels

Water level sensors incorporating data loggers were used in 2002-2010 for automatic, continuous recording of groundwater levels at numerous locations at the Everest site. Hydrographs generated from the recorder data indicated little net change in the groundwater levels during the period of record. The hydrographs depicted a consistent, seasonal pattern of (1) rising groundwater levels in association with spring and early summer rains, (2) falling groundwater levels during the later summer and early fall, and (3) relatively stable groundwater elevations during the winter and early spring. The accumulated data demonstrated that the relative impact of the spring and early summer recharge events is greatest at the monitored locations in the eastern portion of the study area. This effect decreases progressively in the Everest aquifer unit at locations west of the Nigh property.

The automatic and manual groundwater level measurements made in 2002-2010 demonstrated a consistent groundwater flow pattern, with only transient seasonal variations in the magnitude (but not the direction) of the hydraulic gradients. As a result, the decision was made to suspend automatic water level monitoring at Everest and thereby reduce monitoring costs and effort. After a final data download on October 1, 2010, the recorders were removed from the wells on the same day. Current and future water level determinations are based on hand measurements made at the time of the annual groundwater sampling.

During the present reporting period, manual water level measurements were made in the wells sampled for VOCs during the annual groundwater sampling event on April 27-28, 2011. The manual groundwater level measurements were made by using a water level indicator to determine the depth to groundwater, within 0.01 ft, from the top of the well casing (TOC).

The groundwater level data are presented and discussed in Section 3.1.

2.2 Groundwater and Surface Water Sampling and Analysis

On April 27-28, 2011, groundwater samples were collected for VOCs analyses at 14 locations (MW1-MW4, SB09, SB34, SB49, SB60, SB62-SB64, SB78, SB80, SB88) along

and near the identified contaminant migration pathway (Figure 2.1). Samples were collected from the groundwater monitoring points by using the low-flow procedure. On April 29, 2011, surface water samples were collected for VOCs analyses at 5 locations (Figure 2.2) along the intermittent creek to the west (downgradient) of the identified carbon tetrachloride contamination in groundwater. Surface water samples were collected for VOCs analyses by dipping a laboratory-approved container beneath the ambient water surface at each required sampling location. The sequence of groundwater and surface water sampling activities during the 2011 monitoring event is summarized in Appendix A, Table A.1.

The groundwater and surface water samples were labeled, packaged, and chilled to 4°C by placement in ice-filled coolers. The samples were shipped with overnight delivery to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne for VOCs analyses with U.S. Environmental Protection Agency (EPA) Method 524.2 (EPA 1995). Aliquots of selected samples (chosen in the field) were also shipped directly to TestAmerica Laboratories, Inc., South Burlington, Vermont, for verification VOCs analyses according to EPA Contract Laboratory Program protocols.

The results of the groundwater and surface water analyses are presented in Sections 3.2 and 3.3, respectively.

2.3 Vegetation Sampling and Analysis

Argonne experience has demonstrated that the sampling and analysis (for VOCs) of native vegetation, and particularly tree branch tissues, often provides a sensitive indicator of possible carbon tetrachloride contamination in the surface water or shallow groundwater within the plant rooting zone. Samples of branch tissues from tree species including elm, pin cherry, mulberry, Osage orange, willow, and cottonwood were therefore collected on July 29, 2011, at 17 previously sampled locations (EV004-EV006, EV008A-EV10, EV013, EV016-EV022, and EV024-EV026; Figure 2.3) along the intermittent creek. Five new locations (EV27-EV31) in the contaminant plume were also sampled. The branch samples were cut and sealed in 40-mL glass vials, then placed immediately on dry ice for shipment to the AGEM Laboratory for analysis (Alvarado and Rose 2004).

The sequence of vegetation sampling activities during the 2011 monitoring event is summarized in Appendix A, Table A.1. The results of the vegetation analyses are discussed in Section 3.4.

2.4 Handling and Disposal of Investigation-Derived Waste

Purge water generated as potentially contaminated investigation-derived waste was containerized on-site. The accumulated purge water was sampled on October 31, 2011 (along with waste waters from several other CCC/USDA sites in Kansas), and analyzed by Pace Analytical Services, Inc., Lenexa, Kansas, on November 4, 2011. Methods used were EPA Method 5030/8260 for VOCs, EPA Method 504.1 for ethylene dibromide, and EPA Method 353.2 for nitrate/nitrite nitrogen. No VOCs were detected. Nitrate/nitrite nitrogen was present at 10.6 mg/L. The laboratory results are in Supplement 1, on the compact disc (CD) inside the back cover of this report. The water is being stored at the site awaiting disposal, pending KDHE approval.

2.5 Quality Control for Sample Collection, Handling, and Analysis

The quality assurance/quality control procedures followed during the 2011 annual monitoring for collection, handling, and analysis of samples are described in detail in the *Master Work Plan* (Argonne 2002). Results of these activities 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 were analyzed within the required holding times.

- Quality control samples collected to monitor sample-handling activities (one field blank, two equipment rinsates, and three trip blanks; Table B.1 in Appendix B) and method blanks analyzed with the samples to monitor

analytical methodologies were all free of carbon tetrachloride and chloroform contamination.

- Groundwater and surface water 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.

- Accuracy and precision of the analytical methodology were evident in the analysis of two replicate samples and the duplicate analysis of two additional samples, with average relative percent difference values between the initial analyses and the associated quality control analyses of 5% for carbon tetrachloride and 10% for chloroform (Table B.1 in Appendix B). The analytical data from the AGEM Laboratory for groundwater and surface water are acceptable for quantitative determination of contaminant distribution.

- In accordance with the procedures defined in the *Master Work Plan* (Argonne 2002), selected 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 compare favorably over the range of contaminant concentrations detected, with average relative percent difference values of 3% for carbon tetrachloride and 1% for chloroform (Table B.2 in Appendix B). The analytical data provided by TestAmerica for sample delivery group 200-4949 are in Supplement 2 (on CD).

- Vegetation samples were analyzed for carbon tetrachloride and chloroform at the AGEM Laboratory by using a gas chromatograph with electron capture detection to achieve the low detection limits required. An 11-point calibration of the gas chromatograph system was established on the basis of the mass of known quantities of carbon tetrachloride and chloroform.

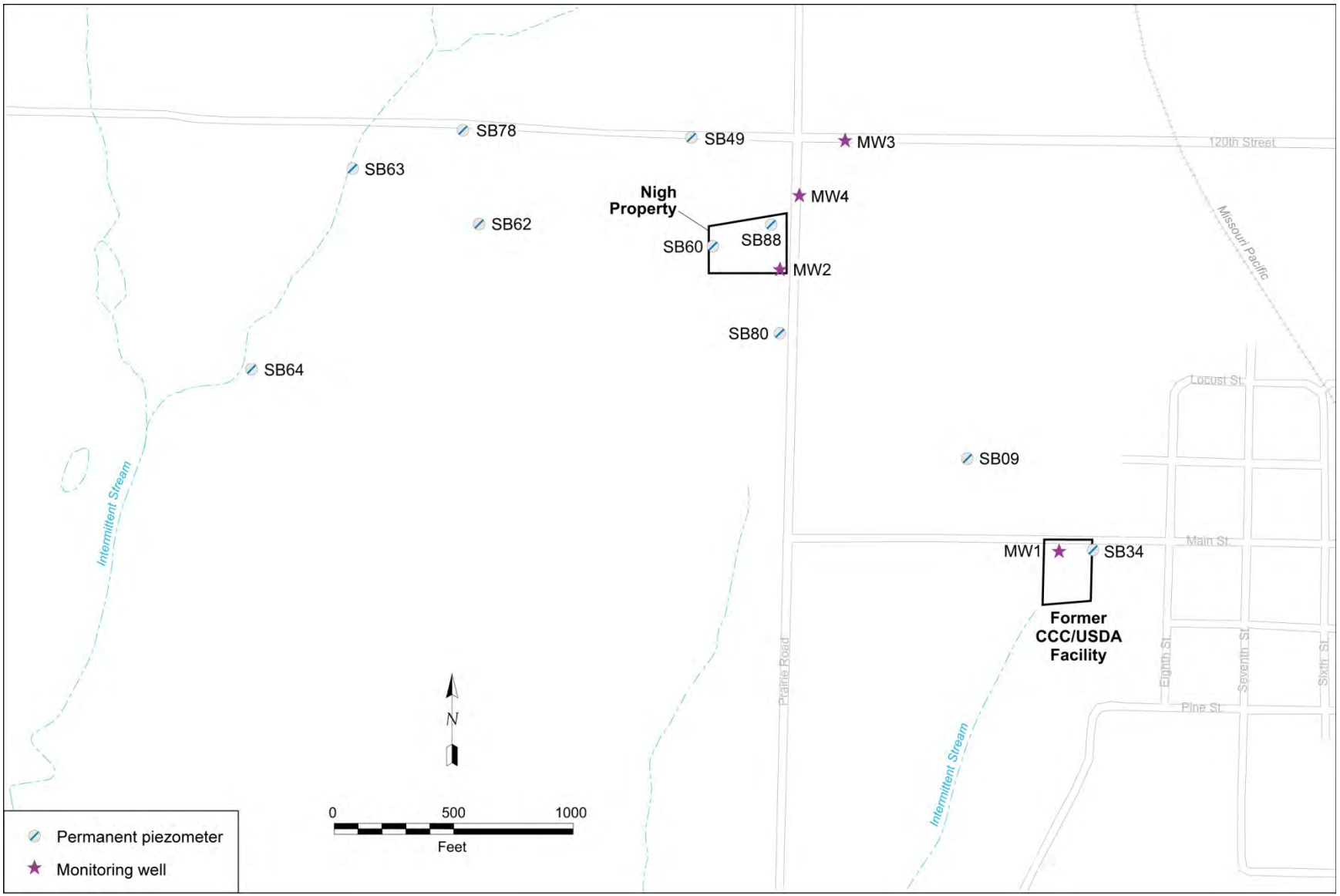


FIGURE 2.1 Groundwater sampling locations in April 2011.

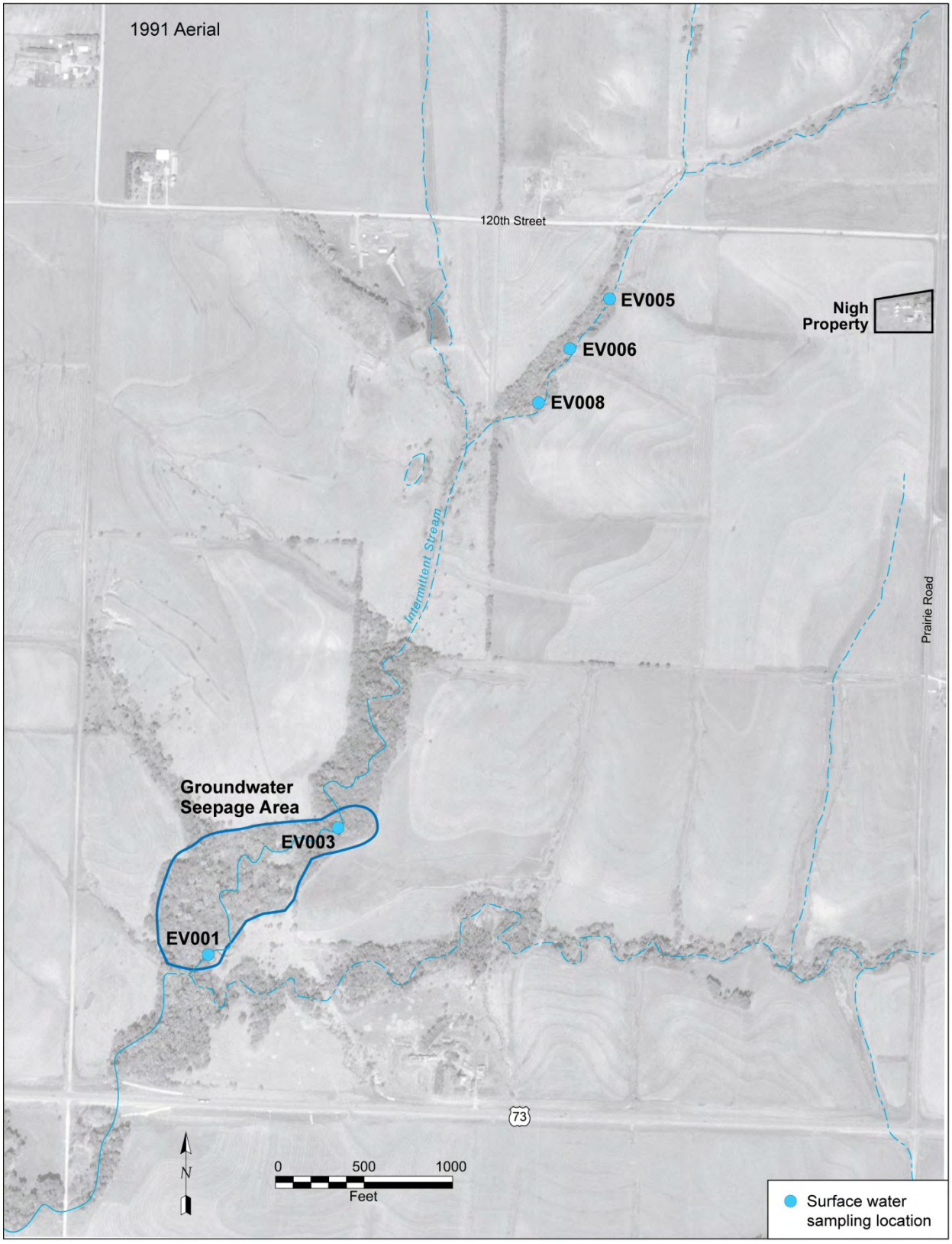


FIGURE 2.2 Surface water sampling locations in April 2011.

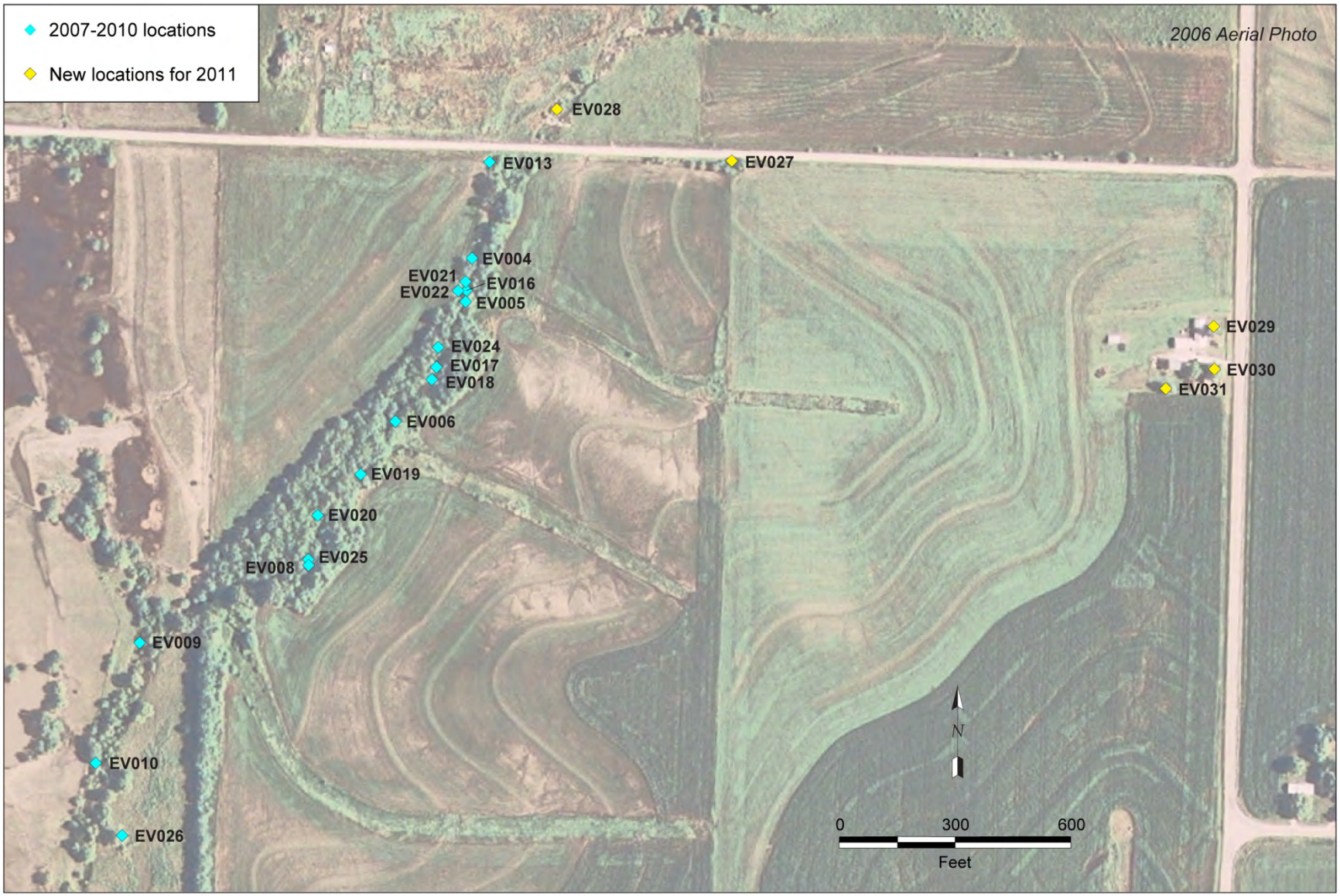


FIGURE 2.3 Vegetation sampling locations in July 2011.

3 Results and Discussion

3.1 Groundwater Level Data

Argonne's investigations (Argonne 2003, 2006a,d) determined that groundwater flow in the Everest aquifer unit occurs at a relatively low rate, in association with estimated hydraulic conductivities for this interval that are generally < 3 ft/day. The flow is driven primarily by groundwater recharge to the southeast of the former CCC/USDA facility and by discharge along the lower (perennial) reaches of the creek southwest of the Nigh property. The result is a relatively stable pattern of groundwater flow across the investigation area. The detailed pathways of groundwater flow and contaminant migration are influenced, however, by hydrogeologic heterogeneity in the aquifer unit, particularly by a region of reduced sand content and hence decreased permeability near the Nigh property.

Figure 3.1 shows the configuration of the potentiometric surface at the site, as determined from manual groundwater level measurements on April 27-28, 2011. This configuration is compared in Figure 3.2 with mapping based on 2008, 2009, and 2010 measurements. Figure 3.2 demonstrates that the potentiometric surface — and hence the apparent groundwater flow pattern influencing the contaminant distribution — has remained consistent with the above interpretation.

The hand-measured water level data from annual monitoring in 2009-2011 are in Table 3.1.

3.2 Groundwater Analysis Results

The analytical data for VOCs and the field-measured parameters for the groundwater samples collected on April 27-28, 2011, are in Tables 3.2 and 3.3, respectively, together with previous data for these wells. The April 2011 data for carbon tetrachloride and chloroform are illustrated in Figures 3.3 and 3.4, respectively.

In April 2011, carbon tetrachloride was detected in groundwater at 11 of the 14 monitoring points sampled (Table 3.2 and Figure 3.3), at concentrations ranging from an estimated value of 0.7 μg/L (at SB62; below the purge-and-trap method quantitation limit of

1.0 μg/L) to 104 μg/L (at MW4). Chloroform was also identified at 8 locations (Table 3.2 and Figure 3.4), at concentrations ranging from an estimated value of 0.4 μg/L (at MW3) to 3.9 μg/L (at SB09).

