ANL/EVS/AGEM/TR-11-04

Argonne NATIONAL LABORATORY

Annual Report of Monitoring at Barnes, Kansas, in 2010

Environmental Science Division

USDA 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

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Notation

AGEM	Applied Geosciences and Environmental Management
AMSL	above mean sea level
BGL	below ground level
°C	degree(s) Celsius
CCC	Commodity Credit Corporation
CD	compact disc
COC	chain of custody
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
gal	gallon(s)
hr	hour(s)
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
min	minute
mV	millivolt(s)
ND	not detected
PWS	public water supply
RBSL	risk-based screening level
USDA	U.S. Department of Agriculture
VOC	volatile organic compound

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1 Introduction and Background

The Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA) operated a grain storage facility at Barnes, Kansas, in 1949-1974. Carbon tetrachloride contamination was initially detected in 1986 in the town's public water supply wells. In 2006-2007, the CCC/USDA conducted a comprehensive targeted investigation at and near its former property in Barnes to characterize this contamination. Those results were reported previously (Argonne 2008a). The results of that investigation indicated that carbon tetrachloride contamination is present in groundwater at low to moderate levels in the vicinity of the former CCC/USDA grain storage facility.

Information obtained during the 2006-2007 investigation also indicated that at least one other potential source might have contributed to the groundwater contaminant plume (Argonne 2008a). The former agriculture building owned by the local school district, located immediately east of well PWS3, is also a potential source of the contamination.

In November 2007, the CCC/USDA began periodic groundwater monitoring at Barnes. The monitoring is being conducted on behalf of the CCC/USDA by Argonne National Laboratory, under the direction of the Kansas Department of Health and Environment (KDHE). The objective is to monitor the carbon tetrachloride contamination identified in the groundwater at Barnes. Through 2010, sampling was conducted in a network of 28 individual monitoring wells (at 19 distinct locations), 2 public water supply wells, and 1 private well (Figure 1.1).

The results of the 2006-2007 targeted investigation and the subsequent monitoring events (Argonne 2008a-d, 2009a,b, 2010) demonstrated the presence of carbon tetrachloride contamination in groundwater at levels exceeding the KDHE Tier 2 risk-based screening level (RBSL) of 5.0 μg/L for this compound. The contaminant plume appears to extend from the former CCC/USDA property northwestward, toward the Barnes public water supply wells. Long-term monitoring of the groundwater levels and the contaminant distribution has confirmed that pumping of the public water supply wells affects the direction of groundwater flow. When these wells are not pumping, the direction of groundwater flow is to the northeast. However, when they are pumping, groundwater flow is directed to the northwest, toward the public wells.

A contingency interim measure (Argonne 2009c) has been approved by the KDHE (2009) and will be implemented if the two operating public water supply wells become contaminated at levels above the RBSL of 5.0 μg/L for carbon tetrachloride.

This current report presents the results of monitoring conducted in 2010. Sampling of the monitoring well network was conducted in March-April 2010 and September 2010. In addition, the two operating public water supply wells were sampled in June 2010 and December 2010. On the basis of an evaluation of the data collected in 2006-2009 (Argonne 2010), including a trend analysis of the site contamination and its migration, the KDHE (2010) concurred that future monitoring will occur on an annual basis, with twice-yearly sampling of the two public water supply wells in service (conducted in cooperation with the city). The KDHE (2010) also agreed to decrease the number wells to be sampled in the future, as discussed in Section 5.

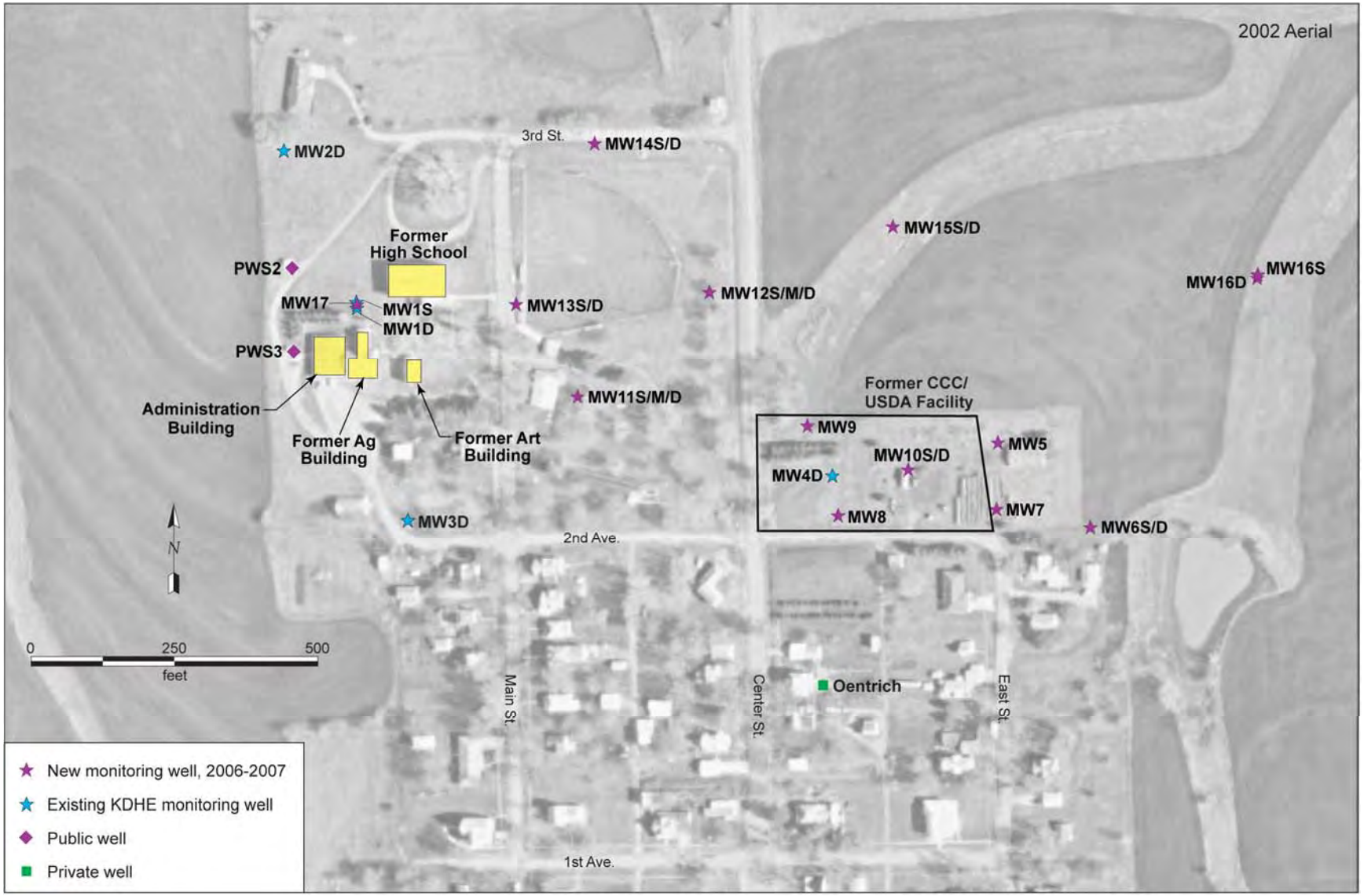

FIGURE 1.1 Groundwater sampling locations at Barnes in 2010. Source of photograph: NAPP (2002).

2 Conceptual Site Model

Barnes lies in a transition zone between the Flint Hills and the glaciated region. The area's topography consists of gently sloping hills of Pleistocene loess (with variations in elevation < 50 ft) overlying a shale unit and interbedded shale, limestone, and siltstone of the Permian Chase Group. Groundwater for the public water supply is produced from the bedrock aquifer of the Chase Group.