Figure 3.5 illustrates the configuration of the carbon tetrachloride plume, as interpreted from the 2011 data. Over the years of investigation, the plume has been interpreted as shown in Figure 3.6 for data generated in 2001-2002, 2006, 2008, 2009, 2010, and 2011. The pattern of groundwater flow and inferred contaminant migration has consistently been to the north-northwest from the former CCC/USDA facility and toward the Nigh property, then west-southwest from the Nigh property toward the intermittent creek, as shown in Figure 3.2 for 2008-2011 data.

At most of the monitored locations, Table 3.2 indicates decreases in carbon tetrachloride concentrations in April 2011 relative to 2010 results. Noteworthy decreases of > 50% occurred at locations MW4, MW60, and MW88, in the most concentrated part of the plume. The comparison in Figure 3.6 demonstrates that the area of the plume with carbon tetrachloride concentrations > 200 μg/L has decreased markedly over time and suggests a generally decreasing trend in contaminant levels.

During the 2010 annual monitoring event, slightly elevated levels of carbon tetrachloride were noted at two locations (SB63 and SB64) immediately adjacent to the intermittent creek along the inferred downgradient pathway for the plume (Figure 3.6). In contrast, in the 2011 sampling carbon tetrachloride was not detected at either of these locations (Figures 3.5 and 3.6).

The plume has been interpreted as expanding toward the intermittent creek over time. This interpretation is in qualitative agreement with the very slow groundwater movement and contaminant migration observed (Argonne 2003, 2006a,d, 2008, 2010a, 2011).

Table 3.3 indicates that the dissolved oxygen (DO) levels and oxidation-reduction potential (ORP) values have remained relatively consistent over the period of record, aside from the anomalously negative ORP values recorded in April 2009 at several wells. This discrepancy was traced to a faulty ORP sensor in one of two instrument probes employed for the determination of field parameters during the April 2009 sampling event. The associated DO values for these samples and all other field parameter measurements for the April 2009 sampling event were analytically acceptable, and the issue did not affect the VOCs results. The problem

with the ORP sensor was rectified prior to the April 2010 sampling, and anomalous ORP results did not recur. Overall, the results indicate that no significant changes in the chemical and biological environment within the Everest aquifer have occurred.

3.3 Surface Water Analysis Results

The results of VOCs analyses of the surface water samples collected on April 29, 2011, are in Table 3.4, along with the results from prior annual monitoring in 2009 and 2010. As shown, no carbon tetrachloride or chloroform has been detected (at the purge-and-trap method quantitation limit of 1.0 μg/L) at any of the surface water sampling locations (Figure 2.2) along the intermittent creek downgradient from the identified groundwater plume.

3.4 Vegetation Analysis Results

The results of VOCs analyses of the vegetation samples collected on July 29, 2011, are in Table 3.5. No carbon tetrachloride was detected (at method detection limit of 0.4 μg/kg) in the natural vegetation at any of the locations sampled (Figure 2.3). Trace levels of chloroform (at method detection limit of 0.75 μg/kg) were detected at four locations within the contaminant plume. The vegetation results are therefore consistent with the absence of identified contamination in surface water (Section 3.3). Together, the results of the surface water and vegetation analyses indicate that the carbon tetrachloride contamination identified at Everest has, to date, not impacted shallow groundwater in the immediate vicinity of the intermittent creek or the surface waters of the creek itself.

TABLE 3.1 Hand-measured water levels during annual monitoring in 2009-2011.

		April 25-26, 2009		April 8-9, 2010		April 27-28, 2011	
Well	Reference Elevation[a] (ft AMSL)	Depth to Water[b] (ft TOC)	Water Elevation (ft AMSL)	Depth to Water (ft TOC)	Water Elevation (ft AMSL)	Depth to Water (ft TOC)	Water Elevation (ft AMSL)
SB09	1138.94	31.50	1107.44	19.70	1119.24	23.93	1115.01
SB34	1131.73	9.50	1122.23	9.16	1122.57	13.28	1118.45
SB49	1132.48	37.40	1095.08	36.65	1095.83	40.88	1091.60
SB60	1144.11	48.20	1095.91	47.70	1096.41	51.44	1092.67
SB62	1121.22	29.00	1092.22	25.60	1095.62	31.51	1089.71
SB63	1104.75	19.20	1085.55	16.71	1088.04	18.87	1085.88
SB64	1098.36	21.20	1077.16	17.30	1081.06	20.02	1078.34
SB72	1112.53	28.20	1084.33	27.10	1085.43	–	–
SB77	1124.57	41.00	1083.57	40.25	1084.32	–	–
SB78	1118.22	24.30	1093.92	25.00	1093.22	28.38	1089.84
SB80	1149.72	44.60	1105.12	42.30	1107.42	47.82	1101.90
SB88	1151.02	45.20	1105.82	44.10	1106.92	51.82	1099.20
MW1	1127.08	4.80	1122.28	4.50	1122.58	8.83	1118.25
MW2	1151.68	47.50	1104.18	46.40	1105.28	51.69	1099.99
MW3	1144.92	31.50	1113.42	30.60	1114.32	39.72	1105.20
MW4	1148.93	–	–	36.20	1112.73	43.46	1105.47

[a] Reference elevation is the top of the well's casing (TOC).

[b] Depth measured from TOC.

TABLE 3.2 Analytical results for VOCs in groundwater samples collected in 2001-2011 at monitoring wells in the approved monitoring network.

					Concentration (µg/L)		
Location	Sample	Sample Date	Depth (ft BGL)	Sample Type[a]	Carbon Tetrachloride	Chloroform	Methylene Chloride
MW1	EVMW1-W-20103	3/23/06	41-51	MW	2.0	0.4 J[b]	ND[c]
MW1	EVMW1-W-23441	4/1/08	41-51	MW	1.6	0.5 J	ND
MW1	EVMW1-W-26326	4/25/09	41-51	MW	38	3.2	ND
MW1	EVMW1-W-29743	4/8/10	41-51	MW	59	4.8	ND
MW1	EVMW1-W-29770	4/27/11	41-51	MW	54	3.8	ND
MW2	EVMW2-W-23442	4/9/08	59-79	MW	47	1.0	ND
MW2	EVMW2-W-26327	4/26/09	59-79	MW	101	2.1	ND
MW2	EVMW2-W-29744	4/8/10	59-79	MW	124	3.3	ND
MW2	EVMW2-W-29744DUP[d]	4/8/10	59-79	MW	129	3.1	ND
MW2	EVMW2-W-29771	4/27/11	59-79	MW	70	2.5	ND
MW2	EVMW2DUP-W-29784[d]	4/27/11	59-79	MW	62	2.2	ND
MW3	EVMW3-W-23443	4/1/08	56.5-71.5	MW	7.6	0.3 J	ND
MW3	EVMW3-W-26328	4/25/09	56.5-71.5	MW	9.1	0.4 J	ND
MW3	EVMW3-W-29745	4/8/10	56.5-71.5	MW	13	0.5 J	ND
MW3	EVMW3-W-29772	4/28/11	56.5-71.5	MW	11	0.4 J	ND
MW3	EVMW3DUP-W-29785[d]	4/28/11	56.5-71.5	MW	12	0.3 J	ND
MW4	EVMW4-W-20117	3/23/06	48.5-68.5	MW	316	13	ND
MW4	EVMW4-W-23444	4/2/08	48.5-68.5	MW	244	7.9	ND
MW4	EVMW4-W-29746	4/9/10	48.5-68.5	MW	245	8.4	ND
MW4	EVMW4-W-29746DUP[d]	4/9/10	48.5-68.5	MW	253	8.8	ND
MW4	EVMW4-W-29773	4/28/11	48.5-68.5	MW	104	4.0	ND
SB09	EVSB09-W-20098	3/22/06	51-57	CPT/P	90	5.1	ND
SB09	EVSB09-W-23448	4/9/08	51-57	CPT/P	51	2.3	ND
SB09	EVSB09-W-26330	4/26/09	51-57	CPT/P	114	5.4	ND
SB09	EVSB09-W-29747	4/9/10	51-57	CPT/P	72	4.9	ND
SB09	EVSB09-W-29747DUP[d]	4/9/10	51-57	CPT/P	75	5.3	ND
SB09	EVSB09DUP-W-29760[d]	4/9/10	51-57	CPT/P	63	4.5	ND
SB09	EVSB09-W-29774	4/27/11	51-57	CPT/P	49	3.9	ND

TABLE 3.2 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Sample Type[a]	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
SB34	EVSB34-W-12857	3/28/01	46-49	CPT	2.2	1.3	ND
SB34	EVSB34-W-12854	3/28/01	49-53	CPT	ND	ND	ND
SB34	EVSB34-W-20097	3/22/06	46-53	CPT/P	29	8.6	ND
SB34	EVSB34-W-23451	4/9/08	46-53	CPT/P	3.2	1.1	ND
SB34	EVSB34-W-26331	4/26/09	46-53	CPT/P	4.4	1.9	ND
SB34	EVSB34-W-29748	4/9/10	46-53	CPT/P	2.7	0.5 J	ND
SB34	EVSB34-W-29775	4/27/11	46-53	CPT/P	1.1	0.7 J	ND
SB49	EVSB49-W-20095	3/22/06	51-55	CPT/P	0.9 J	ND	ND
SB49	EVSB49-W-23452	4/8/08	51-55	CPT/P	2.1	ND	ND
SB49	EVSB49-W-26332	4/26/09	51-55	CPT/P	3.2	ND	ND
SB49	EVSB49-W-29749	4/8/10	51-55	CPT/P	3.3	ND	ND
SB49	EVSB49-W-29776	4/28/11	51-55	CPT/P	3.0	ND	ND
SB60	EVSB60-W-23453	4/2/08	56.7-61.7	CPT/P	67	2.1	ND
SB60	EVSB60-W-26333	4/26/09	56.7-61.7	CPT/P	112	3.7	ND
SB60	EVSB60-W-29450	4/8/10	56.7-61.7	CPT/P	86	3.2	ND
SB60	EVSB60-W-29777	4/28/11	56.7-61.7	CPT/P	38	1.9	ND
SB62	EVSB62-W-20088	3/21/06	33-41	CPT/P	0.7 J	ND	ND
SB62	EVSB62-W-23454	4/2/08	33-41	CPT/P	0.3 J	ND	ND
SB62	EVSB62-W-26334	4/25/09	33-41	CPT/P	1.7	ND	ND
SB62	EVSB62-W-29751	4/9/10	33-41	CPT/P	4.0	ND	ND
SB62	EVSB62-W-29778	4/28/11	33-41	CPT/P	0.7 J	ND	ND
SB63	EVSB63-W-20087	3/21/06	20-25	CPT/P	ND	ND	ND
SB63	EVSB63-W-23455	4/2/08	20-25	CPT/P	ND	ND	ND
SB63	EVSB63-W-26335	4/25/09	20-25	CPT/P	ND	ND	ND
SB63	EVSB63-W-29752	4/9/10	20-25	CPT/P	0.4 J	ND	ND
SB63	EVSB63-W-29779	4/28/11	20-25	CPT/P	ND	ND	ND
SB64	EVSB64-W-20086	3/21/06	22-27	CPT/P	ND	ND	ND
SB64	EVSB64-W-23456	4/2/08	22-27	CPT/P	ND	ND	ND
SB64	EVSB64-W-26336	4/25/09	22-27	CPT/P	ND	ND	ND
SB64	EVSB64-W-29753	4/9/10	22-27	CPT/P	2.3	ND	ND

TABLE 3.2 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Sample Type[a]	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
SB64	EVSB64-W-29780	4/28/11	22-27	CPT/P	ND	ND	ND
SB64	EVSB64-W-29780DUP[d]	4/28/11	22-27	CPT/P	ND	ND	ND
SB72	EVSB72-W-20100	3/23/06	32-42	CPT/P	0.4 J	ND	ND
SB72	EVSB72-W-23458	4/9/08	32-42	CPT/P	ND	ND	ND
SB72	EVSB72-W-26337	4/25/09	32-42	CPT/P	ND	ND	ND
SB72	EVSB72-W-29754	4/8/10	32-42	CPT/P	ND	ND	ND
SB72	EVSB72DUP-W-29759[d]	4/8/10	32-42	CPT/P	ND	ND	ND
SB77	EVSB77-W-20090	3/21/06	40-55	CPT/P	ND	ND	ND
SB77	EVSB77-W-23459	4/1/08	40-55	CPT/P	ND	ND	ND
SB77	EVSB77-W-26338	4/26/09	40-55	CPT/P	ND	ND	ND
SB77	EVSB77-W-29455	4/8/10	40-55	CPT/P	ND	ND	ND
SB78	EVSB78-W-20107	3/24/06	30-40	CPT/P	ND	ND	ND
SB78	EVSB78-W-23460	4/1/08	30-40	CPT/P	ND	ND	ND
SB78	EVSB78-W-26339	4/26/09	30-40	CPT/P	ND	ND	ND
SB78	EVSB78-W-29756	4/8/10	30-40	CPT/P	ND	ND	ND
SB78	EVSB78-W-29781	4/28/11	30-40	CPT/P	ND	ND	ND
SB80	EVSB80-W-20127	3/24/06	46.2-70.7	CPT/P	0.3 J	ND	ND
SB80	EVSB80-W-23463	4/2/08	46.2-70.7	CPT/P	0.8 J	ND	ND
SB80	EVSB80-W-26340	4/25/09	46.2-70.7	CPT/P	1.3	ND	ND
SB80	EVSB80-W-29757	4/8/10	46.2-70.7	CPT/P	1.7	ND	ND
SB80	EVSB80-W-29782	4/27/11	46.2-70.7	CPT/P	1.4	ND	ND
SB88	EVSB88-W-20124	3/24/06	62-72	CPT/P	114	3.2	ND
SB88	EVSB88-W-23464	4/8/08	62-72	CPT/P	159	5.0	ND
SB88	EVSB88-W-26341	4/26/09	62-72	CPT/P	234	7.9	ND
SB88	EVSB88-W-29758	4/8/10	62-72	CPT/P	212	7.6	ND
SB88	EVSB88-W-29783	4/28/11	62-72	CPT/P	69	3.8	ND
QC	EVQCIR-W-29786[d]	4/27/11	–	RI	ND	ND	ND
QC	EVQCTB-W-29789[d]	4/27/11	–	TB	ND	ND	ND
QC	EVDIH2O-W-29788[d]	4/28/11	–	FB	ND	ND	ND

TABLE 3.2 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Sample Type[a]	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
QC	EVQCIR-W-29787[d]	4/28/11	–	RI	ND	ND	ND
QC	EVQCTB-W-29790[d]	4/28/11	–	TB	ND	ND	ND
QC	EVQCTB-W-29791[d]	4/29/11	–	TB	ND	ND	ND

[a] Sample types: CPT, cone penetrometer; CPT/P, piezometer; FB, field blank; MW, monitoring well; RI, rinsate; TB, trip blank.

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

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

[d] Quality control sample in 2010 or 2011.

TABLE 3.3 Field measurements for groundwater samples collected in 2001-2011 at monitoring locations in the approved monitoring network.

Location	Sample	Sample Date	Depth (ft BGL)	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Carbon Dioxide (mg/L)	Iron(II) (mg/L)
MW1	EVMW1-W-20103	3/23/06	41-51	13.1	7.26	1236	–	–	–	–
MW1	EVMW1-W-23441	4/1/08	41-51	9.9	6.89	1251	2.06	201	–	0.00
MW1	EVMW1-W-26326	4/25/09	41-51	13.0	6.85	1039	1.87	167	–	–
MW1	EVMW1-W-29743	4/8/10	41-51	11.9	6.78	945	1.87	96	–	–
MW1	EVMW1-W-29770	4/27/11	41-51	12.6	6.83	898	2.15	101	–	0.00
MW2	EVMW2-W-23442	4/9/08	59-79	12.7	7.51	693	6.08	173	–	0.01
MW2	EVMW2-W-26327	4/26/09	59-79	17.3	7.14	585	5.46	173	–	–
MW2	EVMW2-W-29744	4/8/10	59-79	15.2	7.12	555	6.33	256	–	0.00
MW2	EVMW2-W-29771	4/27/11	59-79	13.3	7.62	528	9.83	105	–	0.04
MW3	EVMW3-W-23443	4/1/08	56.5-71.5	11.0	7.18	746	2.65	150	–	0.18
MW3	EVMW3-W-26328	4/25/09	56.5-71.5	13.5	7.36	660	2.88	-82	–	–
MW3	EVMW3-W-29745	4/8/10	56.5-71.5	13.3	6.91	564	2.93	-2	–	0.04
MW3	EVMW3-W-29772	4/28/11	56.5-71.5	13.8	7.37	534	3.50	91	–	0.03
MW4	EVMW4-W-20117	3/23/06	48.5-68.5	12.8	7.17	675	0.40	218	25	0.21
MW4	EVMW4-W-23444	4/2/08	48.5-68.5	9.7	7.25	817	3.03	185	–	0.00
MW4	EVMW4-W-29746	4/9/10	48.5-68.5	13.1	7.13	628	2.81	178	–	0.00
MW4	EVMW4-W-29773	4/28/11	48.5-68.5	15.4	7.27	612	3.11	99	–	0.02
SB09	EVSB09-W-20098	3/22/06	51-57	10.2	7.42	862	–	–	–	–
SB09	EVSB09-W-23448	4/9/08	51-57	9.0	7.36	616	2.71	186	–	0.00
SB09	EVSB09-W-26330	4/26/09	51-57	13.5	7.05	692	2.22	210	–	–
SB09	EVSB09-W-29747	4/9/10	51-57	19.0	6.97	612	3.91	223	–	0.01
SB09	EVSB09-W-29774	4/27/11	51-57	13.8	7.05	645	6.31	106	–	0.15
SB34	EVSB34-W-12857	3/28/01	46-49	14.7	7.87	767	–	–	–	–
SB34	EVSB34-W-12854	3/28/01	49-53	13.2	7.57	757	–	–	–	–
SB34	EVSB34-W-20097	3/22/06	46-53	11.3	7.31	781	–	–	–	–
SB34	EVSB34-W-23451	4/9/08	46-53	10.5	7.08	924	0.98	178	–	0.05
SB34	EVSB34-W-26331	4/26/09	46-53	13.6	7.18	858	1.62	-146	–	–
SB34	EVSB34-W-29748	4/9/10	46-53	13.9	6.79	769	1.10	131	–	0.00
SB34	EVSB34-W-29775	4/27/11	46-53	12.8	6.84	716	1.36	70	–	0.02