The site lithology and subsurface contaminant conditions were determined in the 2006-2007 investigation through the collection of continuous-core samples at 13 locations (MW5-MW17) extending from east of the former CCC/USDA grain storage facility and westward, across the area of concern, toward the public water supply wells (Argonne 2008a). The predominant lithology consists of a thin layer of silty clay to clayey silt with fine sand in the upper 2-20 ft. This layer is underlain by highly weathered shale interbedded with thin layers of fractured limestone at depths of approximately 18-132 ft BGL (below ground level). No soil contamination at concentrations above the current RBSL of 73.4 µg/kg for the soil-to-groundwater protection pathway was detected at any of the 13 locations. Trace concentrations (< 10 µg/kg) of carbon tetrachloride were detected in soil at 3 locations on the former CCC/USDA facility property. These low concentrations would not result in higher concentrations in groundwater, and therefore the soil on the former CCC/USDA property is not considered to be a source for the carbon tetrachloride contamination in groundwater.

Groundwater is present predominantly in the fractured limestone layers. Monitoring wells were installed and screened at various depths, with several locations completed as nested wells to determine contaminant concentrations at depths where water-bearing zones were indicated. Throughout the monitoring program, a detailed evaluation of the hand-measured water levels and carbon tetrachloride data has been conducted to investigate the stratigraphy of the saturated zone. The accumulated water level data confirm that three vertically distinct aquifer zones are present: shallow, intermediate, and deep. These zones are discussed further in Section 4.1. The vertical distribution of the carbon tetrachloride in groundwater indicates that the highest concentrations (approximately 50-80 µg/L over the course of the monitoring program to date) occur in the intermediate aquifer zone. Lower concentrations have been detected in the deep aquifer zone, and no carbon tetrachloride has been detected in the shallow zone. Trace levels of carbon tetrachloride have been detected periodically in the two public water supply wells; these wells are believed to be screened over all three aquifer zones.

Extensive documentation of the potentiometric surface at Barnes during the targeted investigation and subsequent monitoring events (Argonne 2008a-d, 2009a,b, 2010) has indicated that operation of the public water supply wells strongly influences the groundwater flow direction. The accumulated data document a predominant direction of groundwater flow to the northeast under non-pumping conditions. In contrast, flow is toward the northwest, in the approximate direction of the public wells, when they are pumping. The data demonstrate that the public water supply wells are operated daily, with drawdowns of as much as 2.25 ft during pumping. Pumping and subsequent water level recovery periods typically range from 3 hr to 7 hr in duration, resulting in groundwater levels (and apparent flow directions) that shift relatively continuously throughout much of each day. For this reason, water level data collected by the automatic recorders, which are coincident in time at all monitored locations, provide the primary basis for determining the topology of the potentiometric surface at any point in the cycles of groundwater pumping and recovery.

The automatic recorder data also provide critical information needed to evaluate the hydrologic regime in anticipation of a corrective action study. The data accumulated for recorders installed in deep-zone wells indicate the presence of both vertical and lateral influences on the local hydraulic gradients. Intermediate-zone wells equipped with automatic water level recorders obtain detailed data on the potential temporal variability of the hydraulic heads in this aquifer zone.

3 Sampling and Analysis Activities in 2010

3.1 Measurement of Groundwater Levels

The groundwater sampling events at Barnes on March 30-April 1, 2010, and on September 17-18, 2010, involved 1 private well (Oentrich) and 28 monitoring wells (MW1S, MW1D, MW2D, MW3D, MW4D, MW5, MW6S, MW6D, MW7, MW8, MW9, MW10S, MW10D, MW11S, MW11M, MW11D, MW12S, MW12M, MW12D, MW13S, MW13D, MW14S, MW14D, MW15S, MW15D, MW16S, MW16D, MW17). In addition, sampling of the two operating public water supply wells (PWS2 and PWS3) was conducted on March 31, June 17, September 18, and December 15, 2010. All of the well locations are shown in Figure 1.1. A chronological summary of the field activities in 2010 is in Appendix A, Table A.1.

Before implementation of the low-flow sampling described in Section 3.2, a hand-held water level indicator was used to measure the depth to groundwater and the total depth of each well, to within 0.01 ft, from the top of the well casing. During the 2010 sampling events, monitoring wells MW1S and MW12S were measured but were found to be dry, and consequently they could not be sampled. Two public water supply wells (PWS2 and PWS3) and one private well (Oentrich) were sampled but could not be measured because of the pumps and other equipment in the wells. Introduction of measuring devices could result in damage to the wells.

In addition to the manual water level measurements, since 2006 data recorders have been gathering long-term data on the groundwater elevation and gradient at selected monitoring wells across the investigation area. The data loggers record water levels continuously at 60-min intervals. To augment the data generated by recorders installed in the deeper aquifer zone, in November 2008 water level recorders were installed in five wells — MW10S, MW11M, MW12M, MW13S, and MW17 — to investigate the potential hydraulic influences on groundwater flow and contaminant migration in the intermediate aquifer zone, in which the highest concentrations of carbon tetrachloride in groundwater have been identified. In 2010, a total of 14 wells were monitored for water levels, at the locations shown in Figure 3.1.

The hand-measured and automatically recorded groundwater level data are presented and discussed in Section 4.1.

3.2 Well Sampling and Analyses

After measurement of water levels, low-flow groundwater sampling techniques, according to U.S. Environmental Protection Agency (EPA) guidelines (Puls and Barcelona 1996; Yeskis and Zavala 2002), were used to purge and sample the monitoring wells. The Oentrich well and the public water supply wells were sampled at their respective faucets after purging for 5-10 min (Table A.1 in Appendix A). The field measurements are in Appendix A, Table A.2. For public wells PWS2 and PWS3, samples of untreated ("raw") produced water were collected at the wellheads prior to mixing and introduction into the public distribution system.

Under the exact requirements of state regulation K.A.R. 28-15, compliance samples would be collected from the distribution system after treatment and after water from the wells had been combined, as indicated in 40 CFR 141.24(f)(3). The sampling of individual wellheads at Barnes to test each well is a more stringent comparison with the Tier 2 standard of 5.0 μg/L than sampling of the blended water.

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

The analytical results are presented and discussed in Section 4.2.

3.3 Handling and Disposal of Investigation-Derived Waste

Purge water generated as potentially contaminated investigation-derived waste was containerized on-site in 55-gal drums. The accumulated purge water (less than two drums) was sampled for VOCs (including ethylene dibromide) and nitrates. The samples were analyzed by a Kansas-certified laboratory, Pace Analytical Services (Lenexa, Kansas). The analytical results are in Supplement 1, on the compact disc (CD) inside the back cover of this report. The concentrations of carbon tetrachloride, chloroform, ethylene dibromide, and nitrate were below

the KDHE standards. On December 17, 2010, the wastewater was taken to the Sabetha municipal water treatment facility for disposal.

3.4 Quality Control for Sample Collection, Handling, and Analysis

Quality assurance/quality control procedures followed during the 2010 monitoring events are described in detail in the *Master Work Plan* (Argonne 2002). The results are summarized as follows:

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

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

- Quality control samples collected to monitor sample-handling activities (field blank, equipment rinsates and trip blanks) and method blanks analyzed with the samples to monitor analytical methodologies were all free of carbon tetrachloride and chloroform contamination. Analytical results for quality control samples collected to monitor sample-handling activities are in Appendix B, Table B.1.

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

- Results from the AGEM Laboratory for dual analyses of the groundwater samples are in Appendix B, Table B.2. The results of the dual analyses

compare well, with average relative percent difference values for carbon tetrachloride and chloroform of approximately 8.4% and 2.3%, respectively, indicating consistency in the sampling and analytical methodologies.

- In accordance with the procedures defined in the *Master Work Plan* (Argonne 2002), groundwater samples were submitted to a second laboratory (TestAmerica) for verification analysis according to the protocols of the EPA's Contract Laboratory Program. Documentation is in Supplement 2 (on CD). The results from the two laboratories compare favorably, with average relative percent difference values for carbon tetrachloride and chloroform of 14% and 4%, respectively. Methylene chloride was not detected by either laboratory. The lack of contamination in the sample from public well PWS3 was confirmed in verification analysis.