TABLE 3.3 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Carbon Dioxide (mg/L)	Iron(II) (mg/L)
SB49	EVSB49-W-20095	3/22/06	51-55	11.3	7.15	649	–	–	–	–
SB49	EVSB49-W-23452	4/8/08	51-55	9.4	7.68	618	3.79	136	–	0.04
SB49	EVSB49-W-26332	4/26/09	51-55	15.5	7.54	583	6.70	-140	–	–
SB49	EVSB49-W-29749	4/8/10	51-55	14.1	7.14	505	5.02	58	–	0.12
SB49	EVSB49-W-29776	4/28/11	51-55	15.5	7.36	497	5.16	138	–	0.00
SB60	EVSB60-W-23453	4/2/08	56.7-61.7	14.7	7.58	660	4.10	211	–	0.00
SB60	EVSB60-W-26333	4/26/09	56.7-61.7	17.4	7.16	630	5.26	179	–	–
SB60	EVSB60-W-29450	4/8/10	56.7-61.7	17.8	7.18	623	5.80	240	–	0.00
SB60	EVSB60-W-29777	4/28/11	56.7-61.7	18.9	7.20	643	11.12	141	–	0.18
SB62	EVSB62-W-20088	3/21/06	33-41	11.5	7.52	722	–	–	–	–
SB62	EVSB62-W-23454	4/2/08	33-41	7.0	7.75	761	4.33	221	–	0.00
SB62	EVSB62-W-26334	4/25/09	33-41	12.0	7.24	696	6.17	156	–	–
SB62	EVSB62-W-29751	4/9/10	33-41	20.4	7.26	628	6.42	238	–	0.00
SB62	EVSB62-W-29778	4/28/11	33-41	22.1	7.37	697	9.81	115	–	0.12
SB63	EVSB63-W-20087	3/21/06	20-25	6.5	6.92	688	–	–	–	–
SB63	EVSB63-W-23455	4/2/08	20-25	14.7	6.62	707	0.74	158	–	0.08
SB63	EVSB63-W-26335	4/25/09	20-25	12.0	6.46	606	1.01	-63	–	–
SB63	EVSB63-W-29752	4/9/10	20-25	18.4	6.28	505	0.35	68	–	0.00
SB63	EVSB63-W-29779	4/28/11	20-25	20.2	6.21	630	1.92	69	–	0.41
SB64	EVSB64-W-20086	3/21/06	22-27	11.3	7.27	876	–	–	–	–
SB64	EVSB64-W-23456	4/2/08	22-27	10.5	7.07	826	1.21	169	–	0.16
SB64	EVSB64-W-26336	4/25/09	22-27	11.2	6.79	784	2.45	-46	–	–
SB64	EVSB64-W-29753	4/9/10	22-27	15.5	6.67	708	1.45	256	–	0.00
SB64	EVSB64-W-29780	4/28/11	22-27	17.6	6.47	749	1.09	116	–	0.04
SB72	EVSB72-W-20100	3/23/06	32-42	12.9	7.28	586	–	–	–	–
SB72	EVSB72-W-23458	4/9/08	32-42	12.9	7.08	593	4.73	182	–	0.10
SB72	EVSB72-W-26337	4/25/09	32-42	12.7	7.01	553	5.89	163	–	–
SB72	EVSB72-W-29754	4/8/10	32-42	16.3	7.03	527	5.43	80	–	0.00
SB77	EVSB77-W-20090	3/21/06	40-55	11.9	7.58	692	–	–	–	–

TABLE 3.3 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Carbon Dioxide (mg/L)	Iron(II) (mg/L)
SB77	EVSB77-W-23459	4/1/08	40-55	9.9	7.60	653	5.44	163	–	0.12
SB77	EVSB77-W-26338	4/26/09	40-55	19.9	7.45	709	8.88	-122	–	–
SB77	EVSB77-W-29455	4/8/10	40-55	15.9	7.09	671	6.89	98	–	0.08
SB78	EVSB78-W-20107	3/24/06	30-40	12.2	7.41	653	–	–	–	–
SB78	EVSB78-W-23460	4/1/08	30-40	10.1	7.64	621	4.74	161	–	0.00
SB78	EVSB78-W-26339	4/26/09	30-40	18.2	7.54	597	6.73	-134	–	–
SB78	EVSB78-W-29756	4/8/10	30-40	16.3	7.18	513	5.06	89	–	0.09
SB78	EVSB78-W-29781	4/28/11	30-40	19.1	7.38	543	5.48	150	–	0.00
SB80	EVSB80-W-20127	3/24/06	46.2-70.7	12.3	7.14	679	3.30	212	25	0.46
SB80	EVSB80-W-23463	4/2/08	46.2-70.7	17.2	7.14	706	5.30	222	–	0.00
SB80	EVSB80-W-26340	4/25/09	46.2-70.7	15.3	7.21	592	4.78	164	–	–
SB80	EVSB80-W-29757	4/8/10	46.2-70.7	16.6	7.19	574	5.52	268	–	0.04
SB80	EVSB80-W-29782	4/27/11	46.2-70.7	18.1	7.19	621	4.92	128	–	0.24
SB88	EVSB88-W-20124	3/24/06	62-72	12.9	6.96	717	4.58	183	25	0.46
SB88	EVSB88-W-23464	4/8/08	62-72	8.2	7.23	758	5.23	242	–	0.11
SB88	EVSB88-W-26341	4/26/09	62-72	18.0	7.16	628	4.19	182	–	–
SB88	EVSB88-W-29758	4/8/10	62-72	15.9	7.12	592	4.83	227	–	0.00
SB88	EVSB88-W-29783	4/28/11	62-72	20.1	7.30	627	9.65	143	–	0.16

TABLE 3.4 Analytical results for VOCs in surface water samples collected during annual monitoring in 2009-2011.

			Concentration (μg/L)	
Location	Sample	Sample Date	Carbon Tetrachloride	Chloroform
EV001	EV001-W-26320	4/24/09	ND[a]	ND
EV003	EV003-W-26321	4/24/09	ND	ND
EV005	EV005-W-26322	4/24/09	ND	ND
EV006	EV006-W-26323	4/24/09	ND	ND
EV008	EV008-W-26324	4/24/09	ND	ND
EV001	EV001-W-29738	4/8/10	ND	ND
EV003	EV003-W-29739	4/8/10	ND	ND
EV005	EV005-W-29740	4/8/10	ND	ND
EV006	EV006-W-29741	4/8/10	ND	ND
EV008	EV008-W-29742	4/8/10	ND	ND
EV001	EV001-W-29765	4/29/11	ND	ND
EV003	EV003-W-29766	4/29/11	ND	ND
EV005	EV005-W-29767	4/29/11	ND	ND
EV006	EV006-W-29768	4/29/11	ND	ND
EV008	EV008-W-29769	4/29/11	ND	ND

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

TABLE 3.5 Analytical results for VOCs in tree branch samples collected on July 29, 2011.[a]

Location	Sample	Sample Time	Height above Ground (ft)	Chain of Custody	Analysis Date and Time	Concentration (µg/kg)		Sample Description
						Carbon Tetrachloride	Chloroform	
EV004	EV004-B-29751	9:10	4	6618	8/23/11 17:27	ND[b]	ND	Up 4 ft, out 1 ft.
EV005	EV005-B-29756	9:20	5	6618	8/23/11 2:56	ND	ND	Up 5 ft. Still alive, but down in stream.
EV006	EV006-B-29760	9:33	3	6618	8/25/11 21:03	ND	ND	Up 3 ft; sucker.
EV007	EV007-no sample	9:40	–	–	–	–	–	Tree dead; no sample collected.
EV008A	EV008A-B-29765	9:55	6	6618	8/22/11 22:10	ND	0.9	Mulberry cannot be sampled; shade pruning. Sampled hackberry about 5 ft east. Moved stake.
EV009	EV009-B-29767	10:06	3	6618	8/25/11 21:44	ND	ND	Up 3 ft; sucker.
EV010	EV010-B-29766	10:10	4	6618	8/23/11 1:35	ND	ND	Up 4 ft.
EV013	EV013-B-29750	9:06	4	6618	8/23/11 0:53	ND	ND	Up 4 ft; sucker.
EV016	EV016-B-29754	9:17	4	6618	8/22/11 20:48	ND	1.0	Up 4 ft; sucker.
EV017	EV017-B-29758	9:27	3	6619	8/23/11 14:42	ND	ND	Up 3 ft; sucker.
EV018	EV018-B-29759	9:29	3	6619	8/22/11 22:50	ND	ND	Up 3 ft; sucker.
EV019	EV019-B-29761	9:35	4	6618	8/23/11 16:45	ND	ND	Up 4 ft; sucker.
EV020	EV020-B-29763	9:47	3	6618	8/23/11 15:24	ND	ND	Up 3 ft.
EV021	EV021-B-29752	9:14	7	6618	8/23/11 0:13	ND	1.9	Up 7 ft. Elm to north of dead willow.
EV022	EV022-B-29755	9:18	5	6618	8/22/11 21:29	ND	1.8	Up 5 ft, out 4 ft.
EV023	EV023-no sample	9:15	–	–	–	–	–	Tree gone; no sample collected.
EV024	EV024-B-29757	9:25	7	6619	8/22/11 23:32	ND	ND	Up 7 ft; sucker.
EV025	EV025-B-29764	9:53	0	6618	8/25/11 19:00	ND	ND	Root sprout at base of tree.
EV026	EV026-B-29768	10:04	7	6618	8/23/11 2:15	ND	ND	Up 7 ft, out 8 ft.
EV027	EV027-B-29769	10:28	4	6618	8/23/11 16:05	ND	ND	New 2011 location, 600 ft east of creek on 120th St., south side. Up 4 ft, out 1 ft.
EV028	EV028-B-29747	10:30	5	6619	8/26/11 19:32	ND	ND	New 2011 location, 200 ft north of 120th St., in creek among much trash near bathtub. Stem willow. Up 5 ft, out 1 ft.
EV029	EV029-B-29748	10:40	5	6619	8/25/11 20:23	ND	ND	New 2011 location, 1191 Prairie Rd. Large white ash, up 5 ft; sucker.
EV030	EV030-B-29749	10:48	8	6619	8/25/11 23:47	ND	ND	New 2011 location. Silver maple in front of house. Up 8 ft, out 2 ft.
EV031	EV031-B-29770	10:50	7	6619	8/25/11 19:41	ND	ND	New 2011 location. Large hackberry back near dog pen and barn. Up 7 ft, out 3 ft.

TABLE 3.5 (Cont.)

[a] Branch samples collected from existing trees were shipped to the AGEM Laboratory on August 1, 2011, and analyzed by modified EPA Method SW3810 for carbon tetrachloride and chloroform.

[b] ND, not detected at a detection limit of 0.4 µg/kg for carbon tetrachloride or 0.75 µg/kg for chloroform.

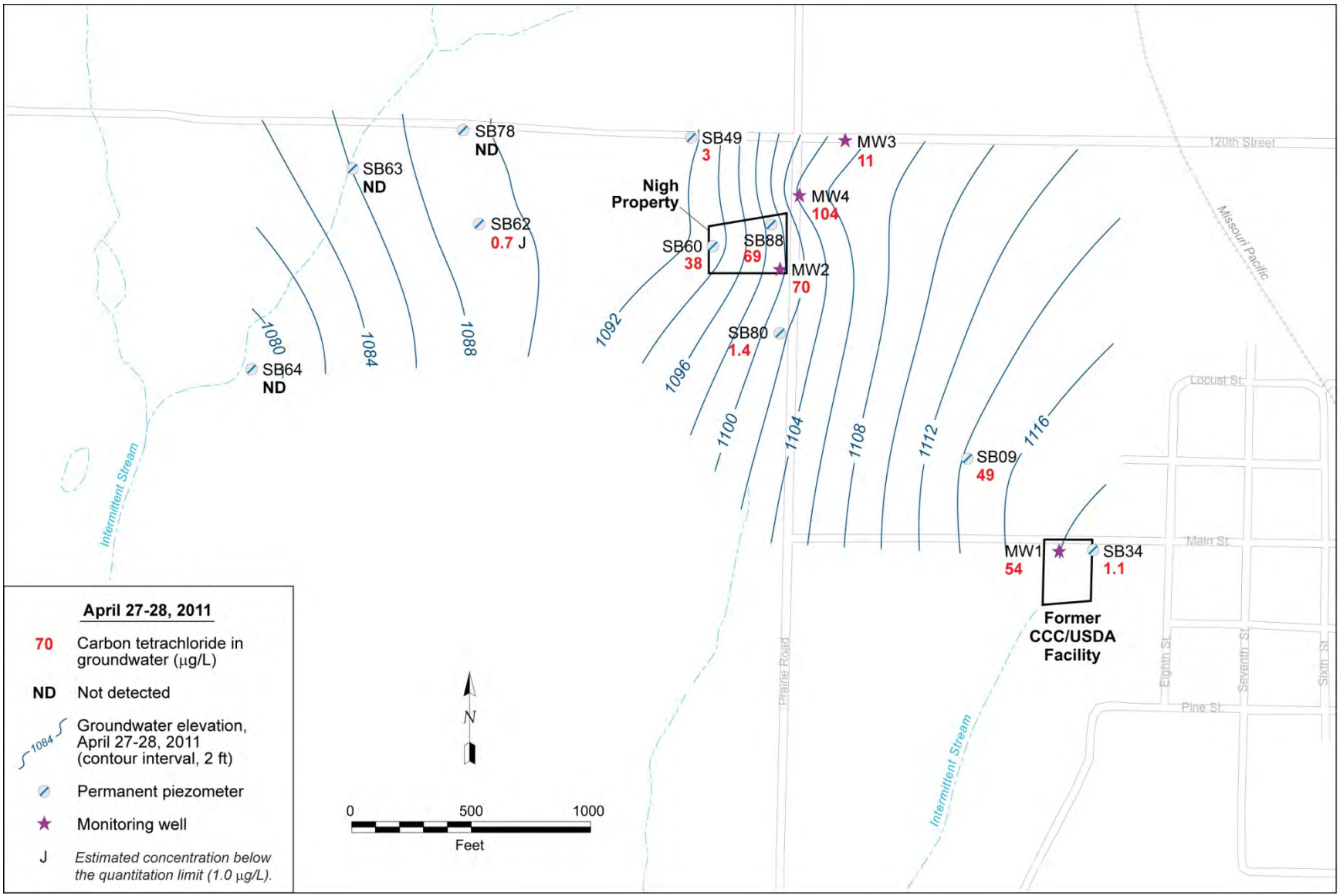


FIGURE 3.1 Potentiometric surface interpreted from groundwater levels measured on April 27-28, 2011.

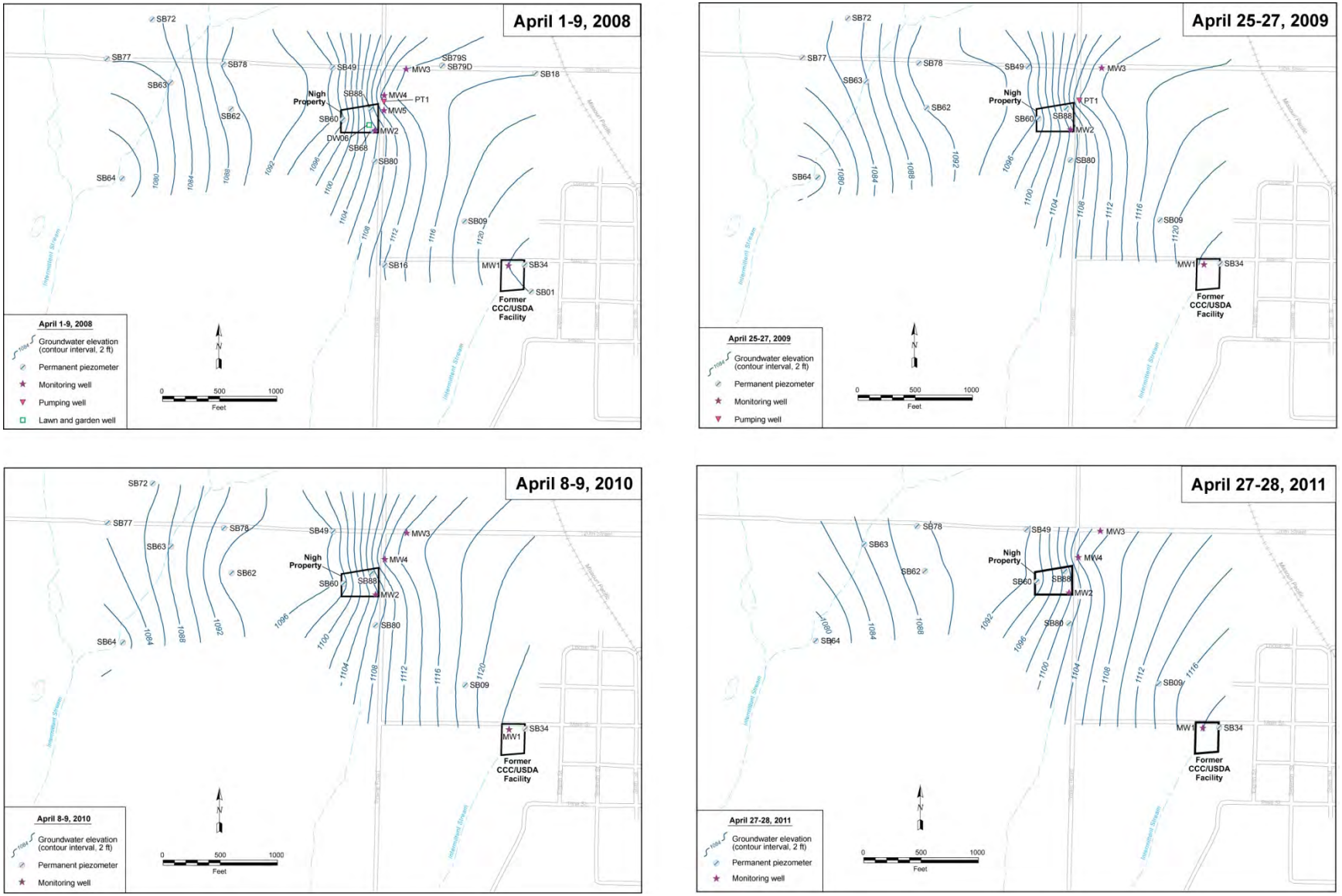


FIGURE 3.2 Historical potentiometric surface interpretations from groundwater levels measured in 2008, 2009, 2010, and 2011.

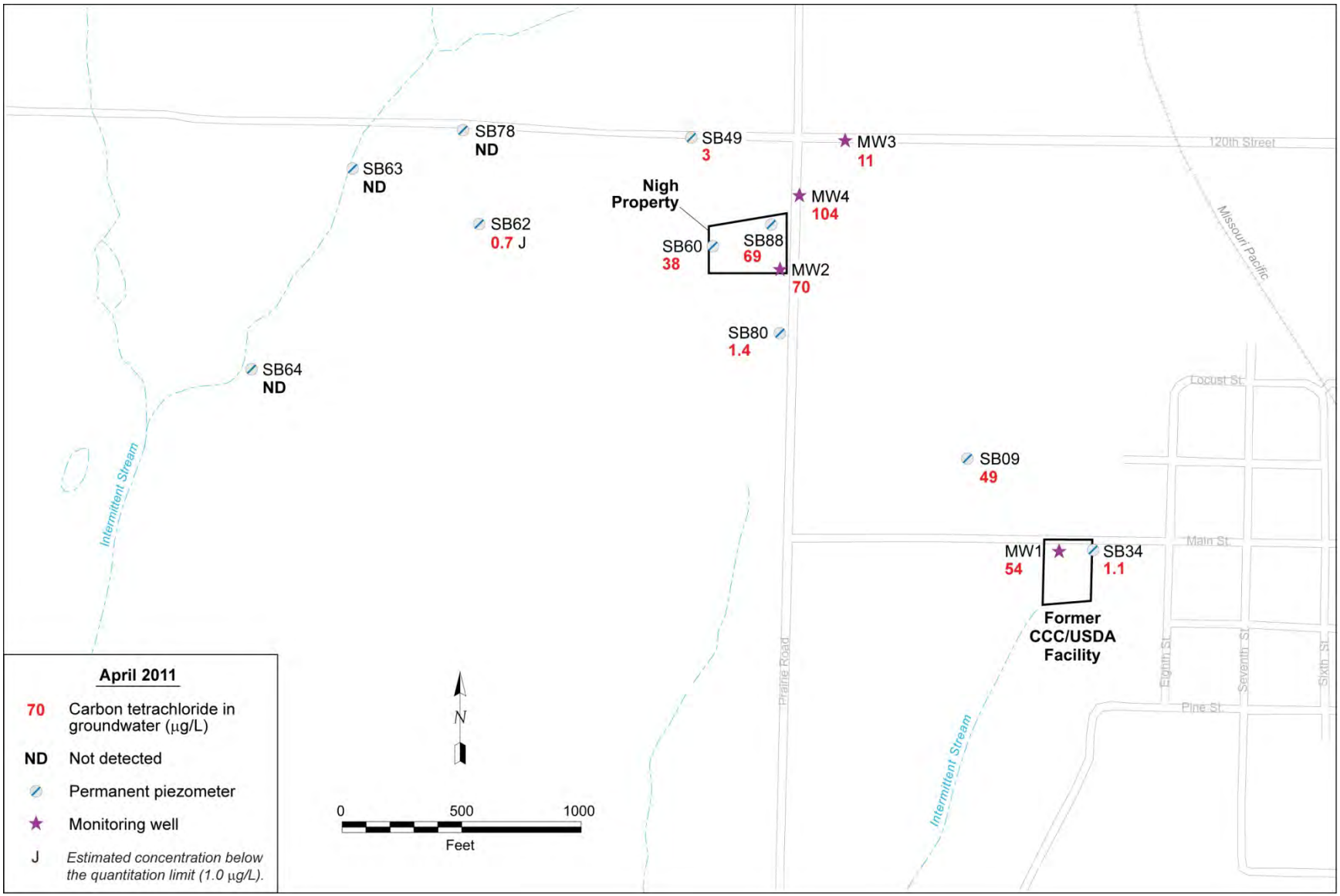


FIGURE 3.3 Lateral distribution of carbon tetrachloride in groundwater in April 2011.