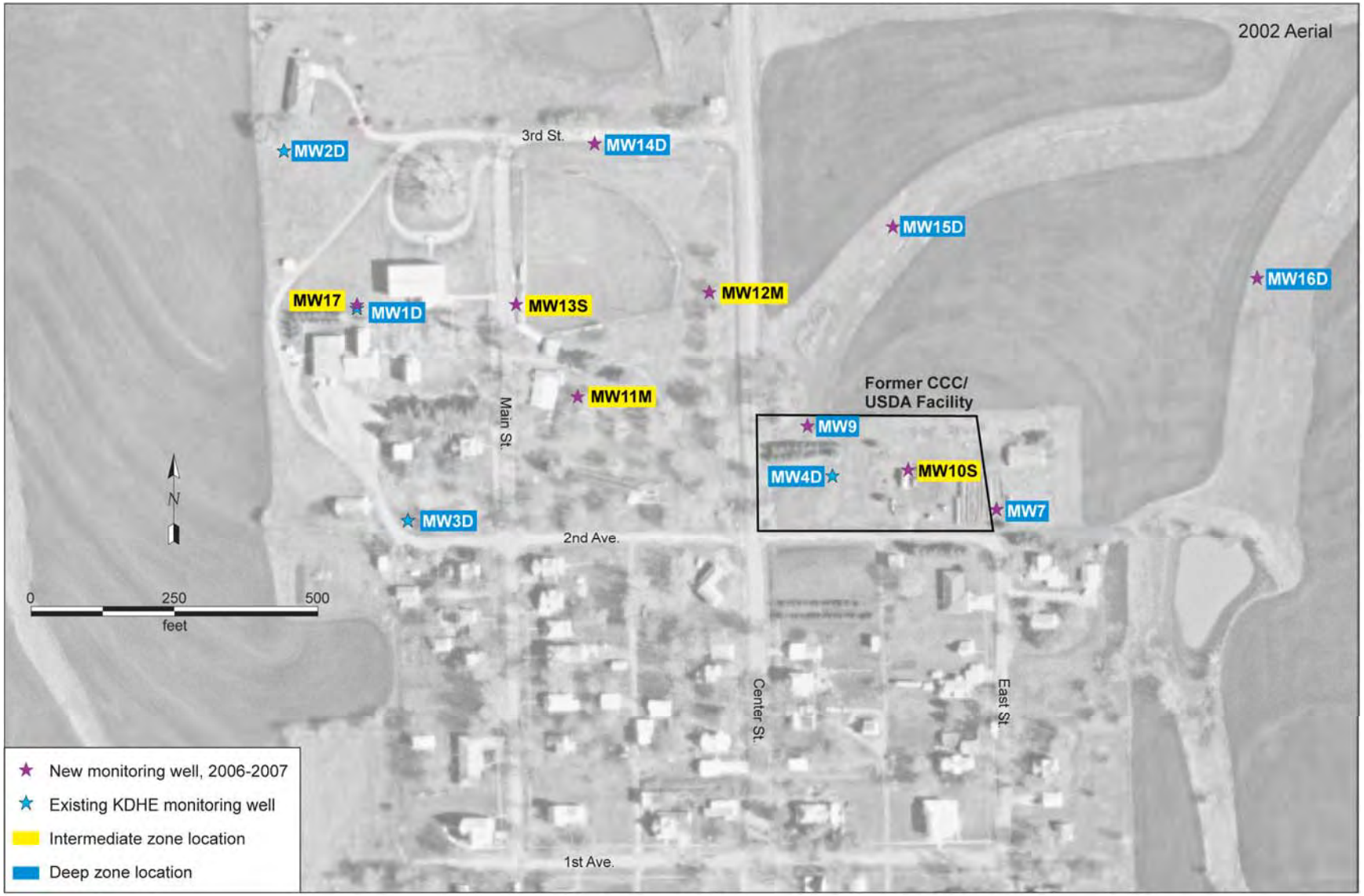

FIGURE 3.1 Wells at Barnes equipped with data loggers for automatic water level monitoring in 2010. Source of photograph: NAPP (2002).

4 Results and Discussion

4.1 Groundwater Level Data

The manual water level measurements taken during 2010 are in Table 4.1. Included are measurements made during sampling of the monitoring well network on March 30-April 1 and September 17-18, 2010, and hand measurements taken on February 3 and July 16, 2010, for all shallow, intermediate, and deep wells in the monitoring network. Evaluation of manual water level measurements (together with the contaminant distribution data discussed in Section 4.2) continues to suggest that three vertically distinguishable aquifer zones are present at Barnes: shallow, intermediate, and deep. The designations "S," "M," and "D" in monitoring well names (Table 4.1) were assigned at the time of well installation. They indicate shallow-, medium-, and deep-screened (relative depths) wells in an individual well cluster, rather than the aquifer zone screened. Table 4.2 shows the approximate water level elevations for wells screened in the three aquifer zones, as indicated by the long-term monitoring data accumulated since 2007. As in the prior monitoring events, three vertically distinguished aquifer zones are also evident in the 2010 sampling events (Table 4.2).

Water level data collected by the automatic recorders, which are coincident in time at all monitored locations, provide the primary basis for determination of the topology of the potentiometric surface at any point in the cycles of groundwater pumping and recovery. Water levels measured by hand over a finite time period in the areally distributed network of monitoring wells at this site cannot generally be relied on to yield a meaningful representation of groundwater flow directions under pumping conditions, because of the documented short-term, transient water level variations that are related to pumping cycles in the public water supply wells. Figure 4.1a presents a potentiometric surface map (under non-pumping conditions) on February 2, 2010, for the network of wells in the deeper aquifer zone currently being monitored (see Section 3.1). Figure 4.1b represents a comparable map derived from measurements taken on February 2, 2010, under pumping conditions.

The hydrographs in Figures 4.2a and 4.2b summarize data for the recording transducers in the deep-zone wells (January-December 2010) and the intermediate-zone wells (January-September 2010 only, because of recorder failures), respectively. The hydrographs for the deep-zone wells showed relatively stable water levels in January, after which levels increased in a somewhat stepwise fashion from February through mid July. A net increase of up to

approximately 18 ft is evident over this period at most locations. The levels slowly declined through the remainder of the year, but they were still approximately 11 ft higher at many locations at the end of the year than in January 2010. A similar pattern of seasonal rise in the water levels in the intermediate zone is also indicated, although the data for this interval are incomplete because of multiple recorder failures. Increases of 12-16 ft are indicated from January to July in this zone.

Prior to November 2008, Argonne observed suggestions of the presence of vertical hydraulic gradients in the data from recorders in the deep portion of the aquifer (particularly at MW15D). Consequently, in November 2008, wells in the intermediate portion of the aquifer (MW10S, MW11M, MW12M, MW13S, and MW17; Table 4.1) were equipped with automatic water level recorders to generate detailed data on the potential temporal variability of the hydraulic heads in this aquifer zone. The observed groundwater levels in the intermediate zone (Figure 4.2b) do not show the degree of drawdown response observed in the deep wells.

These data, together with the VOCs analyses of groundwater samples discussed in Section 4.2, support a plausible working interpretation for the movement of groundwater (and carbon tetrachloride) in the study area. The existing results suggest that the entire saturated sequence at Barnes is hydraulically interconnected but varies internally in both vertical and horizontal permeability. The permeability in the more shaly parts of the section (which include the intermediate aquifer zone) appears to be generally lower than the permeability in the deep aquifer zone, and migration pathways might therefore be more complex in the shaly materials. The shaly materials of the intermediate zone appear to have sufficient vertical permeability to have allowed infiltration of carbon tetrachloride into the deeper parts of the section. The vertical permeability is still quite low, however, as evidenced by the significant vertical gradients documented in the nested wells (Table 4.1).

Most of the deep monitoring wells are associated with limestones (see Figures 4.1-4.5 in Argonne 2008a). The logs show that even though MW15D is considered a “deep” well, it is not completed in these limestones. Well MW15D has always returned much higher measured groundwater levels than would be expected, given its relative areal position at the site (Figures 3.1 and 4.2a) and its screened depth. This observation is qualitatively consistent with the hypothesis that the higher groundwater levels in MW15D are a reflection of lower permeability associated with the shales at this location, versus the nearby limestones — which appear to act as better carrier beds.

The observed groundwater levels in the intermediate-zone wells do not appear to define an apparent flow direction toward the public water supply wells, despite the mapped occurrence of carbon tetrachloride contamination in this stratigraphic interval (Section 4.2). The relative water levels do, however, appear qualitatively linked to the elevations of the screens in the respective intermediate-zone monitoring wells. Well MW11 has the highest recorded groundwater levels and the shallowest (in terms of elevation) screened interval, with MW10-MW12 the next lower in screened elevations (and water levels), and MW13-MW17 the lowest. The existing data empirically indicate that the measured "head" in each of these wells is more strongly influenced by the vertical position of the well screen than by the areal location of the well in the intermediate zone of the groundwater flow system.

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

The analytical data for VOCs in the groundwater samples collected in 2010 are in Table 4.3, together with data for the previous sampling events at Barnes. The highest concentration of carbon tetrachloride in sitewide monitoring continues to be found at intermediate-zone well MW10S (located in the eastern portion of the former CCC/USDA facility and screened at 93-103 ft BGL), with detections of 73 µg/L in March-April 2010 and 78 µg/L in September 2010.

Wells MW12M and MW13S are located northwest of well MW10S (Figure 3.1) and in the direction of flow toward the public wells when these wells are in operation. Carbon tetrachloride concentrations at both wells remained fairly stable through 2010, with values at MW12M of 2.2 µg/L in March-April and 6.6 µg/L in September and values at MW13S of 13 µg/L in March-April and 6.2 µg/L in September. The 2010 concentrations trended lower at MW12M and at MW13S than values reported in 2008-2009, possibly as a result of the higher water levels documented during 2010 than in earlier years.

The lateral distribution of carbon tetrachloride in groundwater in sampling events in 2009-2010 is illustrated in Figure 4.3. The distribution in 2010 is similar to the previous distribution. Contaminant concentrations at and near the public water supply wells remained low to undetectable.

Trace levels of carbon tetrachloride continue to be detected periodically at public well PWS2 (Table 4.3 and Figure 4.3). No contamination has been detected in public well PWS3 since 2008. Because of the pulsing influence on groundwater flow patterns, depending on whether the public wells are operating, no clear migration trend toward the public wells has been evident in sitewide monitoring to date.

The lateral distribution of chloroform in groundwater in 2010 (Figure 4.4) is also similar to the distribution during previous sampling events. The highest concentration of chloroform in sitewide sampling since 2007 has been found at well MW12M, located northwest of the former CCC/USDA facility and screened at 90-100 ft BGL (in the intermediate aquifer zone), with concentrations of 1.0-5.9 µg/L. Relatively lower dissolved oxygen and oxidation-reduction potential values have been measured consistently at this location (Table A.2).

The vertical distribution of carbon tetrachloride in groundwater indicates that the highest concentrations are present in the intermediate zone, at wells MW10S (78 µg/L), MW12M (6.6 µg/L), and MW13S (6.2 µg/L), as measured in September 2010 (Table 4.3). The deep-zone wells at these locations showed little to no change in carbon tetrachloride concentrations between the 2009 and 2010 sampling events (Figure 4.3). Figure 4.5 illustrates the interpreted lateral extent of the contaminant in the deep zone in 2010.

Shallow-zone well MW11S continued to show no detectable concentrations of carbon tetrachloride. Shallow-zone wells MW1S and MW12S were dry and were not sampled in 2010 (Table 4.3 and Figure 4.3).

In keeping with the groundwater level relationships outlined in Section 4.1, the above observations suggest that groundwater and carbon tetrachloride might be relatively less mobile in the (shaly) intermediate-zone lithologies than in the deeper limestones. Both vertical and horizontal hydraulic gradients are expected to drive contaminant migration in the shaly materials, while horizontal groundwater flow (and contaminant migration) might predominate in the deeper limestones. Because of the inferred higher permeability in the deeper limestones, the carbon tetrachloride in this zone might be more effectively mixed and diluted by groundwater movement in response to the oscillatory hydraulic gradients imparted by pumping of the public wells, while the movement of groundwater and hence carbon tetrachloride in the intermediate-zone lithologies is more restricted.

TABLE 4.1 Hand-measured water levels at Barnes in 2010.

		Water Level on Date Indicated							
	Reference	2/2/10		3/30/10-4/1/10		7/16/10		9/17/10-9/18/10	
Well	Elevation (ft AMSL)	ft TOC[a]	ft AMSL	ft TOC[a]	ft AMSL	ft TOC[a]	ft AMSL	ft TOC[a]	ft AMSL
Shallow aquifer zone									
MW1S	1351.58	Dry	–	Dry	–	–	–	Dry	–
MW11S	1336.58	25.20	1311.38	21.50	1315.08	NM	–	24.71	1311.87
MW12S	1327.46	Dry	–	Dry	–	–	–	Dry	–
Intermediate aquifier zone									
MW10S	1331.33	74.48	1256.85	71.96	1259.37	62.75	1268.58	65.95	1265.38
MW11M	1336.51	79.58	1256.93	77.90	1258.61	68.44	1268.07	71.22	1265.29
MW12M	1327.46	71.06	1256.40	70.45	1257.01	59.69	1267.77	63.90	1263.56
MW13S	1342.36	87.65	1254.71	85.65	1256.71	75.14	1267.22	78.01	1264.35
MW17	1351.77	97.06	1254.71	94.90	1256.87	84.71	1267.06	88.03	1263.74
Deep aquifer zone									
MW1D	1351.33	118.85	1232.48	114.55	1236.78	107.74	1243.59	105.28	1246.05
MW2D	1348.85	116.64	1232.21	112.40	1236.45	100.34	1248.51	103.38	1245.47
MW3D	1345.99	113.35	1232.64	108.86	1237.13	97.00	1248.99	99.92	1246.07
MW4D	1326.32	94.53	1231.79	91.45	1234.87	78.58	1247.74	81.25	1245.07
MW5	1327.20	95.94	1231.26	92.06	1235.14	NM	–	70.45	1256.75
MW6S	1323.13	88.83	1234.30	86.15	1236.98	NM	–	76.46	1246.67
MW6D	1323.15	91.88	1231.27	87.84	1235.31	NM	–	79.35	1243.80
MW7	1329.91	98.52	1231.39	94.56	1235.35	82.95	1246.96	85.67	1244.24
MW8	1330.06	98.25	1231.81	94.06	1236.00	NM	–	84.95	1245.11
MW9	1321.86	90.15	1231.71	82.45	1239.41	74.25	1247.61	75.46	1246.40
MW10D	1331.33	99.88	1231.45	96.86	1234.47	NM	–	86.92	1244.41
MW11D	1336.53	104.19	1232.34	100.10	1236.43	NM	–	90.97	1245.56
MW12D	1327.52	96.00	1231.52	93.55	1233.97	NM	–	83.10	1244.42
MW13D	1342.37	110.11	1232.26	105.75	1236.62	NM	–	96.88	1245.49
MW14S	1332.69	100.79	1231.90	96.70	1235.99	NM	–	87.82	1244.87
MW14D	1332.74	100.83	1231.91	96.50	1236.24	84.93	1247.81	87.66	1245.08
MW15S	1309.34	78.44	1230.90	75.65	1233.69	NM	–	66.07	1243.27
MW15D	1309.29	71.21	1238.08	66.50	1242.79	54.92	1254.37	58.11	1251.18
MW16S	1299.47	NM[b]	–	66.10	1233.37	NM	–	57.24	1242.23
MW16D	1299.52	69.11	1230.41	65.95	1233.57	54.59	1244.93	57.65	1241.87
Oentrich[c]	1336.93	NM	–	NM	–	–	–	NM	–

[a] TOC, top of casing.

[b] NM, not measured.

[c] The Oentrich well water level was measured from the concrete at the top of the well vault. The value shown was corrected by 5.5 ft to give a measured depth from the top of the casing.