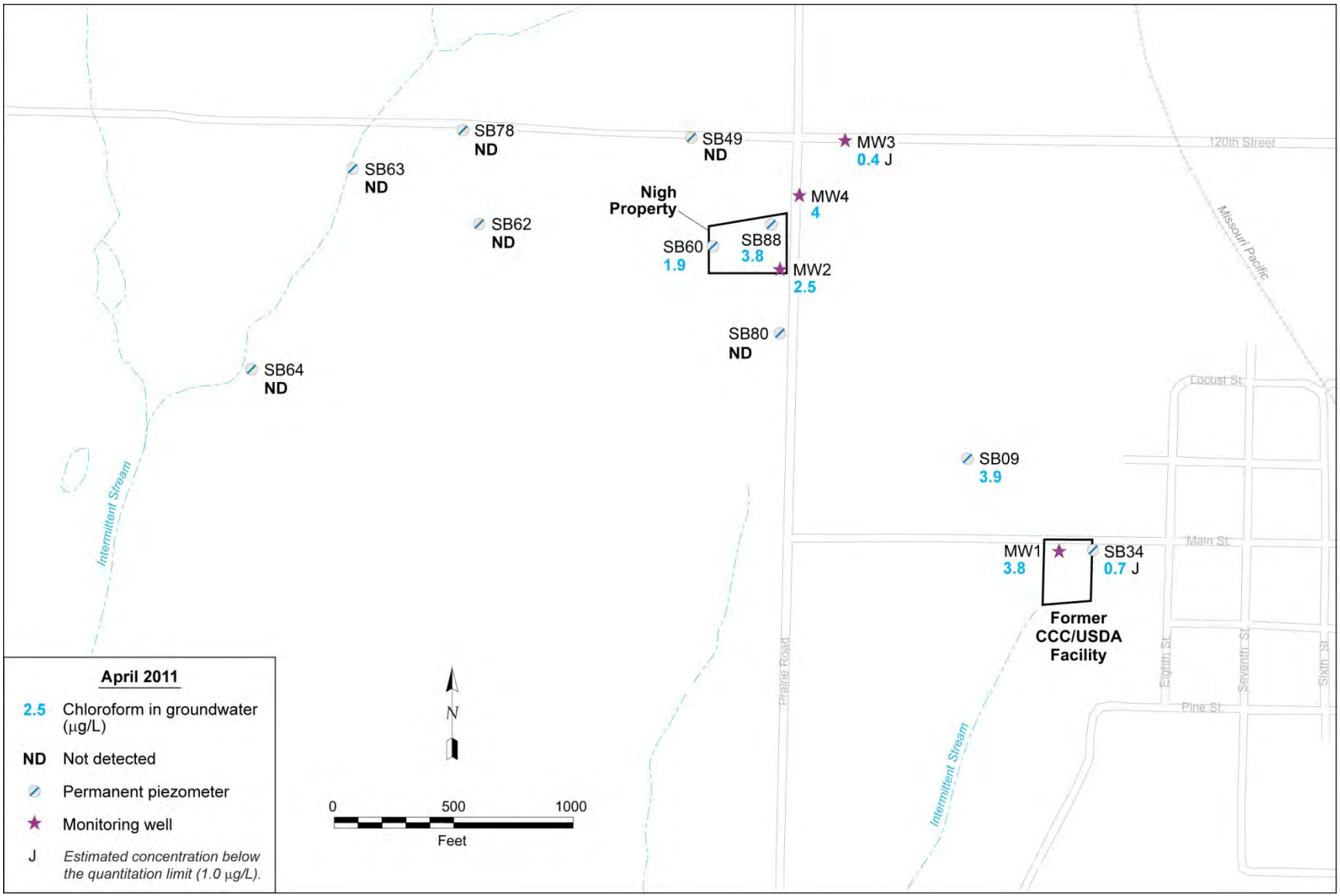


FIGURE 3.4 Lateral distribution of chloroform in groundwater in April 2011.

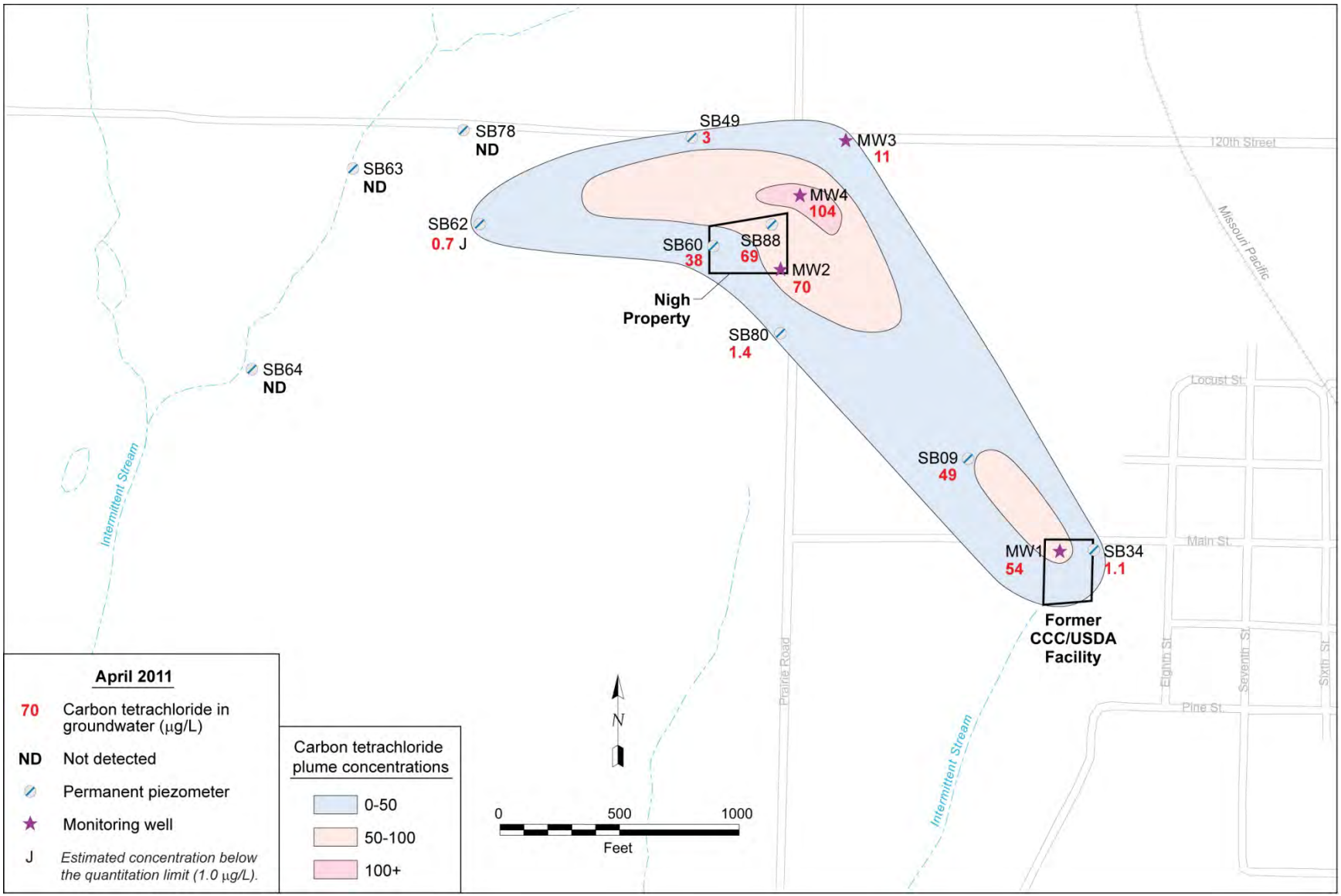
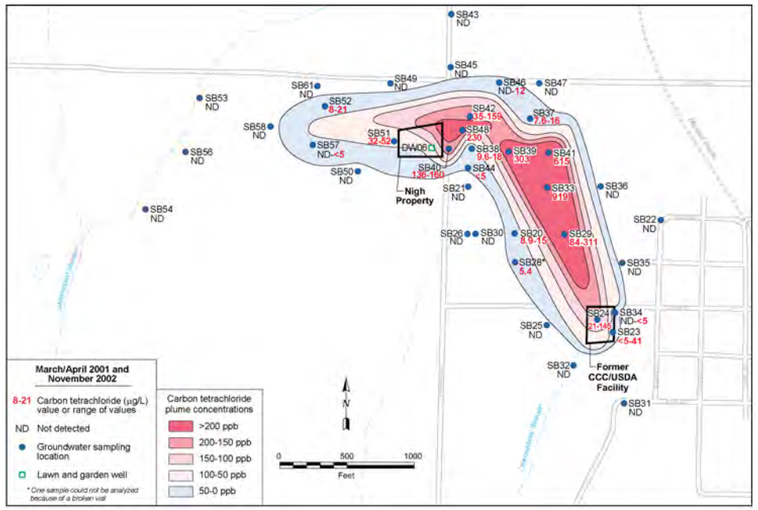
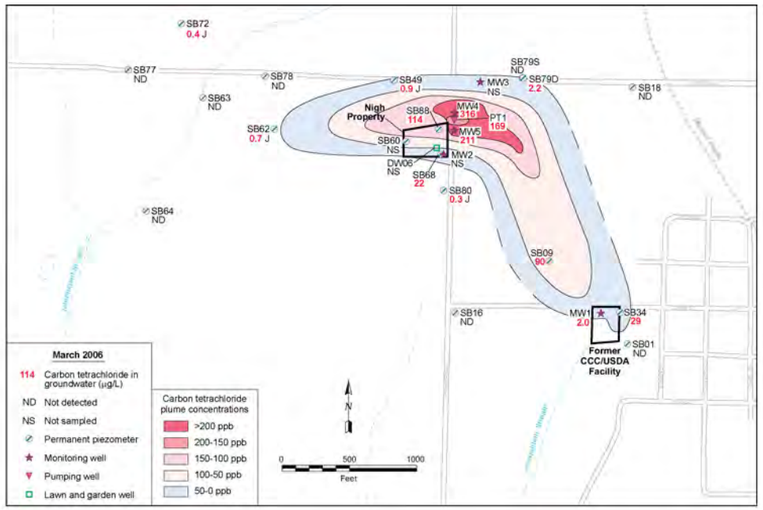


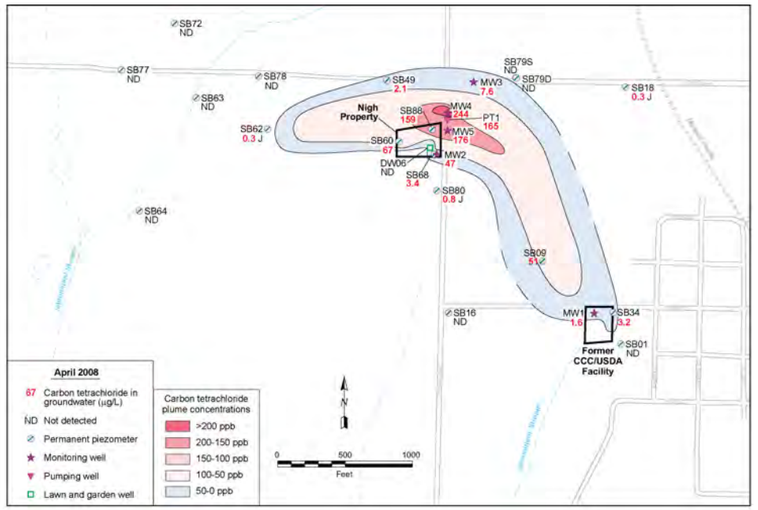
FIGURE 3.5 Interpreted carbon tetrachloride contaminant plume in groundwater at Everest, for data collected in April 2011.



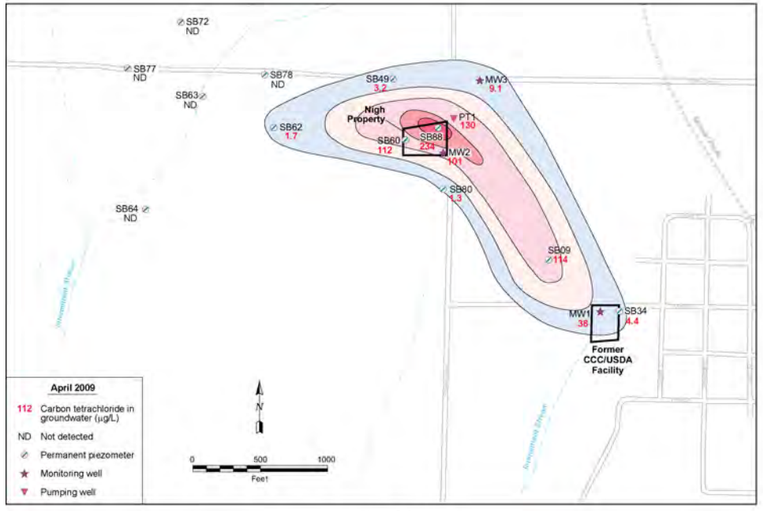
March/April 2001 and November 2002



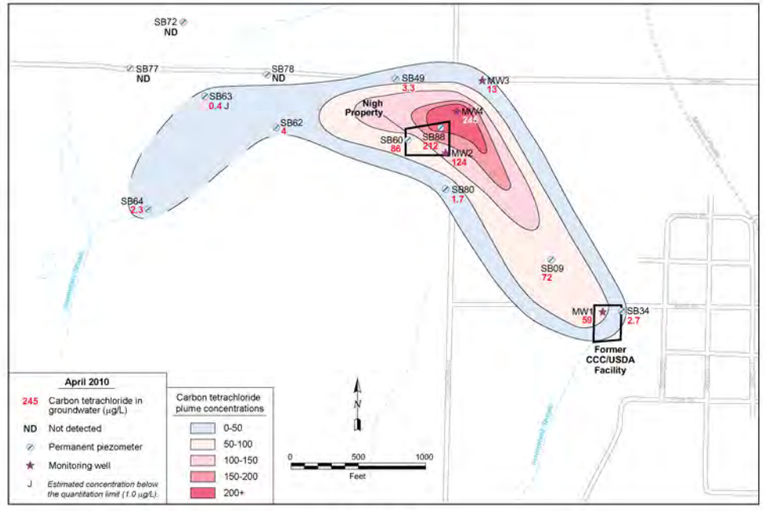
March 2006



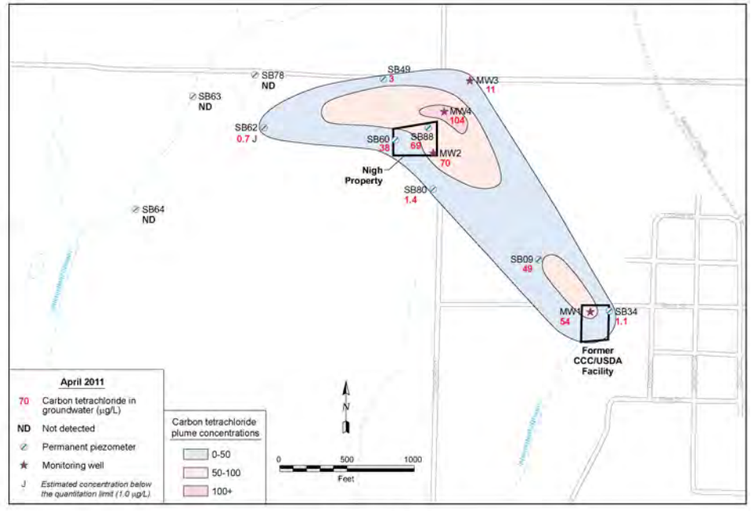
April 2008



April 2009



April 2010



April 2011

FIGURE 3.6 Historical interpretations of the carbon tetrachloride contaminant plume in groundwater at Everest, for data collected in 2001-2002, 2006, 2008, 2009, 2010, and 2011.

4 Conclusions and Recommendations

4.1 Conclusions

The findings of the 2011 monitoring at Everest support the following conclusions:

- Measurements of groundwater levels obtained manually during annual monitoring in 2009-2011 (and through the use of automatic recorders in 2002-2010) have consistently indicated an initial direction of groundwater flow from the former CCC/USDA facility to the north-northwest and toward the Nigh property, then west-southwest from the Nigh property toward the intermittent creek that lies west of the former CCC/USDA facility and the Nigh property.

- At most of the monitored locations, carbon tetrachloride concentrations decreased in April 2011 relative to 2010 results. Noteworthy decreases of > 50% occurred at locations MW4, MW60, and MW88, in the most concentrated part of the plume.

- Comparison of accumulated data demonstrates that the area of the carbon tetrachloride plume with concentrations > 200 µg/L has decreased markedly over time and suggests a generally decreasing trend in contaminant levels.

- The trace increases in carbon tetrachloride concentrations observed in 2010 at locations SB63 and SB64 were notable because of the locations' proximity to the downgradient intermittent creek. However, these increases were not confirmed in sampling in 2011.

- The results of the April 2011 monitoring event continue to support the interpretation, made during the 9-yr observation period from 2001 to 2010, that the migration rate for contamination in groundwater toward the intermittent creek is very slow.

- No carbon tetrachloride was detected in five samples of surface water collected from the intermittent creek west of the former CCC/USDA facility and the Nigh property, or in tree branch tissue samples collected at locations along the banks of the creek. These observations indicate that the carbon tetrachloride contamination identified at Everest has, to date, not impacted the surface waters of the intermittent creek.

4.2 Recommendations

The findings of the annual monitoring at Everest in 2011 support the following recommendations:

- In view of the slow migration of contamination in the groundwater documented during the 10-yr observation period from 2001 to 2011, the present (annual) KDHE-approved frequency for monitoring of the groundwater and surface waters at this site remains protective of human health and the environment.

- In keeping with the approved monitoring plan, the next annual groundwater sampling event will occur in April 2012. As recommended in the report of 2009 monitoring (Argonne 2010a), and with KDHE (2010) approval, sampling at monitoring points SB72 and SB77 has been discontinued.

- Surface water and vegetation sampling during the spring and summer of 2012 will be protective in identifying any potential effects in surface water or in vegetation along the intermittent creek.

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Appendix A:

Sequence of Sampling Activities during the 2011 Annual Monitoring Event at Everest

TABLE A.1 Sequence of sampling activities during annual monitoring in 2011.