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TABLE 4.2 Elevation ranges measured for the three aquifer zones, 2007-2010.

	Elevation of Aquifer Zone (ft AMSL)		
Date	Shallow	Intermediate	Deep
September 2010	1,312	1,263-1,265	1,242-1,256
July 2010	–	1,267-1,269	1,244-1,254
March-April 2010	1,315	1,257-1,259	1,233-1,243
February 2010	1,311	1,255-1,257	1,230-1,238
October 2009	1,275-1,307	1,254-1,256	1,229-1,237
June 2009	1,274-1,310	1,255-1,258	1,232-1,241
March 2009	1,308	1,251-1,256	1,229-1,236
November 2008	–	1,257-1,259	1,233-1,242
October 2008	1,314	1,256-1,259	1,235-1,242
July 2008	1,312	1,255-1,258	1,229-1,239
March 2008	1,309	1,250-1,254	1,223-1,229
November 2007	1,307	1,249-1,254	1,220-1,239
June 2007	1,276-1,314	1,247-1,254	1,221-1,228

TABLE 4.3 Analytical results from the AGEM Laboratory for volatile organic compounds in groundwater samples collected at Barnes, 2006-2010.

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
Previously existing monitoring wells						
MW1S	13.3-23.3	Not sampled (well dry)	7/19/06	–	–	–
		Not sampled (well dry)	4/4/07	–	–	–
		Not sampled (well dry)	11/18/07	–	–	–
		Not sampled (well dry)	3/4/08	–	–	–
		Not sampled (well dry)	7/9/08	–	–	–
		Not sampled (well dry)	10/22/08	–	–	–
		Not sampled (well dry)	3/4/09	–	–	–
		Not sampled (well dry)	6/17/09	–	–	–
		Not sampled (well dry)	9/30/09	–	–	–
		Not sampled (well dry)	3/31/10	–	–	–
		Not sampled (well dry)	9/17/10	–	–	–
MW1D	139.85-159.4	BAMW1D-W-21688	7/19/06	1.0	ND[a]	ND
		BAMW1D-W-22565	4/4/07	1.2	ND	ND
		BAMW1D-W-22593	11/18/07	ND	ND	ND
		BAMW1D-W-22627	3/4/08	0.2 J[b]	ND	ND
		BAMW1D-W-22668	7/9/08	0.2 J	ND	ND
		BAMW1D-W-27720	10/22/08	ND	ND	ND
		BAMW1D-W-22703	3/4/09	ND	ND	ND
		BAMW1D-W-28639	6/17/09	ND	ND	ND
		BAMW1D-W-28678	9/30/09	0.3 J	ND	ND
		BAMW1D-W-28718	3/31/10	ND	ND	ND
		BAMW1D-W-28761	9/17/10	ND	ND	ND
MW2D	133.26-152.93	BAMW2D-W-21687	7/19/06	ND	ND	ND
		BAMW2D-W-22564	4/4/07	ND	ND	ND
		BAMW2D-W-22594	11/18/07	ND	ND	ND
		BAMW2D-W-22628	3/7/08	ND	ND	ND
		BAMW2D-W-22669	7/10/08	ND	ND	ND
		BAMW2D-W-27721	10/22/08	ND	ND	ND
		BAMW2D-W-22704	3/4/09	ND	ND	ND
		BAMW2D-W-28640	6/18/09	ND	ND	ND
		BAMW2D-W-28679	9/30/09	ND	ND	ND
		BAMW2D-W-28719	3/31/10	ND	ND	ND
		BAMW2D-W-28762	9/17/10	ND	ND	ND
MW3D	133.02-152.73	BAMW3D-W-21686	7/19/06	ND	ND	ND
		BAMW3D-W-22567	4/4/07	ND	ND	ND
		BAMW3D-W-22595	11/19/07	ND	ND	ND
		BAMW3D-W-22629	3/7/08	ND	ND	ND
		BAMW3D-W-22670	7/10/08	ND	ND	ND
		BAMW3D-W-27722	10/22/08	ND	ND	ND
		BAMW3D-W-22705	3/4/09	ND	ND	ND
		BAMW3D-W-28641	6/17/09	ND	ND	ND
		BAMW3D-W-28680	9/30/09	ND	ND	ND
		BAMW3D-W-28720	4/1/10	ND	ND	ND
		BAMW3D-W-28763	9/17/10	ND	ND	ND

TABLE 4.3 (Cont.)

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
Previously existing monitoring wells (cont.)						
MW4D	98.38-118.22	BAMW4D-W-21690	7/20/06	2.1	ND	ND
		BAMW4D-W-22583	4/6/07	3.5	0.1 J	ND
		BAMW4D-W-22596	11/19/07	1.7	0.4 J	ND
		BAMW4D-W-22642	3/9/08	18	0.4 J	ND
		BAMW4D-W-22671	7/12/08	9.4	0.5 J	ND
		BAMW4D-W-27723	10/23/08	7.6	ND	ND
		BAMW4D-W-22706	3/5/09	7.2	0.3 J	ND
		BAMW4D-W-28642	6/18/09	9.1	ND	ND
		BAMW4D-W-28681	9/30/09	13	0.3 J	ND
		BAMW4D-W-28721	3/31/10	13	0.4 J	ND
		BAMW4D-W-28764	9/17/10	12	ND	ND
CCC/USDA wells installed during the 2006-2007 investigation						
MW5	110-120	BAMW5-W-22589	4/6/07	0.6 J	ND	ND
		BAMW5-W-22597	11/19/07	0.6 J	ND	ND
		BAMW5-W-22637	3/8/08	0.7 J	ND	ND
		BAMW5-W-22672	7/11/08	ND	ND	ND
		BAMW5-W-27724	10/23/08	3.0	ND	ND
		BAMW5-W-22707	3/5/09	3.2	ND	ND
		BAMW5-W-28643	6/19/09	4.8	ND	ND
		BAMW5-W-28682	9/30/09	7.2	ND	ND
		BAMW5-W-28722	3/30/10	7.7	0.3 J	ND
		BAMW5-W-28765	9/17/10	11	ND	ND
MW6S	90.5-100.5	Not sampled (well dry)	4/4/07	–	–	–
		BAMW6S-W-22598	11/19/07	0.3 J	ND	ND
		BAMW6S-W-22635	3/8/08	0.4 J	ND	ND
		BAMW6S-W-22673	7/11/08	ND	ND	ND
		BAMW6S-W-27725	10/23/08	ND	ND	ND
		BAMW6S-W-22708	3/5/09	ND	ND	ND
		BAMW6S-W-28644	6/18/09	ND	ND	ND
		BAMW6S-W-28683	10/1/09	ND	ND	ND
		BAMW6S-W-28723	3/31/10	0.4 J	ND	ND
		BAMW6S-W-28766	9/18/10	ND	ND	ND
MW6D	105-115	BAMW6D-W-22573	4/5/07	ND	ND	ND
		BAMW6D-W-22599	11/19/07	0.5 J	ND	ND
		BAMW6D-W-22636	3/8/08	0.8 J	ND	ND
		BAMW6D-W-22674	7/11/08	0.9 J	ND	ND
		BAMW6D-W-27726	10/23/08	1.1	ND	ND
		BAMW6D-W-22709	3/5/09	1.4	ND	ND
		BAMW6D-W-28645	6/18/09	1.5	ND	ND
		BAMW6D-W-28684	10/1/09	1.5	ND	ND
		BAMW6D-W-28724	3/31/10	1.2	ND	ND
		BAMW6D-W-28767	9/18/10	2.0	ND	ND

TABLE 4.3 (Cont.)