Sample Date	Sample Time	Sample	Location	Medium	Type[a]	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
4/27/11	12:31	EVSB34-W-29775	SB34	Water	CPT/P	46-53	2954	4/27/11	Depth to water = 13.28 ft. Depth of 1-in. well = 53 ft. Sample collected by using low-flow bladder pump positioned at 49.5 after purging of 2 L.
4/27/11	13:46	EVMW1-W-29770	MW1	Water	MW	41-51	2954	4/27/11	Depth to water = 8.83 ft. Depth of 4-in. well = 50.5 ft. Sample collected by using low-flow bladder pump positioned at 46 ft after purging of 8 L.
4/27/11	15:22	EVSB09-W-29774	SB09	Water	CPT/P	51-57	2954	4/27/11	Depth to water = 23.93 ft. Depth of 1-in. well = 55.2 ft. Sample collected by using low-flow bladder pump positioned at 54 ft after purging of 2 L.
4/27/11	16:00	EVQCIR-W-29786	QC	Water	RI	–	2954	4/27/11	Rinsate of decontaminated flow line after collection of sample EVSB09-W-29774.
4/27/11	17:06	EVMW2-W-29771	MW2	Water	MW	59-79	2954	4/27/11	Depth to water = 51.69 ft. Depth of 4-in. well = 79.9 ft. Sample collected by using low-flow bladder pump positioned at 69 ft after purging of 13 L.
4/27/11	17:07	EVMW2DUP-W-29784	MW2	Water	MW	59-79	2954	4/27/11	Replicate of sample EVMW2-W-29771.
4/27/11	18:33	EVSB80-W-29782	SB80	Water	CPT/P	46.2-70.7	2954	4/27/11	Depth to water = 47.82 ft. Depth of 1-in. well = 70.7 ft. Sample collected by using low-flow bladder pump positioned at 58.45 ft after purging of 1 L.
4/27/11	18:45	EVQCTB-W-29789	QC	Water	TB	–	2954	4/27/11	Trip blank sent to the AGEM Laboratory for organic analysis with samples listed on COC 2954.
4/28/11	10:52	EVSB60-W-29777	SB60	Water	CPT/P	56.7-61.7	2955	4/28/11	Depth to water = 51.44 ft. Depth of 1-in. well = 67.5 ft. Sample collected by using low-flow bladder pump positioned at 59.2 ft after purging of 1 L.
4/28/11	11:10	EVMW3-W-29772	MW3	Water	MW	56.5-71.5	2955	4/28/11	Depth to water = 39.72 ft. Depth of 2-in. well = 69.72 ft. Sample collected by using low-flow bladder pump positioned at 64 ft after purging of 7 L.

TABLE A.1 (Cont.)

Sample Date	Sample Time	Sample	Location	Medium	Type[a]	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
4/28/11	11:11	EVMW3DUP-W-29785	MW3	Water	MW	56.5-71.5	2955	4/28/11	Replicate of sample EVMW3-W-29772.
4/28/11	12:42	EVSB88-W-29783	SB88	Water	CPT/P	62-72	2955	4/28/11	Depth to water = 51.82 ft. Depth of 1-in. well = 70.5 ft. Sample collected by using low-flow bladder pump positioned at 67 ft after purging of 1.5 L.
4/28/11	12:46	EVMW4-W-29773	MW4	Water	MW	48.5-68.	2955	4/28/11	Depth to water = 43.46 ft. Depth of 2-in. well = 70 ft. Sample collected by using low-flow bladder pump positioned at 58.5 ft after purging of 7.5 L.
4/28/11	14:24	EVSB49-W-29776	SB49	Water	CPT/P	51-55	2955	4/28/11	Depth to water = 40.88 ft. Depth of 1-in. well = 58.4 ft. Sample collected by using low-flow bladder pump positioned at 53 ft after purging of 2.2 L.
4/28/11	14:40	EVSB63-W-29779	SB63	Water	CPT/P	20-25	2955	4/28/11	Depth to water = 18.87 ft. Depth of 1-in. well = 24.5 ft. Sample collected by using low-flow bladder pump positioned at 22.5 ft after purging of 1.25 L.
4/28/11	15:00	EVQCIR-W-29787	QC	Water	RI	–	2955	4/28/11	Rinsate of decontaminated flow line after collection of sample EVSB63-W-29779.
4/28/11	15:46	EVSB78-W-29781	SB78	Water	CPT/P	30-40	2955	4/28/11	Depth to water = 28.38 ft. Depth of 1-in. well = 41.4 ft. Sample collected by using low-flow bladder pump positioned at 35 ft after purging of 2.2 L.
4/28/11	16:13	EVSB64-W-29780	SB64	Water	CPT/P	22-27	2955	4/28/11	Depth to water = 20.02 ft. Depth of 1-in. well = 26.3 ft. Sample collected by using low-flow bladder pump positioned at 24.5 ft after purging of 1.75 L.
4/28/11	17:15	EVDIH2O-W-29788	QC	Water	FB	–	2955	4/28/11	Field blank of water used for equipment decontamination in April 2011.
4/28/11	17:20	EVQCTB-W-29790	QC	Water	TB	–	2955	4/28/11	Trip blank sent to the AGEM Laboratory for organic analysis with samples listed on COC 2955.

TABLE A.1 (Cont.)

Sample Date	Sample Time	Sample	Location	Medium	Type[a]	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
4/28/11	17:33	EVSB62-W-29778	SB62	Water	CPT/P	33-41	2955	4/28/11	Depth to water = 31.51 ft. Depth of 1-in. well = 40.5 ft. Sample collected by using low-flow bladder pump positioned at 37 ft after purging of 1 L.
4/29/11	11:54	EV005-W-29767	EV005	Water	SW	–	2957	5/2/11	Water sample from creek.
4/29/11	12:08	EV006-W-29768	EV006	Water	SW	–	2957	5/2/11	Water sample from creek.
4/29/11	12:14	EV008-W-29769	EV008	Water	SW	–	2957	5/2/11	Water sample from creek.
4/29/11	13:00	EV003-W-29766	EV003	Water	SW	–	2957	5/2/11	Water sample from creek.
4/29/11	13:00	EVQCTB-W-29791	QC	Water	TB	–	2957	5/2/11	Trip blank sent to the AGEM Laboratory for organic analysis with samples listed on COC 2957.
4/29/11	13:14	EV001-W-29765	EV001	Water	SW	–	2957	5/2/11	Water sample from creek.
7/29/11	9:06	EV013-B-29750	EV013	Veg	Branch	–	6618	8/1/11	Up 4 ft; sucker.
7/29/11	9:10	EV004-B-29751	EV004	Veg	Branch	–	6618	8/1/11	Up 4 ft, out 1 ft.
7/29/11	9:14	EV021-B-29752	EV021	Veg	Branch	–	6618	8/1/11	Up 7 ft. Elm north of dead willow.
7/29/11	9:15	EV023-no sample	EV023	Veg	Branch	–			Tree gone, no sample collected.
7/29/11	9:17	EV016-B-29754	EV016	Veg	Branch	–	6618	8/1/11	Up 4 ft; sucker.
7/29/11	9:18	EV022-B-29755	EV022	Veg	Branch	–	6618	8/1/11	Up 5 ft, out 4 ft.
7/29/11	9:20	EV005-B-29756	EV005	Veg	Branch	–	6618	8/1/11	Up 5 ft. Still alive, but down in stream.
7/29/11	9:25	EV024-B-29757	EV024	Veg	Branch	–	6619	8/1/11	Up 7 ft; sucker.
7/29/11	9:27	EV017-B-29758	EV017	Veg	Branch	–	6619	8/1/11	Up 3 ft; sucker.
7/29/11	9:29	EV018-B-29759	EV018	Veg	Branch	–	6619	8/1/11	Up 3 ft; sucker.
7/29/11	9:33	EV006-B-29760	EV006	Veg	Branch	–	6618	8/1/11	Up 3 ft; sucker.
7/29/11	9:35	EV019-B-29761	EV019	Veg	Branch	–	6618	8/1/11	Up 4 ft; sucker.
7/29/11	9:40	EV007-no sample	EV007	Veg	Branch	–			Tree dead; no sample collected.
7/29/11	9:47	EV020-B-29763	EV020	Veg	Branch	–	6618	8/1/11	Up 3 ft.
7/29/11	9:53	EV025-B-29764	EV025	Veg	Branch	–	6618	8/1/11	Root sprout at base of tree.
7/29/11	9:55	EV008A-B-29765	EV008A	Veg	Branch	–	6618	8/1/11	Mulberry cannot be sampled; shade pruning. Sampled hackberry about 5 ft east. Moved stake.
7/29/11	10:04	EV026-B-29768	EV026	Veg	Branch	–	6618	8/1/11	Up 7 ft, out 8 ft.
7/29/11	10:06	EV009-B-29767	EV009	Veg	Branch	–	6618	8/1/11	Up 3 ft; sucker.
7/29/11	10:10	EV010-B-29766	EV010	Veg	Branch	–	6618	8/1/11	Up 4 ft.
7/29/11	10:28	EV027-B-29769	EV027	Veg	Branch	–	6618	8/1/11	New 2011 location, 600 ft east of creek on 120th St., south side. Up 4 ft, out 1 ft.
7/29/11	10:30	EV028-B-29747	EV028	Veg	Branch	–	6619	8/1/11	New 2011 location, 200 ft north of 120th St., in creek among much trash near bathtub. Stem willow. Up 5 ft, out 1 ft.

TABLE A.1 (Cont.)

Sample Date	Sample Time	Sample	Location	Medium	Type[a]	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
7/29/11	10:40	EV029-B-29748	EV029	Veg	Branch	–	6619	8/1/11	New 2011 location, 1191 Prairie Rd. Large white ash, up 5 ft; sucker.
7/29/11	10:48	EV030-B-29749	EV030	Veg	Branch	–	6619	8/1/11	New 2011 location. Silver maple in front of house. Up 8 ft, out 2 ft.
7/29/11	10:50	EV031-B-29770	EV031	Veg	Branch	–	6619	8/1/11	New 2011 location. Large hackberry back near dog pen and barn. Up 7 ft, out 3 ft.

[a] Sample type abbreviations: CPT/P, piezometer; FB, field blank; MW, monitoring well; RI, rinsate; SW, surface water; TB, trip blank.

Appendix B:

Quality Control Data Summary

TABLE B.1 Analytical results from the AGEM Laboratory for quality control samples collected during annual monitoring in 2011.

Location	Sample	Sample Date	Depth (ft BGL)	Medium	Analysis Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride	Sample Type
EV008	EV008-W-29769	4/29/11	–	Water	5/3/11	ND[a]	ND	ND	Primary sample
EV008	EV008-W-29769DUP	4/29/11	–	Water	5/3/11	ND	ND	ND	Duplicate analysis
MW2	EVMW2-W-29771	4/27/11	59-79	Water	4/28/11	70	2.5	ND	Primary sample
MW2	EVMW2DUP-W-29784	4/27/11	59-79	Water	4/28/11	62	2.2	ND	Replicate sample
MW3	EVMW3-W-29772	4/28/11	56.5-71.5	Water	4/29/11	11	0.4 J[b]	ND	Primary sample
MW3	EVMW3DUP-W-29785	4/28/11	56.5-71.5	Water	4/29/11	12	0.3 J	ND	Replicate sample
SB64	EVSB64-W-29780	4/28/11	22-27	Water	4/29/11	ND	ND	ND	Primary sample
SB64	EVSB64-W-29780DUP	4/28/11	22-27	Water	4/29/11	ND	ND	ND	Duplicate analysis
QC	EVQCIR-W-29786	4/27/11	–	Water	4/28/11	ND	ND	ND	Equipment rinsate
QC	EVQCTB-W-29789	4/27/11	–	Water	4/28/11	ND	ND	ND	Trip blank
QC	EVQCIR-W-29787	4/28/11	–	Water	4/29/11	ND	ND	ND	Equipment rinsate
QC	EVDIH2O-W-29788	4/28/11	–	Water	4/29/11	ND	ND	ND	Field blank
QC	EVQCTB-W-29790	4/28/11	–	Water	4/29/11	ND	ND	ND	Trip blank
QC	EVQCTB-W-29791	4/29/11	–	Water	5/3/11	ND	ND	ND	Trip blank

[a] ND, 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 B.2 Analytical results for verification groundwater samples collected during annual monitoring in 2011.

				Concentration (μg/L)					
				AGEM Laboratory			TestAmerica		
Location	Sample	Sample Date	Depth (ft BGL)	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB34	EVSB34-W-29775	4/27/2011	46-53	1.1	0.7 J[a]	ND[b]	1.0	0.72	ND
SB63	EVSB63-W-29779	4/28/2011	20-25	ND	ND	ND	0.13 J B[c]	ND	ND
SB64	EVSB64-W-29780	4/28/2011	22-27	ND	ND	ND	0.13 J B	ND	ND
QC	EVQCTB-W-29790	4/28/2011	–	ND	ND	ND	ND	ND	ND

[a] Qualifier J indicates an estimated concentration below the method quantitation limit of 1.0 μg/L for analysis at the AGEM Laboratory by modified EPA Method 524.2 or 0.5 μg/L for analysis at TestAmerica by EPA Method SOM01 (volatiles trace analysis).

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

[c] Qualifier B indicates that the contaminant was present in the associated method blank.

Supplement 1:

Wastewater Analysis Data from Pace Analytical Services, Inc.

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November 11, 2011

Mr. Travis Kamler
TCW Construction Inc
141 M Street
Lincoln, NE 68508

RE: Project: KS/MO Waste Water
Pace Project No.: 60109211

Dear Mr. Kamler:
Enclosed are the analytical results for sample(s) received by the laboratory on November 01, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Trudy Gipson

Trudy Gipson

trudy.gipson@pacelabs.com
Project Manager

Enclosures

cc: Mr. David Surgnier

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CERTIFICATIONS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
A2LA Certification #: 2456.01
Arkansas Certification #: 05-008-0
Illinois Certification #: 001191
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-08-TX
Utah Certification #: 9135995665

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SAMPLE SUMMARY

Project: KS/MO Waste Water
Pace Project No.: 60109211

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60109211001	AGPURGE-W-10111	Water	10/31/11 09:00	11/01/11 09:20
60109211002	BAPURGE-W-10112	Water	10/31/11 12:55	11/01/11 09:20
60109211003	CNPURGE-W-10113	Water	10/31/11 14:02	11/01/11 09:20
60109211004	EUPURGE-W-10114	Water	10/31/11 15:52	11/01/11 09:20
60109211005	HAPURGE-W-10115	Water	10/31/11 12:27	11/01/11 09:20
60109211006	MRPURGE-W-10116	Water	10/31/11 14:42	11/01/11 09:20
60109211007	SVPURGE-W-10117	Water	10/31/11 18:30	11/01/11 09:20

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SAMPLE ANALYTE COUNT

Project: KS/MO Waste Water
Pace Project No.: 60109211

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60109211001	AGPURGE-W-10111	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 353.2	AJM	1
60109211002	BAPURGE-W-10112	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 353.2	AJM	1
60109211003	CNPURGE-W-10113	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 353.2	AJM	1
60109211004	EUPURGE-W-10114	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 353.2	AJM	1
60109211005	HAPURGE-W-10115	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 353.2	AJM	1
60109211006	MRPURGE-W-10116	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 353.2	AJM	1
60109211007	SVPURGE-W-10117	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 353.2	AJM	1

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: AGPURGE-W-10111 **Lab ID: 60109211001** Collected: 10/31/11 09:00 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromoethane (EDB)	ND	ug/L	0.028	1	11/07/11 00:00	11/08/11 00:52	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		11/04/11 20:18	67-64-1	
Benzene	ND	ug/L	1.0	1		11/04/11 20:18	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/04/11 20:18	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/04/11 20:18	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/11 20:18	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/11 20:18	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/04/11 20:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/04/11 20:18	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:18	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:18	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:18	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		11/04/11 20:18	75-15-0	
Carbon tetrachloride	**21.8**	ug/L	1.0	1		11/04/11 20:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/11 20:18	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/11 20:18	75-00-3	
Chloroform	**1.6**	ug/L	1.0	1		11/04/11 20:18	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/11 20:18	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 20:18	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 20:18	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		11/04/11 20:18	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/11 20:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/11 20:18	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/11 20:18	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:18	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/04/11 20:18	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/11 20:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/11 20:18	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		11/04/11 20:18	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:18	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:18	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:18	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:18	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:18	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/11 20:18	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/04/11 20:18	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		11/04/11 20:18	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		11/04/11 20:18	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/04/11 20:18	99-87-6	

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: AGPURGE-W-10111 **Lab ID: 60109211001** Collected: 10/31/11 09:00 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methylene chloride	ND	ug/L	1.0	1		11/04/11 20:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/04/11 20:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/04/11 20:18	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		11/04/11 20:18	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		11/04/11 20:18	103-65-1	
Styrene	ND	ug/L	1.0	1		11/04/11 20:18	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 20:18	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 20:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/11 20:18	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/11 20:18	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:18	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/11 20:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/11 20:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/11 20:18	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/11 20:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		11/04/11 20:18	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 20:18	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 20:18	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/04/11 20:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		11/04/11 20:18	1330-20-7	
4-Bromofluorobenzene (S)	104	%	87-113	1		11/04/11 20:18	460-00-4	
Dibromofluoromethane (S)	103	%	86-112	1		11/04/11 20:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	109	%	82-119	1		11/04/11 20:18	17060-07-0	
Toluene-d8 (S)	103	%	90-110	1		11/04/11 20:18	2037-26-5	
Preservation pH	**7.0**		0.10	1		11/04/11 20:18		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**14.6**	mg/L	0.50	1		11/02/11 08:48		

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: BAPURGE-W-10112 **Lab ID: 60109211002** Collected: 10/31/11 12:55 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromoethane (EDB)	ND	ug/L	0.029	1	11/07/11 00:00	11/08/11 01:04	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		11/04/11 20:35	67-64-1	
Benzene	ND	ug/L	1.0	1		11/04/11 20:35	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/04/11 20:35	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/04/11 20:35	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/11 20:35	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/11 20:35	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/04/11 20:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/04/11 20:35	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:35	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:35	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:35	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		11/04/11 20:35	75-15-0	
Carbon tetrachloride	**1.1**	ug/L	1.0	1		11/04/11 20:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/11 20:35	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/11 20:35	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/04/11 20:35	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/11 20:35	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 20:35	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 20:35	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		11/04/11 20:35	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/11 20:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/11 20:35	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/11 20:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:35	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/04/11 20:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/11 20:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/11 20:35	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		11/04/11 20:35	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:35	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/11 20:35	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/04/11 20:35	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		11/04/11 20:35	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		11/04/11 20:35	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/04/11 20:35	99-87-6	

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: BAPURGE-W-10112 **Lab ID: 60109211002** Collected: 10/31/11 12:55 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methylene chloride	ND	ug/L	1.0	1		11/04/11 20:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/04/11 20:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/04/11 20:35	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		11/04/11 20:35	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		11/04/11 20:35	103-65-1	
Styrene	ND	ug/L	1.0	1		11/04/11 20:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 20:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 20:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/11 20:35	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/11 20:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/11 20:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/11 20:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/11 20:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/11 20:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		11/04/11 20:35	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 20:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 20:35	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/04/11 20:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		11/04/11 20:35	1330-20-7	
4-Bromofluorobenzene (S)	102	%	87-113	1		11/04/11 20:35	460-00-4	
Dibromofluoromethane (S)	98	%	86-112	1		11/04/11 20:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	82-119	1		11/04/11 20:35	17060-07-0	
Toluene-d8 (S)	95	%	90-110	1		11/04/11 20:35	2037-26-5	
Preservation pH	**7.0**		0.10	1		11/04/11 20:35		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**6.1**	mg/L	0.20	1		11/02/11 09:17		

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: CNPURGE-W-10113 **Lab ID: 60109211003** Collected: 10/31/11 14:02 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromoethane (EDB)	ND	ug/L	0.028	1	11/07/11 00:00	11/08/11 01:17	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		11/04/11 20:51	67-64-1	
Benzene	ND	ug/L	1.0	1		11/04/11 20:51	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/04/11 20:51	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/04/11 20:51	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/11 20:51	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/11 20:51	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/04/11 20:51	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/04/11 20:51	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:51	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:51	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		11/04/11 20:51	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		11/04/11 20:51	75-15-0	
Carbon tetrachloride	**1.3**	ug/L	1.0	1		11/04/11 20:51	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/11 20:51	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/11 20:51	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/04/11 20:51	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/11 20:51	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 20:51	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 20:51	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		11/04/11 20:51	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/11 20:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/11 20:51	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/11 20:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:51	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/04/11 20:51	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/11 20:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/11 20:51	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		11/04/11 20:51	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 20:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:51	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:51	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 20:51	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:51	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:51	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 20:51	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/11 20:51	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/04/11 20:51	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		11/04/11 20:51	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		11/04/11 20:51	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/04/11 20:51	99-87-6	

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: CNPURGE-W-10113 **Lab ID: 60109211003** Collected: 10/31/11 14:02 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methylene chloride	ND	ug/L	1.0	1		11/04/11 20:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/04/11 20:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/04/11 20:51	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		11/04/11 20:51	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		11/04/11 20:51	103-65-1	
Styrene	ND	ug/L	1.0	1		11/04/11 20:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 20:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 20:51	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/11 20:51	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/11 20:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 20:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/11 20:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/11 20:51	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/11 20:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/11 20:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		11/04/11 20:51	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 20:51	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 20:51	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/04/11 20:51	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		11/04/11 20:51	1330-20-7	
4-Bromofluorobenzene (S)	107	%	87-113	1		11/04/11 20:51	460-00-4	
Dibromofluoromethane (S)	110	%	86-112	1		11/04/11 20:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	114	%	82-119	1		11/04/11 20:51	17060-07-0	
Toluene-d8 (S)	108	%	90-110	1		11/04/11 20:51	2037-26-5	
Preservation pH	**7.0**		0.10	1		11/04/11 20:51		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**4.4**	mg/L	0.10	1		11/02/11 09:06		

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: EUPURGE-W-10114 **Lab ID: 60109211004** Collected: 10/31/11 15:52 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromoethane (EDB)	ND	ug/L	0.029	1	11/07/11 00:00	11/08/11 01:30	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		11/04/11 21:07	67-64-1	
Benzene	ND	ug/L	1.0	1		11/04/11 21:07	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/04/11 21:07	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/04/11 21:07	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/11 21:07	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/11 21:07	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/04/11 21:07	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/04/11 21:07	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:07	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:07	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:07	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		11/04/11 21:07	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		11/04/11 21:07	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/11 21:07	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/11 21:07	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/04/11 21:07	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/11 21:07	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:07	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:07	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		11/04/11 21:07	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/11 21:07	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/11 21:07	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/11 21:07	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:07	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:07	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:07	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/04/11 21:07	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:07	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:07	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		11/04/11 21:07	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/11 21:07	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/04/11 21:07	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		11/04/11 21:07	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		11/04/11 21:07	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/04/11 21:07	99-87-6	

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: EUPURGE-W-10114 **Lab ID: 60109211004** Collected: 10/31/11 15:52 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methylene chloride	ND	ug/L	1.0	1		11/04/11 21:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/04/11 21:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/04/11 21:07	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		11/04/11 21:07	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		11/04/11 21:07	103-65-1	
Styrene	ND	ug/L	1.0	1		11/04/11 21:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:07	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/11 21:07	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/11 21:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/11 21:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/11 21:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		11/04/11 21:07	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:07	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/04/11 21:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		11/04/11 21:07	1330-20-7	
4-Bromofluorobenzene (S)	106	%	87-113	1		11/04/11 21:07	460-00-4	
Dibromofluoromethane (S)	108	%	86-112	1		11/04/11 21:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	82-119	1		11/04/11 21:07	17060-07-0	
Toluene-d8 (S)	105	%	90-110	1		11/04/11 21:07	2037-26-5	
Preservation pH	7.0		0.10	1		11/04/11 21:07		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**10.6**	mg/L	0.50	1		11/02/11 09:21		

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: HAPURGE-W-10115 **Lab ID: 60109211005** Collected: 10/31/11 12:27 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromoethane (EDB)	ND	ug/L	0.028	1	11/07/11 00:00	11/08/11 01:43	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		11/04/11 21:24	67-64-1	
Benzene	ND	ug/L	1.0	1		11/04/11 21:24	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/04/11 21:24	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/04/11 21:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/11 21:24	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/11 21:24	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/04/11 21:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/04/11 21:24	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:24	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:24	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:24	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		11/04/11 21:24	75-15-0	
Carbon tetrachloride	**6.1**	ug/L	1.0	1		11/04/11 21:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/11 21:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/11 21:24	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/04/11 21:24	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/11 21:24	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:24	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:24	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		11/04/11 21:24	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/11 21:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/11 21:24	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/11 21:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:24	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/04/11 21:24	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:24	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		11/04/11 21:24	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:24	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:24	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:24	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:24	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/11 21:24	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/04/11 21:24	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		11/04/11 21:24	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		11/04/11 21:24	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/04/11 21:24	99-87-6	

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: HAPURGE-W-10115 **Lab ID: 60109211005** Collected: 10/31/11 12:27 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methylene chloride	ND	ug/L	1.0	1		11/04/11 21:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/04/11 21:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/04/11 21:24	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		11/04/11 21:24	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		11/04/11 21:24	103-65-1	
Styrene	ND	ug/L	1.0	1		11/04/11 21:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/11 21:24	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/11 21:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/11 21:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/11 21:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		11/04/11 21:24	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:24	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:24	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/04/11 21:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		11/04/11 21:24	1330-20-7	
4-Bromofluorobenzene (S)	106	%	87-113	1		11/04/11 21:24	460-00-4	
Dibromofluoromethane (S)	103	%	86-112	1		11/04/11 21:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	82-119	1		11/04/11 21:24	17060-07-0	
Toluene-d8 (S)	100	%	90-110	1		11/04/11 21:24	2037-26-5	
Preservation pH	**7.0**		0.10	1		11/04/11 21:24		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**5.7**	mg/L	0.20	1		11/02/11 09:16		

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: MRPURGE-W-10116 **Lab ID: 60109211006** Collected: 10/31/11 14:42 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromoethane (EDB)	ND	ug/L	0.029	1	11/07/11 00:00	11/08/11 01:55	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		11/04/11 21:40	67-64-1	
Benzene	ND	ug/L	1.0	1		11/04/11 21:40	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/04/11 21:40	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/04/11 21:40	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/11 21:40	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/11 21:40	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/04/11 21:40	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/04/11 21:40	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:40	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:40	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:40	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		11/04/11 21:40	75-15-0	
Carbon tetrachloride	**3.4**	ug/L	1.0	1		11/04/11 21:40	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/11 21:40	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/11 21:40	75-00-3	
Chloroform	ND	ug/L	1.0	1		11/04/11 21:40	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/11 21:40	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:40	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:40	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		11/04/11 21:40	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/11 21:40	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/11 21:40	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/11 21:40	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:40	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:40	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:40	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/04/11 21:40	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:40	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:40	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		11/04/11 21:40	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:40	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:40	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:40	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:40	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:40	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:40	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:40	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:40	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:40	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/11 21:40	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/04/11 21:40	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		11/04/11 21:40	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		11/04/11 21:40	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/04/11 21:40	99-87-6	

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: MRPURGE-W-10116 **Lab ID: 60109211006** Collected: 10/31/11 14:42 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methylene chloride	ND	ug/L	1.0	1		11/04/11 21:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/04/11 21:40	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/04/11 21:40	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		11/04/11 21:40	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		11/04/11 21:40	103-65-1	
Styrene	ND	ug/L	1.0	1		11/04/11 21:40	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:40	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:40	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/11 21:40	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/11 21:40	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:40	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:40	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:40	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:40	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/11 21:40	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/11 21:40	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		11/04/11 21:40	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:40	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:40	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/04/11 21:40	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		11/04/11 21:40	1330-20-7	
4-Bromofluorobenzene (S)	105	%	87-113	1		11/04/11 21:40	460-00-4	
Dibromofluoromethane (S)	108	%	86-112	1		11/04/11 21:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	114	%	82-119	1		11/04/11 21:40	17060-07-0	
Toluene-d8 (S)	109	%	90-110	1		11/04/11 21:40	2037-26-5	
Preservation pH	**7.0**		0.10	1		11/04/11 21:40		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**13.8**	mg/L	0.50	1		11/02/11 09:20		

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: SVPURGE-W-10117 **Lab ID: 60109211007** Collected: 10/31/11 18:30 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1							
1,2-Dibromoethane (EDB)	ND	ug/L	0.029	1	11/07/11 00:00	11/08/11 02:09	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		11/04/11 21:56	67-64-1	
Benzene	ND	ug/L	1.0	1		11/04/11 21:56	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		11/04/11 21:56	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		11/04/11 21:56	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		11/04/11 21:56	75-27-4	
Bromoform	ND	ug/L	1.0	1		11/04/11 21:56	75-25-2	
Bromomethane	ND	ug/L	1.0	1		11/04/11 21:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		11/04/11 21:56	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:56	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:56	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		11/04/11 21:56	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		11/04/11 21:56	75-15-0	
Carbon tetrachloride	**6.9**	ug/L	1.0	1		11/04/11 21:56	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		11/04/11 21:56	108-90-7	
Chloroethane	ND	ug/L	1.0	1		11/04/11 21:56	75-00-3	
Chloroform	**3.3**	ug/L	1.0	1		11/04/11 21:56	67-66-3	
Chloromethane	ND	ug/L	1.0	1		11/04/11 21:56	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:56	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		11/04/11 21:56	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		11/04/11 21:56	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		11/04/11 21:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		11/04/11 21:56	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		11/04/11 21:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:56	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		11/04/11 21:56	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:56	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		11/04/11 21:56	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		11/04/11 21:56	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		11/04/11 21:56	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:56	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:56	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		11/04/11 21:56	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		11/04/11 21:56	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		11/04/11 21:56	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		11/04/11 21:56	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		11/04/11 21:56	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		11/04/11 21:56	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		11/04/11 21:56	99-87-6	

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ANALYTICAL RESULTS

Project: KS/MO Waste Water
Pace Project No.: 60109211

Sample: SVPURGE-W-10117 **Lab ID: 60109211007** Collected: 10/31/11 18:30 Received: 11/01/11 09:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260							
Methylene chloride	ND	ug/L	1.0	1		11/04/11 21:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		11/04/11 21:56	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		11/04/11 21:56	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		11/04/11 21:56	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		11/04/11 21:56	103-65-1	
Styrene	ND	ug/L	1.0	1		11/04/11 21:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		11/04/11 21:56	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		11/04/11 21:56	127-18-4	
Toluene	ND	ug/L	1.0	1		11/04/11 21:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		11/04/11 21:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		11/04/11 21:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		11/04/11 21:56	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		11/04/11 21:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		11/04/11 21:56	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		11/04/11 21:56	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		11/04/11 21:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		11/04/11 21:56	1330-20-7	
4-Bromofluorobenzene (S)	90	%	87-113	1		11/04/11 21:56	460-00-4	
Dibromofluoromethane (S)	106	%	86-112	1		11/04/11 21:56	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%	82-119	1		11/04/11 21:56	17060-07-0	
Toluene-d8 (S)	110	%	90-110	1		11/04/11 21:56	2037-26-5	
Preservation pH	**7.0**		0.10	1		11/04/11 21:56		
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**0.41**	mg/L	0.10	1		11/02/11 09:11		

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QUALITY CONTROL DATA

Project: KS/MO Waste Water
Pace Project No.: 60109211

QC Batch: OEXT/31027 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: GCS 504 EDB DBCP
Associated Lab Samples: 60109211001, 60109211002, 60109211003, 60109211004, 60109211005, 60109211006, 60109211007

METHOD BLANK: 906554 Matrix: Water
Associated Lab Samples: 60109211001, 60109211002, 60109211003, 60109211004, 60109211005, 60109211006, 60109211007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.030	11/07/11 20:35	

LABORATORY CONTROL SAMPLE & LCSD: 906555 906556

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.25	0.23	0.21	94	85	70-130	10	20	

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QUALITY CONTROL DATA

Project: KS/MO Waste Water
Pace Project No.: 60109211

QC Batch: MSV/41422 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 60109211001, 60109211002, 60109211003, 60109211004, 60109211005, 60109211006, 60109211007

METHOD BLANK: 905182 Matrix: Water
Associated Lab Samples: 60109211001, 60109211002, 60109211003, 60109211004, 60109211005, 60109211006, 60109211007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/04/11 17:52	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/04/11 17:52	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/04/11 17:52	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/04/11 17:52	
1,1-Dichloroethane	ug/L	ND	1.0	11/04/11 17:52	
1,1-Dichloroethene	ug/L	ND	1.0	11/04/11 17:52	
1,1-Dichloropropene	ug/L	ND	1.0	11/04/11 17:52	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/04/11 17:52	
1,2,3-Trichloropropane	ug/L	ND	2.5	11/04/11 17:52	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/04/11 17:52	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	11/04/11 17:52	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	11/04/11 17:52	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/04/11 17:52	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/04/11 17:52	
1,2-Dichloroethane	ug/L	ND	1.0	11/04/11 17:52	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	11/04/11 17:52	
1,2-Dichloropropane	ug/L	ND	1.0	11/04/11 17:52	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	11/04/11 17:52	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/04/11 17:52	
1,3-Dichloropropane	ug/L	ND	1.0	11/04/11 17:52	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/04/11 17:52	
2,2-Dichloropropane	ug/L	ND	1.0	11/04/11 17:52	
2-Butanone (MEK)	ug/L	ND	10.0	11/04/11 17:52	
2-Chlorotoluene	ug/L	ND	1.0	11/04/11 17:52	
2-Hexanone	ug/L	ND	10.0	11/04/11 17:52	
4-Chlorotoluene	ug/L	ND	1.0	11/04/11 17:52	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	11/04/11 17:52	
Acetone	ug/L	ND	10.0	11/04/11 17:52	
Benzene	ug/L	ND	1.0	11/04/11 17:52	
Bromobenzene	ug/L	ND	1.0	11/04/11 17:52	
Bromochloromethane	ug/L	ND	1.0	11/04/11 17:52	
Bromodichloromethane	ug/L	ND	1.0	11/04/11 17:52	
Bromoform	ug/L	ND	1.0	11/04/11 17:52	
Bromomethane	ug/L	ND	1.0	11/04/11 17:52	
Carbon disulfide	ug/L	ND	5.0	11/04/11 17:52	
Carbon tetrachloride	ug/L	ND	1.0	11/04/11 17:52	
Chlorobenzene	ug/L	ND	1.0	11/04/11 17:52	
Chloroethane	ug/L	ND	1.0	11/04/11 17:52	
Chloroform	ug/L	ND	1.0	11/04/11 17:52	
Chloromethane	ug/L	ND	1.0	11/04/11 17:52	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/04/11 17:52	
cis-1,3-Dichloropropene	ug/L	ND	1.0	11/04/11 17:52	
Dibromochloromethane	ug/L	ND	1.0	11/04/11 17:52	

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QUALITY CONTROL DATA

Project: KS/MO Waste Water
Pace Project No.: 60109211

METHOD BLANK: 905182 Matrix: Water

Associated Lab Samples: 60109211001, 60109211002, 60109211003, 60109211004, 60109211005, 60109211006, 60109211007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	1.0	11/04/11 17:52	
Dichlorodifluoromethane	ug/L	ND	1.0	11/04/11 17:52	
Ethylbenzene	ug/L	ND	1.0	11/04/11 17:52	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	11/04/11 17:52	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	11/04/11 17:52	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/04/11 17:52	
Methylene chloride	ug/L	ND	1.0	11/04/11 17:52	
n-Butylbenzene	ug/L	ND	1.0	11/04/11 17:52	
n-Propylbenzene	ug/L	ND	1.0	11/04/11 17:52	
Naphthalene	ug/L	ND	10.0	11/04/11 17:52	
p-Isopropyltoluene	ug/L	ND	1.0	11/04/11 17:52	
sec-Butylbenzene	ug/L	ND	1.0	11/04/11 17:52	
Styrene	ug/L	ND	1.0	11/04/11 17:52	
tert-Butylbenzene	ug/L	ND	1.0	11/04/11 17:52	
Tetrachloroethene	ug/L	ND	1.0	11/04/11 17:52	
Toluene	ug/L	ND	1.0	11/04/11 17:52	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/04/11 17:52	
trans-1,3-Dichloropropene	ug/L	ND	1.0	11/04/11 17:52	
Trichloroethene	ug/L	ND	1.0	11/04/11 17:52	
Trichlorofluoromethane	ug/L	ND	1.0	11/04/11 17:52	
Vinyl chloride	ug/L	ND	1.0	11/04/11 17:52	
Xylene (Total)	ug/L	ND	3.0	11/04/11 17:52	
1,2-Dichloroethane-d4 (S)	%	107	82-119	11/04/11 17:52	
4-Bromofluorobenzene (S)	%	97	87-113	11/04/11 17:52	
Dibromofluoromethane (S)	%	105	86-112	11/04/11 17:52	
Toluene-d8 (S)	%	103	90-110	11/04/11 17:52	

LABORATORY CONTROL SAMPLE: 905183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	17.3	86	81-121	
1,1,1-Trichloroethane	ug/L	20	17.6	88	82-119	
1,1,2,2-Tetrachloroethane	ug/L	20	18.1	91	78-124	
1,1,2-Trichloroethane	ug/L	20	20.3	102	79-121	
1,1-Dichloroethane	ug/L	20	18.3	91	73-119	
1,1-Dichloroethene	ug/L	20	17.7	89	75-120	
1,1-Dichloropropene	ug/L	20	18.5	93	79-123	
1,2,3-Trichlorobenzene	ug/L	20	17.8	89	73-122	
1,2,3-Trichloropropane	ug/L	20	18.1	91	77-124	
1,2,4-Trichlorobenzene	ug/L	20	17.4	87	75-120	
1,2,4-Trimethylbenzene	ug/L	20	18.7	94	77-120	
1,2-Dibromo-3-chloropropane	ug/L	20	16.7	84	69-125	
1,2-Dibromoethane (EDB)	ug/L	20	18.8	94	85-121	
1,2-Dichlorobenzene	ug/L	20	19.2	96	82-115	
1,2-Dichloroethane	ug/L	20	19.3	96	77-125	