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
CCC/USDA wells installed during the 2006-2007 investigation (cont.)						
MW7	116-126	BAMW7-W-22588	4/6/07	1.0	ND	ND
		BAMW7-W-22600	11/19/07	2.6	ND	ND
		BAMW7-W-22643	3/9/08	2.8	ND	ND
		BAMW7-W-22675	7/12/08	1.7	ND	ND
		BAMW7-W-27727	10/23/08	2.1	ND	ND
		BAMW7-W-22710	3/5/09	1.4	ND	ND
		BAMW7-W-28646	6/19/09	1.4	ND	ND
		BAMW7-W-28685	9/30/09	1.6	ND	ND
		BAMW7-W-28725	3/30/10	1.6	ND	ND
		BAMW7-W-28768	9/17/10	2.6	ND	ND
MW8	110-120	BAMW8-W-22584	4/6/07	14	0.7 J	ND
		BAMW8-W-22601	11/19/07	23	0.6 J	ND
		BAMW8-W-22652	3/10/08	19	0.6 J	ND
		BAMW8-W-22676	7/11/08	21	0.6 J	ND
		BAMW8-W-27728	10/23/08	24	1.0	ND
		BAMW8-W-22711	3/5/09	20	1.3	ND
		BAMW8-W-28647	6/19/09	26	1.7	ND
		BAMW8-W-28686	9/30/09	29	2.2	ND
		BAMW8-W-28726	3/31/10	30	2.0	ND
		BAMW8-W-28769	9/17/10	31	2.1	ND
MW9	100-110	BAMW9-W-22582	4/5/07	1.0	ND	ND
		BAMW9-W-22602	11/19/07	7.7	0.6 J	ND
		BAMW9-W-22647	3/9/08	3.0	0.3 J	ND
		BAMW9-W-22678	7/11/08	1.3	0.3 J	ND
		BAMW9-W-27729	10/24/08	2.2	0.2 J	ND
		BAMW9-W-22712	3/5/09	2.3	ND	ND
		BAMW9-W-28648	6/17/09	1.1	ND	ND
		BAMW9-W-28687	9/29/09	4.6	ND	ND
		BAMW9-W-28727	3/31/10	2.9	ND	ND
		BAMW9-W-28770	9/18/10	1.4	ND	ND
MW10S	93-103	BAMW10S-W-22586	4/6/07	20	1.4	ND
		BAMW10S-W-22603	11/19/07	11	0.7 J	ND
		BAMW10S-W-22649	3/10/08	56	2.0	ND
		BAMW10S-W-22679	7/11/08	49	1.8	ND
		BAMW10S-W-27730	10/23/08	68	2.3	ND
		BAMW10S-W-22713	3/5/09	49	2.1	ND
		BAMW10S-W-28649	6/19/09	76	2.5	ND
		BAMW10S-W-28688	9/30/09	53	2.4	ND
		BAMW10S-W-28728	3/30/10	73	3.0	ND
		BAMW10S-W-28771	9/17/10	78	2.9	ND

TABLE 4.3 (Cont.)

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
CCC/USDA wells installed during the 2006-2007 investigation (cont.)						
MW10D	115-125	BAMW10D-W-22585	4/6/07	2.4	0.2 J	ND
		BAMW10D-W-22604	11/19/07	6.3	0.5 J	ND
		BAMW10D-W-22646	3/9/08	5.7	0.5 J	ND
		BAMW10D-W-22680	7/11/08	3.9	0.7 J	ND
		BAMW10D-W-27731	10/23/08	4.4	0.6 J	ND
		BAMW10D-W-22714	3/5/09	5.3	0.4 J	ND
		BAMW10D-W-28650	6/19/09	4.8	0.6 J	ND
		BAMW10D-W-28689	9/30/09	4.3	0.4 J	ND
		BAMW10D-W-28729	3/30/10	4.4	0.4 J	ND
		BAMW10D-W-28772	9/17/10	4.8	ND	ND
MW11S	40-50	BAMW11S-W-22570	4/4/07	ND	1.1	ND
		BAMW11S-W-22605	11/19/07	ND	0.6 J	ND
		BAMW11S-W-22630	3/5/08	ND	0.6 J	ND
		BAMW11S-W-22681	7/10/08	ND	0.4 J	ND
		BAMW11S-W-27732	10/23/08	ND	0.3 J	ND
		BAMW11S-W-22715	3/4/09	ND	ND	ND
		BAMW11S-W-28651	6/19/09	ND	ND	ND
		BAMW11S-W-28690	10/1/09	ND	ND	ND
		BAMW11S-W-28730	3/31/10	ND	ND	ND
		BAMW11S-W-28773	9/18/10	ND	ND	ND
MW11M	90-100	BAMW11M-W-22572	4/5/07	ND	ND	ND
		BAMW11M-W-22606	11/19/07	3.7	ND	ND
		BAMW11M-W-22644	3/6/08	2.4	0.5 J	ND
		BAMW11M-W-22682	7/10/08	2.4	0.7 J	ND
		BAMW11M-W-27733	10/23/08	1.7	2.1	ND
		BAMW11M-W-22716	3/4/09	0.6 J	1.2	ND
		BAMW11M-W-28652	6/19/09	ND	1.1	ND
		BAMW11M-W-28691	10/1/09	ND	0.5 J	ND
		BAMW11M-W-28731	3/31/10	0.5 J	0.8 J	ND
		BAMW11M-W-28774	9/18/10	ND	ND	ND
MW11D	125-135	BAMW11D-W-22571	4/4/07	1.1	ND	ND
		BAMW11D-W-22607	11/19/07	0.8 J	ND	ND
		BAMW11D-W-22639	3/5/08	0.4 J	ND	ND
		BAMW11D-W-22683	7/10/08	0.9 J	ND	ND
		BAMW11D-W-27734	10/23/08	0.9 J	0.2 J	ND
		BAMW11D-W-22717	3/4/09	0.8 J	ND	ND
		BAMW11D-W-28653	6/19/09	ND	ND	ND
		BAMW11D-W-28692	10/1/09	1.0	ND	ND
		BAMW11D-W-28732	4/1/10	0.5 J	ND	ND
		BAMW11D-W-28775	9/18/10	ND	ND	ND

TABLE 4.3 (Cont.)

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
CCC/USDA wells installed during the 2006-2007 investigation (cont.)						
MW12S	43-50	Not sampled (well dry)	4/5/07	–	–	–
		Not sampled (well dry)	11/19/07	–	–	–
		Not sampled (well dry)	3/10/08	–	–	–
		Not sampled (well dry)	7/10/08	–	–	–
		Not sampled (well dry)	10/22/08	–	–	–
		Not sampled (well dry)	3/4/09	–	–	–
		BAMW12S-W-28654	6/19/09	ND	ND	ND
		Not sampled (well dry)	10/1/09	–	–	–
		Not sampled (well dry)	3/31/10	–	–	–
		Not sampled (well dry)	9/18/10	–	–	–
MW12M	90-100	BAMW12M-W-22580	4/5/07	20	4.2	ND
		BAMW12M-W-22609	11/19/07	18	5.1	ND
		BAMW12M-W-22651	3/10/08	18	2.6	ND
		BAMW12M-W-22685	7/10/08	27	4.2	ND
		BAMW12M-W-27736	10/22/08	18	4.5	ND
		BAMW12M-W-22719	3/4/09	25	4.4	ND
		BAMW12M-W-28655	6/19/09	28	4.9	ND
		BAMW12M-W-28694	10/1/09	26	5.1	ND
		BAMW12M-W-28734	3/31/10	2.2	1.0	ND
		BAMW12M-W-28777	9/18/10	6.6	5.9	ND
MW12D	115-125	BAMW12D-W-22576	4/5/07	0.6 J	ND	ND
		BAMW12D-W-22610	11/18/07	1.6	ND	ND
		BAMW12D-W-22641	3/9/08	1.0	ND	ND
		BAMW12D-W-22686	7/11/08	0.7 J	ND	ND
		BAMW12D-W-27737	10/22/08	0.9 J	ND	ND
		BAMW12D-W-22757	3/4/09	0.7 J	ND	ND
		BAMW12D-W-28656	6/19/09	ND	ND	ND
		BAMW12D-W-28695	10/1/09	1.5	ND	ND
		BAMW12D-W-28735	3/31/10	1.0	0.2 J	ND
		BAMW12D-W-28778	9/18/10	0.6 J	ND	ND
MW13S	112-122	BAMW13S-W-22575	4/5/07	21	1.6	ND
		BAMW13S-W-22611	11/19/07	17	1.8	ND
		BAMW13S-W-22650	3/10/08	17	1.5	ND
		BAMW13S-W-22687	7/9/08	17	1.9	ND
		BAMW13S-W-27738	10/22/08	20	1.6	ND
		BAMW13S-W-22758	3/4/09	14	1.1	ND
		BAMW13S-W-28657	6/18/09	16	1.1	ND
		BAMW13S-W-28696	9/30/09	12	0.9 J	ND
		BAMW13S-W-28736	4/1/10	13	0.8 J	ND
		BAMW13S-W-28779	9/18/10	6.2	1.2	ND

TABLE 4.3 (Cont.)