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QUALITY CONTROL DATA

Project: KS/MO Waste Water
Pace Project No.: 60109211

LABORATORY CONTROL SAMPLE: 905183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	40.0	100	79-120	
1,2-Dichloropropane	ug/L	20	18.8	94	83-119	
1,3,5-Trimethylbenzene	ug/L	20	18.1	91	79-121	
1,3-Dichlorobenzene	ug/L	20	17.7	88	79-117	
1,3-Dichloropropane	ug/L	20	19.2	96	78-116	
1,4-Dichlorobenzene	ug/L	20	18.7	94	83-115	
2,2-Dichloropropane	ug/L	20	16.3	82	66-123	
2-Butanone (MEK)	ug/L	100	101	101	43-165	
2-Chlorotoluene	ug/L	20	18.6	93	81-117	
2-Hexanone	ug/L	100	98.3	98	47-159	
4-Chlorotoluene	ug/L	20	18.8	94	84-116	
4-Methyl-2-pentanone (MIBK)	ug/L	100	90.7	91	71-129	
Acetone	ug/L	100	111	111	18-192	
Benzene	ug/L	20	19.5	97	82-117	
Bromobenzene	ug/L	20	18.5	92	83-116	
Bromochloromethane	ug/L	20	18.9	94	79-121	
Bromodichloromethane	ug/L	20	18.5	92	79-114	
Bromoform	ug/L	20	17.8	89	78-121	
Bromomethane	ug/L	20	20.6	103	36-146	
Carbon disulfide	ug/L	20	20.6	103	75-138	
Carbon tetrachloride	ug/L	20	19.3	96	80-123	
Chlorobenzene	ug/L	20	18.2	91	83-121	
Chloroethane	ug/L	20	19.6	98	42-166	
Chloroform	ug/L	20	20.1	100	82-116	
Chloromethane	ug/L	20	17.7	88	32-127	
cis-1,2-Dichloroethene	ug/L	20	18.2	91	80-119	
cis-1,3-Dichloropropene	ug/L	20	17.0	85	76-119	
Dibromochloromethane	ug/L	20	17.9	89	81-123	
Dibromomethane	ug/L	20	19.2	96	79-123	
Dichlorodifluoromethane	ug/L	20	15.2	76	10-163	
Ethylbenzene	ug/L	20	17.7	88	79-121	
Hexachloro-1,3-butadiene	ug/L	20	18.5	92	78-125	
Isopropylbenzene (Cumene)	ug/L	20	18.7	93	80-120	
Methyl-tert-butyl ether	ug/L	20	18.1	91	78-119	
Methylene chloride	ug/L	20	19.6	98	75-118	
n-Butylbenzene	ug/L	20	18.2	91	80-126	
n-Propylbenzene	ug/L	20	18.3	91	83-116	
Naphthalene	ug/L	20	16.8	84	66-133	
p-Isopropyltoluene	ug/L	20	17.9	89	77-120	
sec-Butylbenzene	ug/L	20	17.8	89	81-120	
Styrene	ug/L	20	18.8	94	84-115	
tert-Butylbenzene	ug/L	20	18.0	90	80-117	
Tetrachloroethene	ug/L	20	19.8	99	80-124	
Toluene	ug/L	20	19.1	95	80-120	
trans-1,2-Dichloroethene	ug/L	20	21.8	109	79-120	
trans-1,3-Dichloropropene	ug/L	20	18.5	92	76-118	
Trichloroethene	ug/L	20	17.5	88	76-122	
Trichlorofluoromethane	ug/L	20	19.0	95	72-120	

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QUALITY CONTROL DATA

Project: KS/MO Waste Water
Pace Project No.: 60109211

LABORATORY CONTROL SAMPLE: 905183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	20	17.5	88	57-163	
Xylene (Total)	ug/L	60	53.9	90	75-120	
1,2-Dichloroethane-d4 (S)	%			103	82-119	
4-Bromofluorobenzene (S)	%			104	87-113	
Dibromofluoromethane (S)	%			101	86-112	
Toluene-d8 (S)	%			99	90-110	

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QUALITY CONTROL DATA

Project: KS/MO Waste Water
Pace Project No.: 60109211

QC Batch: WETA/18128
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60109211001

METHOD BLANK: 903260 Matrix: Water
Associated Lab Samples: 60109211001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	11/02/11 08:39	

LABORATORY CONTROL SAMPLE: 903261

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.6	97	90-110	

MATRIX SPIKE SAMPLE: 903262

Parameter	Units	60109214001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1.6	1.5	93	90-110	

MATRIX SPIKE SAMPLE: 903263

Parameter	Units	60109214002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	ND	1.6	1.6	102	90-110	

SAMPLE DUPLICATE: 903264

Parameter	Units	60109214008 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	ND	ND		15	

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QUALITY CONTROL DATA

Project: KS/MO Waste Water
Pace Project No.: 60109211

QC Batch: WETA/18129 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate + Nitrite, Unpres.
Associated Lab Samples: 60109211002, 60109211003, 60109211004, 60109211005, 60109211006, 60109211007

METHOD BLANK: 903266 Matrix: Water
Associated Lab Samples: 60109211002, 60109211003, 60109211004, 60109211005, 60109211006, 60109211007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Nitrate	mg/L	ND	0.10	11/02/11 09:03	

LABORATORY CONTROL SAMPLE: 903267

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	1.6	1.6	98	90-110	

MATRIX SPIKE SAMPLE: 903268

Parameter	Units	60109211007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Nitrate	mg/L	0.41	1.6	1.9	95	90-110	

SAMPLE DUPLICATE: 903269

Parameter	Units	60109238001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Nitrate	mg/L	6.8	6.8	0	15	

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QUALIFIERS

Project: KS/MO Waste Water
Pace Project No.: 60109211

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/41422

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1334694

Section A Required Client Information:
- Company: TCW Construction
- Address: 141 M Street, Lincoln NE 68508
- Email To: tKamler@tcwconstruction.com
- Phone: 402 416 7255 Fax:
- Requested Due Date/TAT:

Section B Required Project Information:
- Report To: tKamler@tcwconstruction.com
- Copy To: Surgnier@prodigy.net
- Purchase Order No.:
- Project Name: KS/MO Waste Water
- Project Number:

Section C Invoice Information:
- Attention: Travis Kamler
- Company Name: TCW Construction
- Address:
- Pace Quote Reference:
- Pace Project Manager: Trudy Gipson
- Pace Profile #:

REGULATORY AGENCY
- ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER
- ☐ UST ☐ RCRA ☐ OTHER ______

Site Location STATE: KS/MO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	40 ml VOC	40 ml EDB	250 ml NITRATES	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60109211
1	AGPURGE-W-10111	WW	C	3-18		10-30	9:00	60	5	3					2				2	2	1		(1BP3N) 2(DG9W) 2(DG9T) 01
2	BAPURGE-W-10112	WW	C	9-28		10-31	12:55	60	5	3					2				2	2	1		02
3	CNPURGE-W-10113	WW	C	4-19		10-31	14:02	60	5	3					2				2	2	1		03
4	EUBURGE-W-10114	WW	C	4-27		10-31	15:52	60	5	3					2				2	2	1		04
5	HAPURGE-W-10115	WW	C	6-13		10-31	12:27	60	5	3					2				2	2	1		05
6	MRPURGE-W-10116	WW	C	4-20		10-31	14:42	60	5	3					2				2	2	1		06
7	SVPURGE-W-10117	WW	C	8-9		10-31	18:30	60	5	3					2				2	2	1		07
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
All samples collected from drums holding purge water at sites sampled during the 2011 Year	[signature] / TCW	10-31-11	18:45	[signature]	11/1/11	920	4.2	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
- PRINT Name of SAMPLER: Travis Kamler
- SIGNATURE of SAMPLER: [signature]
- DATE Signed (MM/DD/YY): 10-31-2011

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Sample Condition Upon Receipt

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Client Name: TCN Const. Project # 60169211

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other _____

Tracking #: 8758 2746 3563 Pace Shipping Label Used? ☐ Yes ☒ No

Custody Seal on Cooler/Box Present: ☒ Yes ☐ No Seals intact: ☒ Yes ☐ No

Optional
Proj. Due Date: 11/4
Proj. Name:

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☐ Other _____

Thermometer Used: ~~T-197~~ / T-194 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 4.2
Temperature should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: JND 11/1/11 1025

Chain of Custody present:	☒Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.	NO3
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.	
Sufficient volume:	☒Yes ☐No ☐N/A	8.	
Correct containers used:	☒Yes ☐No ☐N/A	9.	
-Pace containers used:	☒Yes ☐No ☐N/A		
Containers intact:	☒Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.	
Filtered volume received for dissolved tests	☐Yes ☐No ☒N/A	12.	
Sample labels match COC:	☒Yes ☐No ☐N/A	13.	
-Includes date/time/ID/analyses Matrix: water			
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	14.	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A		
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes ☐No	Initial when completed NA	Lot # of added preservative
Trip Blank present:	☐Yes ☒No ☐N/A	15.	
Pace Trip Blank lot # (if purchased): NA			
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	16.	
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:	

Client Notification/ Resolution: Copy COC to Client? Y / (N) Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 11-1-11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Supplement 2:

Groundwater Verification Data from TestAmerica Laboratories, Inc.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 200-4949-1

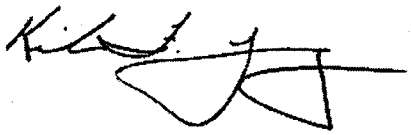
SDG Number: 200-4949

Job Description: Everest (200-4949)

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
5/4/2011 2:43 PM

Kirk F Young
Project Manager I
kirk.young@testamericainc.com
05/04/2011

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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Table of Contents

CASE NARRATIVE

Client: Argonne National Laboratory

Project: Everest (200-4949)

Report Number: 200-4949-1

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 04/29/2011. 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.

Each sample was analyzed without a dilution. 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 the method blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. 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, carbon tetrachloride, and toluene were identified in the analysis of the method blank associated with the analytical work. 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 method blank analysis. A trace concentrations of carbon disulfide was identified in the analysis of the storage blank associated with the sample set. The concentration of carbon disulfide in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Present in the method blank and storage 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: 200-4949-1
Sdg Number: 200-4949

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	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	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: Test America		Shipping Info:
PROJECT/SITE: Everest KS		ANL Field Contact (Name & Temporary Phone): Dave Surgnier 630 408 7114
SAMPLER(S) (Signature) Travis Kamler		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
April 27, 2011	EVSB34-W-29775 F	2	2	2 x 40 mL for VOC
April 28, 2011	EVSB63-W-29779	2	2	
April 28, 2011	EVSB64-W-29780	2	2	
April 28, 2011	EVQCTB-W-29790	2	2	2 x 40 mL for VOC

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	4-28-11	17:40	4/29/11 1020				

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
				4/29/11	1020	

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)

10/04/2011

Burlington Facility
Internal Chain of Custody Log (ICOC)

Project Information:

Log-in: 200-4949	**Method:** SOM01.2-Vol-TR
Client: Argonne Nat Lab	**LAB IDs:** 200-4949-1 to 200-4949-4

Samples associated with this Log-in were placed into storage on 4/29/11 (Date) 1441 (Time[2]) by: *Sample Custodian Signature*

Storage Location: Vandridge B Shelf 5 *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]
✓		4949 1-4	5/2/11	0855	✓			JH	JH	Screen
✓		"	5/2/11	0900			✓	JH	JH	Storage
✓		"	5/2/11	1130		✓		JH	JH	Analysis
✓		"	5/2/11	1140			✓	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:

Log-in: 200-4949	**Method:** SOM01.2-Vol-TR
Client: Argonne Nat Lab	**LAB IDs:** 200-4949-5

Samples associated with this Log-in were placed into storage on 4/29/11 (Date) 1441 (Time[2]) by: [signature] *Sample Custodian Signature*

Storage Location: Vent Fridge B Shelf 5 *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]
✓		4949-5	5/2/11	1130		✓		[signature]	[signature]	Analysis
✓		"	5/2/11	1140			✓	[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 Express® US Airbill

8717 3523 5226

0200 Form ID No.

FedEx Retrieval Copy

1 From

Date [illegible] Sender's FedEx Account Number [illegible]

Sender's Name [illegible] Phone [illegible]

Company [illegible]

Address [illegible]

Dept./Floor/Suite/Room

City [illegible] State [illegible] ZIP [illegible]

2 Your Internal Billing Reference [illegible]

3 To

Recipient's Name [illegible] Phone [illegible]

Company [illegible]

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 [illegible]

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 [illegible] State [illegible] ZIP [illegible]

8717 3523 5226

4a Express Package Service * To most locations. *Packages up to 150 lbs.*

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 Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.

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 150 lbs.*

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 available.

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 5 ☒ Other

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 applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No 4 ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. 6 ☐ Dry Ice — Dry Ice, 9, UN 1845 ... kg

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 Recip. Acct. No. ☐

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

[redacted]

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.

554

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Login Sample Receipt Checklist

Client: Argonne National Laboratory

Job Number: 200-4949-1
SDG Number: 200-4949

Login Number: 4949
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 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	2.5 °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.	True	
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.	False	Sample EVQCTB-W-29790 - One vial broken in transit.
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 were 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.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Sample Login Acknowledgement

Job 200-4949-1

Client Job Description:	Everest (200-4949)	**Report To:**	Argonne National Laboratory Jorge Alvarado 9700 South Cass Avenue Building 203 Office B-149 Argonne, IL 60439
Purchase Order #:	8E-00302		
Work Order #:	8E-00302		
Project Manager:	Kirk F Young		
Job Due Date:	5/13/2011		
Job TAT:	14 Days		
Max Deliverable Level:	IV	**Bill To:**	Argonne National Laboratory Accounts Payable Chief Financial Offices 9700 S. Cass Ave. Building 201 Argonne, IL 60439
Earliest Deliverable Due:	5/13/2011		

Login 200-4949

Sample Receipt:	4/29/2011 10:20:00 AM	**Number of Coolers:**	1
Method of Delivery:	FedEx Priority Overnight	**Cooler Temperature(s) (C°):**	2.5;

Lab Sample # / Method	Client Sample ID / Method Description / Work Location	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
200-4949-1	**EVSB34-W-29775**	**4/27/2011 12:00:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4949-2	**EVSB63-W-29779**	**4/28/2011 12:00:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4949-3	**EVSB64-W-29780**	**4/28/2011 12:00:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4949-4	**EVQCTB-W-29790**	**4/28/2011 12:00:00 AM**	**Water**		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4949-5	**VHBLK01**	**4/29/2011 2:35:00 PM**	**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: 200-4949

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.: EVERES Mod. Ref No.: _____ SDG No.: 200-4949

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJA	87	88	73	90	97	103	98
02	EVQCTB-W-29790	81	80	66	84	89	96	93
03	EVSB34-W-29775	88	87	74	224 *	103	120	98
04	EVSB63-W-29779	84	86	73	211 *	100	117	96
05	EVSB64-W-29780	89	90	77	198 *	103	119	101
06	VHBLK01	77	79	67	88	92	103	88

		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.: EVERES Mod. Ref No.: _____ SDG No.: 200-4949

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJA	87	103	105	99	97	107		0
02	EVQCTB-W-29790	82	97	96	93	89	97		0
03	EVSB34-W-29775	90	102	117	271 *	110	110		2
04	EVSB63-W-29779	88	101	109	237 *	100	109		2
05	EVSB64-W-29780	90	105	112	226 *	105	116		2
06	VHBLK01	79	92	95	94	92	96		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.
VBLKJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Lab File ID: JCUI04.D Lab Sample ID: MB 200-17334/4

Instrument ID: J.i

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 05/02/2011

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1134

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	EVQCTB-W-29790	200-4949-4	JCUI05.D	1211
02	EVSB34-W-29775	200-4949-1	JCUI06.D	1238
03	EVSB63-W-29779	200-4949-2	JCUI07.D	1303
04	EVSB64-W-29780	200-4949-3	JCUI08.D	1328
05	VHBLK01	200-4949-5	JCUI09.D	1352

COMMENTS:

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

EPA SAMPLE NO.
BFBJR

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Lab File Id: JCU01.D BFB Injection Date: 03/24/2011

Instrument Id: J.i BFB Injection Time: 1324

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 80.0% of mass 95	52.9
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 120% of mass 95	81.4
175	5.0 - 9.0% of mass 174	7.0 (8.6)1
176	95.0 - 101% of mass 174	81.7 (100)1
177	5.0 - 9.0% of mass 176	4.6 (5.7)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	VSTD0.5JR	IC 200-15618/3	JCU03.D	03/24/2011	1408
02	VSTD001JR	IC 200-15618/4	JCU04.D	03/24/2011	1433
03	VSTD005JR	ICIS 200-15618/5	JCU05.D	03/24/2011	1459
04	VSTD010JR	IC 200-15618/6	JCU06.D	03/24/2011	1524
05	VSTD020JR	IC 200-15618/7	JCU07.D	03/24/2011	1549

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

EPA SAMPLE NO.
BFBJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Lab File Id: JCUI01.D BFB Injection Date: 05/02/2011

Instrument Id: J.i BFB Injection Time: 1008

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.6
75	30.0 - 80.0% of mass 95	47.9
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.3 (1.5)1
174	50.0 - 120% of mass 95	88.9
175	5.0 - 9.0% of mass 174	7.1 (8.0)1
176	95.0 - 101% of mass 174	87.7 (98.6)1
177	5.0 - 9.0% of mass 176	5.6 (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	VSTD005JA	CCVIS 200-17334/2	JCUI02.D	05/02/2011	1027
02	VBLKJA	MB 200-17334/4	JCUI04.D	05/02/2011	1134
03	EVQCTB-W-2 9790	200-4949-4	JCUI05.D	05/02/2011	1211
04	EVSB34-W-2 9775	200-4949-1	JCUI06.D	05/02/2011	1238
05	EVSB63-W-2 9779	200-4949-2	JCUI07.D	05/02/2011	1303
06	EVSB64-W-2 9780	200-4949-3	JCUI08.D	05/02/2011	1328
07	VHBLK01	200-4949-5	JCUI09.D	05/02/2011	1352
08	VSTD005AJ	CCVC 200-17334/10	JCUI10.D	05/02/2011	1429

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: _____ SDG No.: 200-4949

GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 03/24/2011 03/24/2011

EPA Sample No.(VSTD#####): VSTD005JA Date Analyzed: 05/02/2011

Lab File ID (Standard): JCUI02.D Time Analyzed: 1027

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

		IS1 (CBZ) AREA	#	RT	#	IS2 (DFB) AREA	#	RT	#	IS3 (DCB) AREA	#	RT	#
	12 HOUR STD	887724		8.93		1142632		5.58		426519		11.76	
	UPPER LIMIT	1242814		9.26		1599685		5.91		597127		12.09	
	LOWER LIMIT	532634		8.60		685579		5.25		255911		11.43	
	EPA SAMPLE NO.												
01	VBLKJA	825680		8.93		1043392		5.58		378314		11.76	
02	EVQCTB-W-29790	790589		8.93		1017852		5.57		366030		11.76	
03	EVSB34-W-29775	614466		8.93		750633		5.58		292198		11.76	
04	EVSB63-W-29779	661462		8.93		798773		5.58		304487		11.76	
05	EVSB64-W-29780	645928		8.93		793680		5.58		290135		11.76	
06	VHBLK01	701396		8.93		853755		5.58		323170		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.
EVQCTB-W-29790

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI05.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	3.7	J B
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	0.50	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.
EVQCTB-W-29790

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI05.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	0.16	J B
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	0.087	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.
EVQCTB-W-29790

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI05.D

Level: (TRACE or LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	0.89	B J N
03		Unknown siloxane derivative	10.69	0.93	B J
04	E966796 [1]	Total Alkanes	N/A	20	J

[1] EPA-designated Registry Number.