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
CCC/USDA wells installed during the 2006-2007 investigation (cont.)						
MW13D	127-137	BAMW13D-W-22574	4/5/07	3.5	0.4 J	ND
		BAMW13D-W-22612	11/19/07	5.9	0.2 J	ND
		BAMW13D-W-22645	3/9/08	11	1.1	ND
		BAMW13D-W-22688	7/9/08	5.9	0.9 J	ND
		BAMW13D-W-27739	10/22/08	6.6	0.6 J	ND
		BAMW13D-W-22759	3/4/09	5.9	0.6 J	ND
		BAMW13D-W-28658	6/18/09	6.2	ND	ND
		BAMW13D-W-28697	9/30/09	7.2	1.0	ND
		BAMW13D-W-28737	4/1/10	5.5	0.5 J	ND
		BAMW13D-W-28780	9/18/10	5.8	0.6 J	ND
MW14S	108-118	BAMW14S-W-22569	4/4/07	0.9 J	ND	ND
		BAMW14S-W-22613	11/18/07	1.2	ND	ND
		BAMW14S-W-22640	3/8/08	4.3	0.3 J	ND
		BAMW14S-W-22689	7/10/08	5.6	0.3 J	ND
		BAMW14S-W-27740	10/22/08	5.6	0.3 J	ND
		BAMW14S-W-28620	3/4/09	5.6	0.4 J	ND
		BAMW14S-W-28659	6/18/09	3.7	0.6 J	ND
		BAMW14S-W-28698	10/1/09	5.2	0.3 J	ND
		BAMW14S-W-28738	4/1/10	4.3	0.3 J	ND
		BAMW14S-W-28781	9/18/10	4.9	0.4 J	ND
MW14D	123-133	BAMW14D-W-22568	4/4/07	1.2	ND	ND
		BAMW14D-W-22614	11/18/07	0.6 J	ND	ND
		BAMW14D-W-22638	3/8/08	0.7 J	ND	ND
		BAMW14D-W-22690	7/10/08	0.5 J	ND	ND
		BAMW14D-W-27741	10/22/08	ND	ND	ND
		BAMW14D-W-28621	3/5/09	0.6 J	ND	ND
		BAMW14D-W-28660	6/18/09	ND	ND	ND
		BAMW14D-W-28699	10/1/09	0.5 J	ND	ND
		BAMW14D-W-28739	4/1/10	0.4 J	ND	ND
		BAMW14D-W-28782	9/17/10	ND	ND	ND
MW15S	88-98	BAMW15S-W-22560	4/4/07	1.5	ND	ND
		BAMW15S-W-22615	11/18/07	8.7	0.4 J	ND
		BAMW15S-W-22648	3/10/08	1.8	0.2 J	ND
		BAMW15S-W-22691	7/12/08	2.2	0.3 J	ND
		BAMW15S-W-27742	10/23/08	1.9	ND	ND
		BAMW15S-W-28622	3/5/09	2.5	ND	ND
		BAMW15S-W-28661	6/17/09	3.2	0.5 J	ND
		BAMW15S-W-28700	9/29/09	2.6	ND	ND
		BAMW15S-W-28740	3/30/10	4.0	0.4 J	ND
		BAMW15S-W-28783	9/18/10	1.9	ND	ND

TABLE 4.3 (Cont.)

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
CCC/USDA wells installed during the 2006-2007 investigation (cont.)						
MW15D	105-115	BAMW15D-W-22561	4/4/07	ND	ND	ND
		BAMW15D-W-22616	11/18/07	ND	ND	ND
		BAMW15D-W-22631	3/8/08	0.2 J	ND	ND
		BAMW15D-W-22692	7/12/08	ND	ND	ND
		BAMW15D-W-27743	10/24/08	ND	ND	ND
		BAMW15D-W-28623	3/5/09	ND	ND	ND
		BAMW15D-W-28662	6/17/09	ND	ND	ND
		BAMW15D-W-28701	9/29/09	ND	ND	ND
		BAMW15D-W-28741	3/30/10	ND	ND	ND
		BAMW15D-W-28784	9/18/10	ND	ND	ND
MW16S	76-86	BAMW16S-W-22563	4/4/07	ND	ND	ND
		BAMW16S-W-22617	11/19/07	ND	ND	ND
		BAMW16S-W-22632	3/7/08	0.4 J	ND	ND
		BAMW16S-W-22693	7/11/08	ND	ND	ND
		BAMW16S-W-27744	10/23/08	0.9 J	ND	ND
		BAMW16S-W-28624	3/5/09	1.4	ND	ND
		BAMW16S-W-28663	6/18/09	1.6	ND	ND
		BAMW16S-W-28702	9/29/09	1.7	ND	ND
		BAMW16S-W-28742	3/30/10	1.6	ND	ND
		BAMW16S-W-28785	9/18/10	1.7	ND	ND
MW16D	90-100	BAMW16D-W-22562	4/4/07	ND	ND	ND
		BAMW16D-W-22618	11/19/07	ND	ND	ND
		BAMW16D-W-22633	3/7/08	ND	ND	ND
		BAMW16D-W-22694	7/11/08	ND	ND	ND
		BAMW16D-W-27745	10/23/08	ND	ND	ND
		BAMW16D-W-28625	3/5/09	ND	ND	ND
		BAMW16D-W-28664	6/18/09	ND	ND	ND
		BAMW16D-W-28703	9/29/09	ND	ND	ND
		BAMW16D-W-28743	3/30/10	ND	ND	ND
		BAMW16D-W-28786	9/18/10	ND	ND	ND
MW17	120-130	BAMW17D-W-22566	4/4/07	ND	ND	ND
		BAMW17D-W-22619	11/19/07	ND	ND	ND
		BAMW17-W-22634	3/5/08	0.3 J	ND	ND
		BAMW17-W-22695	7/9/08	0.4 J	ND	ND
		BAMW17-W-27746	10/22/08	0.7 J	ND	ND
		BAMW17-W-28626	3/4/09	1.0	ND	ND
		BAMW17-W-28665	6/17/09	1.0	ND	ND
		BAMW17-W-28704	9/30/09	ND	ND	ND
		BAMW17-W-28744	3/31/10	0.5 J	ND	ND
		BAMW17-W-28787	9/17/10	ND	ND	ND

TABLE 4.3 (Cont.)