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

EPA SAMPLE NO.
EVSB34-W-29775

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: _____ SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI06.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. _____ Date Analyzed: 05/02/2011

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	0.13	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	0.50	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	0.72	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	1.0	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.
EVSB34-W-29775

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI06.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	0.014	J B
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.056	J
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.
EVSB34-W-29775

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI06.D

Level: (TRACE or LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	0.50	B 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.
EVSB63-W-29779

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI07.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	0.096	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	0.50	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	0.13	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.
EVSB63-W-29779

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI07.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	0.016	J B
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.
EVSB63-W-29779

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI07.D

Level: (TRACE or LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	3.4	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.
EVSB64-W-29780

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: _____ SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI08.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. _____ Date Analyzed: 05/02/2011

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	0.78	
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	0.099	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	0.50	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	0.13	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.
EVSB64-W-29780

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI08.D

Level: (TRACE/LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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.
EVSB64-W-29780

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI08.D

Level: (TRACE or LOW/MED) TRACE Date Received: 04/29/2011

% Moisture: not dec. Date Analyzed: 05/02/2011

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	13	J

[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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date(s): 03/24/2011 03/24/2011

Heated Purge: (Y/N) N Calibration Time(s): 1408 1549

Purge Volume: 25.0 (mL)

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

LAB FILE ID: RRF0.5 = JCU03.D RRF1.0 = JCU04.D

RRF5.0 = JCU05.D RRF10 = JCU06.D RRF20 = JCU07.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.544	0.601	0.553	0.532	0.488	0.544	7.4
Chloromethane	0.438	0.442	0.422	0.410	0.366	0.416	7.4
Vinyl chloride	0.429	0.440	0.423	0.405	0.362	0.412	7.5
Bromomethane	0.233	0.236	0.233	0.204	0.180	0.217	11.2
Chloroethane	0.222	0.244	0.222	0.213	0.190	0.218	8.9
Trichlorofluoromethane	0.644	0.635	0.621	0.602	0.549	0.610	6.2
1,1-Dichloroethene	0.286	0.304	0.308	0.289	0.255	0.288	7.3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.345	0.374	0.349	0.334	0.301	0.341	7.8
Acetone	0.018	0.015	0.015	0.016	0.014	0.016	10.8
Carbon disulfide	0.991	0.897	0.906	0.850	0.813	0.891	7.5
Methyl acetate	0.041	0.052	0.045	0.046	0.044	0.046	9.0
Methylene Chloride	0.277	0.265	0.272	0.261	0.246	0.264	4.5
trans-1,2-Dichloroethene	0.336	0.336	0.349	0.338	0.315	0.335	3.7
Methyl tert-butyl ether	0.361	0.385	0.390	0.394	0.382	0.382	3.3
1,1-Dichloroethane	0.577	0.568	0.566	0.558	0.520	0.558	3.9
cis-1,2-Dichloroethene	0.306	0.331	0.326	0.325	0.307	0.319	3.6
2-Butanone	0.020	0.025	0.026	0.026	0.026	0.024	11.2
Bromochloromethane	0.107	0.109	0.108	0.104	0.101	0.106	2.8
Chloroform	0.528	0.560	0.559	0.537	0.510	0.539	4.0
1,1,1-Trichloroethane	0.679	0.694	0.719	0.682	0.674	0.689	2.6
Cyclohexane	0.603	0.630	0.720	0.698	0.699	0.670	7.5
Carbon tetrachloride	0.610	0.622	0.658	0.634	0.630	0.631	2.8
Benzene	1.466	1.610	1.649	1.624	1.611	1.592	4.5
1,2-Dichloroethane	0.210	0.221	0.217	0.226	0.208	0.216	3.7
Trichloroethene	0.384	0.414	0.421	0.408	0.410	0.407	3.4
Methylcyclohexane	0.464	0.484	0.516	0.519	0.515	0.500	4.9

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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date(s): 03/24/2011 03/24/2011

Heated Purge: (Y/N) N Calibration Time(s): 1408 1549

Purge Volume: 25.0 (mL)

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

LAB FILE ID: RRF0.5 = JCU03.D RRF1.0 = JCU04.D

RRF5.0 = JCU05.D RRF10 = JCU06.D RRF20 = JCU07.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
1,2-Dichloropropane	0.311	0.297	0.328	0.313	0.308	0.311	3.5
Bromodichloromethane	0.380	0.377	0.389	0.382	0.376	0.381	1.3
cis-1,3-Dichloropropene	0.396	0.377	0.465	0.457	0.460	0.431	9.6
4-Methyl-2-pentanone	0.060	0.070	0.079	0.079	0.079	0.073	11.4
Toluene	1.553	1.602	1.797	1.747	1.684	1.677	6.0
trans-1,3-Dichloropropene	0.271	0.277	0.331	0.328	0.324	0.306	9.6
1,1,2-Trichloroethane	0.138	0.168	0.170	0.159	0.157	0.158	8.0
Tetrachloroethene	0.348	0.346	0.376	0.362	0.352	0.357	3.5
2-Hexanone	0.034	0.041	0.054	0.053	0.054	0.047	19.1
Dibromochloromethane	0.203	0.209	0.221	0.223	0.222	0.216	4.2
1,2-Dibromoethane	0.122	0.143	0.143	0.147	0.143	0.140	7.3
Chlorobenzene	0.996	1.039	1.018	1.004	0.985	1.008	2.1
Ethylbenzene	1.586	1.771	1.977	1.974	1.971	1.856	9.4
o-Xylene	0.596	0.606	0.702	0.705	0.706	0.663	8.5
m,p-Xylene	0.579	0.651	0.782	0.774	0.777	0.713	13.0
Styrene	0.706	0.892	1.074	1.093	1.078	0.969	17.4
Bromoform	0.232	0.195	0.213	0.201	0.214	0.211	6.7
Isopropylbenzene	1.462	1.631	2.003	2.029	2.015	1.828	14.4
1,1,2,2-Tetrachloroethane	0.131	0.153	0.146	0.144	0.143	0.144	5.4
1,3-Dichlorobenzene	1.461	1.504	1.618	1.535	1.520	1.528	3.8
1,4-Dichlorobenzene	1.511	1.553	1.598	1.527	1.521	1.542	2.3
1,2-Dichlorobenzene	1.169	1.252	1.285	1.245	1.246	1.240	3.5
1,2-Dibromo-3-Chloropropane	0.044	0.042	0.037	0.043	0.044	0.042	6.2
1,2,4-Trichlorobenzene	0.604	0.690	0.758	0.740	0.769	0.712	9.5
1,2,3-Trichlorobenzene	0.457	0.508	0.543	0.537	0.545	0.518	7.2

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date(s): 03/24/2011 03/24/2011

Heated Purge: (Y/N) N Calibration Time(s): 1408 1549

Purge Volume: 25.0 (mL)

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

LAB FILE ID: RRF0.5 = JCU03.D RRF1.0 = JCU04.D

RRF5.0 = JCU05.D RRF10 = JCU06.D RRF20 = JCU07.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Vinyl Chloride-d3	0.390	0.401	0.373	0.356	0.320	0.368	8.7
Chloroethane-d5	0.310	0.310	0.285	0.263	0.228	0.279	12.5
1,1-Dichloroethene-d2	0.600	0.671	0.636	0.611	0.555	0.615	7.0
2-Butanone-d5	0.025	0.025	0.026	0.027	0.026	0.026	4.1
Chloroform-d	0.587	0.591	0.583	0.565	0.535	0.572	4.0
1,2-Dichloroethane-d4	0.183	0.182	0.183	0.182	0.172	0.180	2.7
Benzene-d6	1.411	1.574	1.642	1.613	1.586	1.565	5.8
1,2-Dichloropropane-d6	0.419	0.358	0.427	0.419	0.359	0.396	8.8
Toluene-d8	1.263	1.374	1.546	1.505	1.445	1.427	7.8
trans-1,3-Dichloropropene-d4	0.238	0.255	0.297	0.300	0.296	0.277	10.3
2-Hexanone-d5	0.018	0.023	0.029	0.030	0.030	0.026	20.3
1,1,2,2-Tetrachloroethane-d2	0.140	0.151	0.154	0.151	0.147	0.149	3.7
1,2-Dichlorobenzene-d4	0.772	0.792	0.822	0.775	0.779	0.788	2.6

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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date: 05/02/2011 Time: 1027

Lab File Id: JCUI02.D Init. Calib. Date(s): 03/24/2011 03/24/2011

EPA Sample No.(VSTD####): VSTD005JA Init. Calib. Time(s): 1408 1549

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	0.544	0.389	0.010	-28.5	40.0
Chloromethane	0.416	0.279	0.010	-33.0	40.0
Vinyl chloride	0.412	0.309	0.010	-25.0	30.0
Bromomethane	0.217	0.181	0.100	-16.5	30.0
Chloroethane	0.218	0.176	0.010	-19.5	40.0
Trichlorofluoromethane	0.610	0.540	0.010	-11.6	40.0
1,1-Dichloroethene	0.288	0.258	0.100	-10.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.341	0.303	0.010	-11.0	40.0
Acetone	0.016	0.013	0.010	-15.0	40.0
Carbon disulfide	0.891	0.811	0.010	-8.9	40.0
Methyl acetate	0.046	0.040	0.010	-13.5	40.0
Methylene Chloride	0.264	0.242	0.010	-8.4	40.0
trans-1,2-Dichloroethene	0.335	0.316	0.010	-5.5	40.0
Methyl tert-butyl ether	0.382	0.355	0.010	-7.0	40.0
1,1-Dichloroethane	0.558	0.493	0.200	-11.6	30.0
cis-1,2-Dichloroethene	0.319	0.305	0.010	-4.5	40.0
2-Butanone	0.024	0.022	0.010	-9.2	40.0
Bromochloromethane	0.106	0.106	0.050	-0.1	30.0
Chloroform	0.539	0.510	0.200	-5.5	30.0
1,1,1-Trichloroethane	0.689	0.677	0.100	-1.8	30.0
Cyclohexane	0.670	0.619	0.010	-7.6	40.0
Carbon tetrachloride	0.631	0.652	0.100	3.3	30.0
Benzene	1.592	1.498	0.400	-5.9	30.0
1,2-Dichloroethane	0.216	0.208	0.100	-3.8	30.0
Trichloroethene	0.407	0.411	0.300	1.0	30.0
Methylcyclohexane	0.500	0.476	0.010	-4.8	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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date: 05/02/2011 Time: 1027

Lab File Id: JCUI02.D Init. Calib. Date(s): 03/24/2011 03/24/2011

EPA Sample No.(VSTD####): VSTD005JA Init. Calib. Time(s): 1408 1549

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	0.311	0.283	0.010	-9.1	40.0
Bromodichloromethane	0.381	0.378	0.200	-0.8	30.0
cis-1,3-Dichloropropene	0.431	0.439	0.200	1.9	30.0
4-Methyl-2-pentanone	0.073	0.067	0.010	-8.4	40.0
Toluene	1.677	1.654	0.400	-1.4	30.0
trans-1,3-Dichloropropene	0.306	0.307	0.100	0.4	30.0
1,1,2-Trichloroethane	0.158	0.161	0.100	1.5	30.0
Tetrachloroethene	0.357	0.379	0.100	6.1	30.0
2-Hexanone	0.047	0.044	0.010	-6.4	40.0
Dibromochloromethane	0.216	0.230	0.100	6.8	30.0
1,2-Dibromoethane	0.140	0.140	0.010	0.6	40.0
Chlorobenzene	1.008	1.011	0.500	0.2	30.0
Ethylbenzene	1.856	1.872	0.100	0.9	30.0
o-Xylene	0.663	0.688	0.300	3.8	30.0
m,p-Xylene	0.713	0.748	0.300	4.9	30.0
Styrene	0.969	1.033	0.300	6.6	30.0
Bromoform	0.211	0.229	0.050	8.4	30.0
Isopropylbenzene	1.828	1.925	0.010	5.3	40.0
1,1,2,2-Tetrachloroethane	0.144	0.139	0.100	-3.4	30.0
1,3-Dichlorobenzene	1.528	1.584	0.400	3.7	30.0
1,4-Dichlorobenzene	1.542	1.529	0.400	-0.8	30.0
1,2-Dichlorobenzene	1.240	1.234	0.400	-0.5	30.0
1,2-Dibromo-3-Chloropropane	0.042	0.039	0.010	-6.8	40.0
1,2,4-Trichlorobenzene	0.712	0.719	0.200	1.0	30.0
1,2,3-Trichlorobenzene	0.518	0.495	0.200	-4.4	30.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date: 05/02/2011 Time: 1027

Lab File Id: JCUI02.D Init. Calib. Date(s): 03/24/2011 03/24/2011

EPA Sample No.(VSTD####): VSTD005JA Init. Calib. Time(s): 1408 1549

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	0.368	0.261	0.010	-29.0	30.0
Chloroethane-d5	0.279	0.210	0.010	-24.9	40.0
1,1-Dichloroethene-d2	0.615	0.506	0.010	-17.7	30.0
2-Butanone-d5	0.026	0.022	0.010	-15.4	40.0
Chloroform-d	0.572	0.522	0.010	-8.7	30.0
1,2-Dichloroethane-d4	0.180	0.165	0.010	-8.6	30.0
Benzene-d6	1.565	1.427	0.010	-8.8	30.0
1,2-Dichloropropane-d6	0.396	0.370	0.010	-6.7	40.0
Toluene-d8	1.427	1.410	0.010	-1.2	30.0
trans-1,3-Dichloropropene-d4	0.277	0.278	0.010	0.3	30.0
2-Hexanone-d5	0.026	0.025	0.010	-5.4	40.0
1,1,2,2-Tetrachloroethane-d2	0.149	0.133	0.010	-10.6	30.0
1,2-Dichlorobenzene-d4	0.788	0.767	0.010	-2.7	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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date: 05/02/2011 Time: 1429

Lab File Id: JCUI10.D Init. Calib. Date(s): 03/24/2011 03/24/2011

EPA Sample No.(VSTD####): VSTD005AJ Init. Calib. Time(s): 1408 1549

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	0.544	0.452	0.010	-16.9	50.0
Chloromethane	0.416	0.305	0.010	-26.5	50.0
Vinyl chloride	0.412	0.330	0.010	-19.7	50.0
Bromomethane	0.217	0.195	0.010	-10.4	50.0
Chloroethane	0.218	0.189	0.010	-13.2	50.0
Trichlorofluoromethane	0.610	0.622	0.010	1.9	50.0
1,1-Dichloroethene	0.288	0.288	0.010	0.1	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.341	0.356	0.010	4.4	50.0
Acetone	0.016	0.017	0.010	7.1	50.0
Carbon disulfide	0.891	0.855	0.010	-4.1	50.0
Methyl acetate	0.046	0.042	0.010	-7.8	50.0
Methylene Chloride	0.264	0.277	0.010	4.7	50.0
trans-1,2-Dichloroethene	0.335	0.353	0.010	5.5	50.0
Methyl tert-butyl ether	0.382	0.411	0.010	7.5	50.0
1,1-Dichloroethane	0.558	0.544	0.010	-2.5	50.0
cis-1,2-Dichloroethene	0.319	0.346	0.010	8.5	50.0
2-Butanone	0.024	0.026	0.010	4.5	50.0
Bromochloromethane	0.106	0.121	0.010	14.1	50.0
Chloroform	0.539	0.581	0.010	7.9	50.0
1,1,1-Trichloroethane	0.689	0.753	0.010	9.2	50.0
Cyclohexane	0.670	0.646	0.010	-3.6	50.0
Carbon tetrachloride	0.631	0.736	0.010	16.7	50.0
Benzene	1.592	1.628	0.010	2.3	50.0
1,2-Dichloroethane	0.216	0.244	0.010	12.7	50.0
Trichloroethene	0.407	0.445	0.010	9.3	50.0
Methylcyclohexane	0.500	0.509	0.010	1.9	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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date: 05/02/2011 Time: 1429

Lab File Id: JCUI10.D Init. Calib. Date(s): 03/24/2011 03/24/2011

EPA Sample No.(VSTD####): VSTD005AJ Init. Calib. Time(s): 1408 1549

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	0.311	0.302	0.010	-3.1	50.0
Bromodichloromethane	0.381	0.423	0.010	11.1	50.0
cis-1,3-Dichloropropene	0.431	0.465	0.010	7.8	50.0
4-Methyl-2-pentanone	0.073	0.077	0.010	5.5	50.0
Toluene	1.677	1.854	0.010	10.6	50.0
trans-1,3-Dichloropropene	0.306	0.356	0.010	16.3	50.0
1,1,2-Trichloroethane	0.158	0.175	0.010	10.6	50.0
Tetrachloroethene	0.357	0.416	0.010	16.6	50.0
2-Hexanone	0.047	0.051	0.010	8.5	50.0
Dibromochloromethane	0.216	0.260	0.010	20.4	50.0
1,2-Dibromoethane	0.140	0.164	0.010	17.4	50.0
Chlorobenzene	1.008	1.108	0.010	9.9	50.0
Ethylbenzene	1.856	2.049	0.010	10.4	50.0
o-Xylene	0.663	0.762	0.010	15.0	50.0
m,p-Xylene	0.713	0.823	0.010	15.4	50.0
Styrene	0.969	1.153	0.010	19.0	50.0
Bromoform	0.211	0.253	0.010	20.1	50.0
Isopropylbenzene	1.828	2.116	0.010	15.8	50.0
1,1,2,2-Tetrachloroethane	0.144	0.156	0.010	8.6	50.0
1,3-Dichlorobenzene	1.528	1.694	0.010	10.9	50.0
1,4-Dichlorobenzene	1.542	1.700	0.010	10.2	50.0
1,2-Dichlorobenzene	1.240	1.386	0.010	11.8	50.0
1,2-Dibromo-3-Chloropropane	0.042	0.044	0.010	4.6	50.0
1,2,4-Trichlorobenzene	0.712	0.794	0.010	11.4	50.0
1,2,3-Trichlorobenzene	0.518	0.561	0.010	8.4	50.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Instrument ID: J.i Calibration Date: 05/02/2011 Time: 1429

Lab File Id: JCUI10.D Init. Calib. Date(s): 03/24/2011 03/24/2011

EPA Sample No.(VSTD####): VSTD005AJ Init. Calib. Time(s): 1408 1549

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	0.368	0.291	0.010	-20.8	50.0
Chloroethane-d5	0.279	0.238	0.010	-14.8	50.0
1,1-Dichloroethene-d2	0.615	0.572	0.010	-6.9	50.0
2-Butanone-d5	0.026	0.025	0.010	-4.9	50.0
Chloroform-d	0.572	0.582	0.010	1.6	50.0
1,2-Dichloroethane-d4	0.180	0.200	0.010	11.0	50.0
Benzene-d6	1.565	1.580	0.010	0.9	50.0
1,2-Dichloropropane-d6	0.396	0.412	0.010	3.9	50.0
Toluene-d8	1.427	1.531	0.010	7.3	50.0
trans-1,3-Dichloropropene-d4	0.277	0.304	0.010	9.6	50.0
2-Hexanone-d5	0.026	0.029	0.010	10.1	50.0
1,1,2,2-Tetrachloroethane-d2	0.149	0.158	0.010	6.2	50.0
1,2-Dichlorobenzene-d4	0.788	0.843	0.010	7.0	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.
VBLKJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-17334/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI04.D

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

% Moisture: not dec. Date Analyzed: 05/02/2011

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	1.4	J
75-15-0	Carbon disulfide	0.16	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	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	0.022	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.
VBLKJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-17334/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI04.D

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

% Moisture: not dec. Date Analyzed: 05/02/2011

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	0.0095	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	0.50	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.
VBLKJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: _____ SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-17334/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI04.D

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

% Moisture: not dec. _____ Date Analyzed: 05/02/2011

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-	4.12	2.5	J N
02		Unknown	6.90	3.2	X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	1.3	J N
04		Unknown siloxane derivative	10.69	1.7	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.
VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-5

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI09.D

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

% Moisture: not dec. Date Analyzed: 05/02/2011

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	0.069	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	0.50	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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-5

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI09.D

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

% Moisture: not dec. Date Analyzed: 05/02/2011

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.: EVERES Mod. Ref No.: SDG No.: 200-4949

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4949-5

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUI09.D

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

% Moisture: not dec. Date Analyzed: 05/02/2011

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	3.2	B X J
02	E966796 [1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

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