Location	Depth (ft BGL)	Sample	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
Private wells						
Oentrich	150	BAOENT-W-21693	7/20/06	0.3 J	ND	ND
		BAOENT-W-21713	8/2/06	0.6 J	ND	ND
		BAOENTRICH-W-22579	4/5/07	0.6 J	ND	ND
		BAOENTRICH-W-22622	11/19/07	0.8 J	ND	ND
		BAOENTRICH-W-22654	3/6/08	1.3	ND	ND
		BAOENTRICH-W-22695	7/11/08	0.3 J	ND	ND
		BAOENTRICH-W-27747	10/23/08	0.9 J	ND	ND
		BAOENTRICH-W-28627	3/5/09	1.1	ND	ND
		BAOENTRICH-W-28666	6/18/09	0.9 J	ND	ND
		BAOENTRICH-W-28705	9/30/09	1.6	ND	ND
		BAOENTRICH-W-28745	4/1/10	1.2	ND	ND
		BAOENTRICH-W-28788	9/18/10	3.3	0.8 J	ND
Sedivy	138	BACW-W-21849	8/22/06	ND	ND	ND
		BASED2-W-21913	9/13/06	ND	ND	ND
Sedivy1	90	Not sampled (well dry)	9/13/06	–	–	–
Public water supply wells						
PWS2	155	BAPWS2-W-22510	3/9/07	ND	ND	ND
		BAPW2-W-22578	4/5/07	ND	ND	ND
		BAPW2-W-22620	11/20/07	ND	ND	ND
		BAPWS2-W-22655	3/6/08	ND	ND	ND
		BAPWS2-W-22696	7/11/08	0.8 J	ND	ND
		BAPW2-W-27748	10/23/08	1.7	ND	ND
		BAPWS2-W-28628	3/5/09	0.9 J	ND	ND
		BAPWS2-W-28667	6/18/09	1.0	ND	ND
		BAPWS2-W-28706	9/30/09	ND	ND	ND
		BAPWS2-W-28715	12/14/09	ND	ND	ND
		BAPWS2-W-28746	3/31/10	0.9 J	ND	ND
		BAPWS2-W-28758	6/17/10	0.8 J	ND	ND
		BAPWS2-W-28789	9/18/10	1.1	ND	ND
		BAPWS2-W-28803	12/15/10	0.7 J	ND	ND
PWS3	160	BAPWS3-W-22511	3/9/07	0.2 J	ND	ND
		BAPW3-W-22577	4/5/07	ND	ND	ND
		BAPW3-W-22621	11/20/07	ND	ND	ND
		BAPWS3-W-22656	3/6/08	ND	ND	ND
		BAPWS3-W-22697	7/11/08	0.2 J	ND	ND
		BAPW3-W-27749	10/23/08	ND	ND	ND
		BAPWS3-W-28629	3/5/09	ND	ND	ND
		BAPWS3-W-28668	6/18/09	ND	ND	ND
		BAPWS3-W-28707	9/30/09	ND	ND	ND
		BAPWS3-W-28716	12/14/09	ND	ND	ND
		BAPWS3-W-28747	3/31/10	ND	ND	ND
		BAPWS3-W-28759	6/17/10	ND	ND	ND
		BAPWS3-W-28790	9/18/10	ND	ND	ND
		BAPWS3-W-28804	12/15/10	ND	ND	ND

TABLE 4.3 (Cont.)

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

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

[c] Pumping status of public wells:

Sampling Date	PWS2	PWS3
3/9/07	Well has been pumping today.	Well has been pumping today.
4/5/07	Sampled after letting run for 5-10 min.	Well has been pumping all day.
11/20/07	Well on at time of sampling.	Well on at time of sampling.
3/6/08	Let water run from tap for 2-3 min, then sampled.	Sample collected from tap in well house. Let water run from tap for 2-3 min, then sampled.
7/11/08	Running for 30 min.	Running for 30 min.
10/23/08	Well was pumping for 5 min.	Well was pumping for 30 min.
3/5/09	Well operating to fill water tower prior to sampling.	Ran for 5 min.
6/18/09	Well pumping since 6 a.m. on June 18. Let run from tap for 5 min, then sampled.	Well was used on June 17. Let pump run for 10 min, then sampled.
9/30/09	Well used on September 29. Let well run for 10 min, then sampled.	Well in use. Let tap run for 5 min, then sampled.
12/14/09	Well has been pumping today.	Well has been pumping today.
3/31/10	Well used on March 30. Let well run for 10 min, then sampled.	Well in use oversnight. Let tap run for 5 min, then sampled.
6/17/10	Recent use of well not recorded in log.	Recent use of well not recorded in log.
9/18/10	Well in use for past 2 days. Sampled from tap after purging for 5-10 min (approximately 500 gal).	Well in use for past 2 days. Sampled from tap after purging for 5-10 min (approximately 500 gal).
12/15/10	Recent use of well not recorded in log.	Recent use of well not recorded in log.

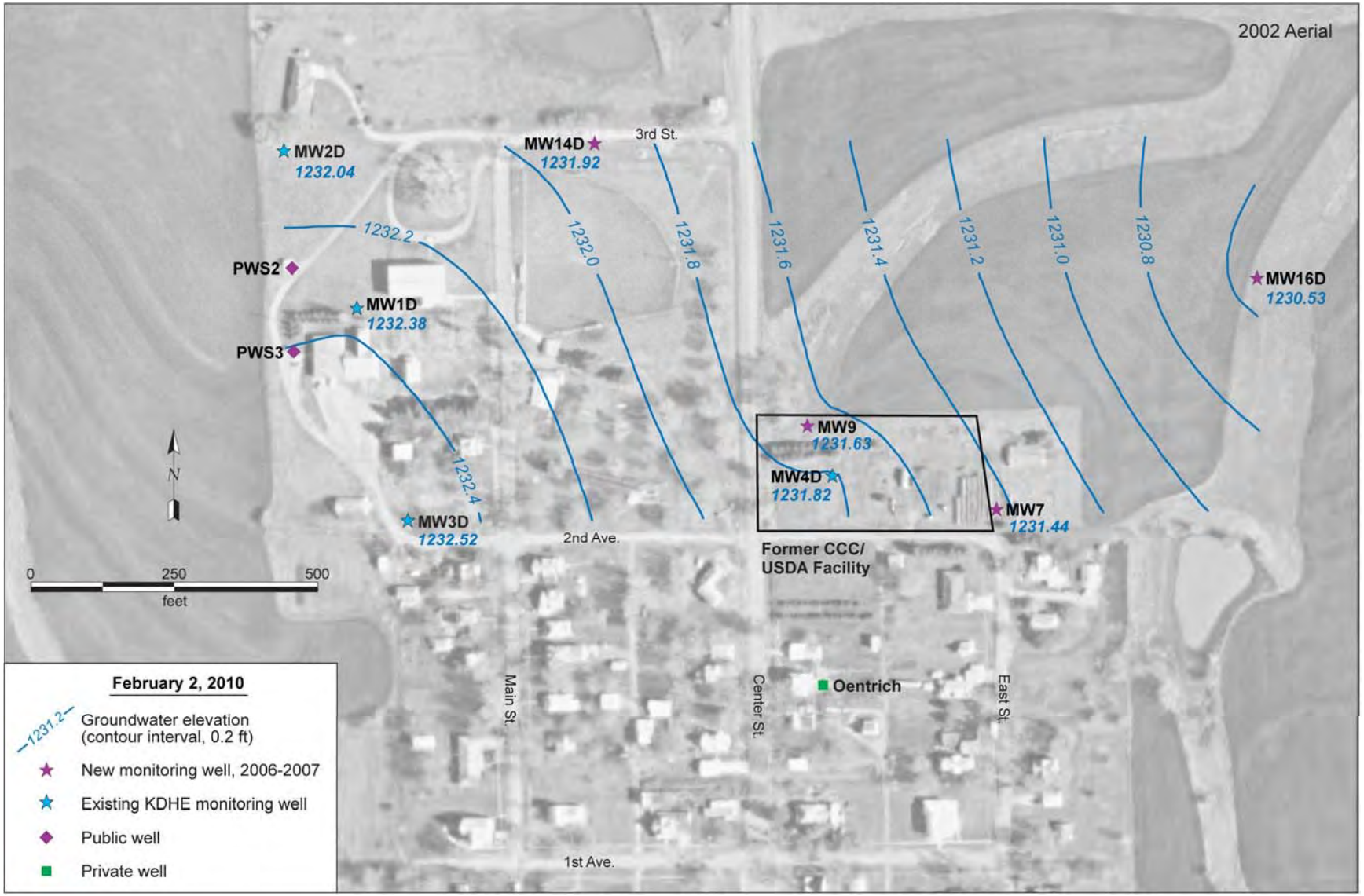


FIGURE 4.1a Potentiometric surface map depicting the groundwater flow direction in the deep aquifer zone at Barnes under static (non-pumping) conditions on February 2, 2010. Source of photograph: NAPP (2002).

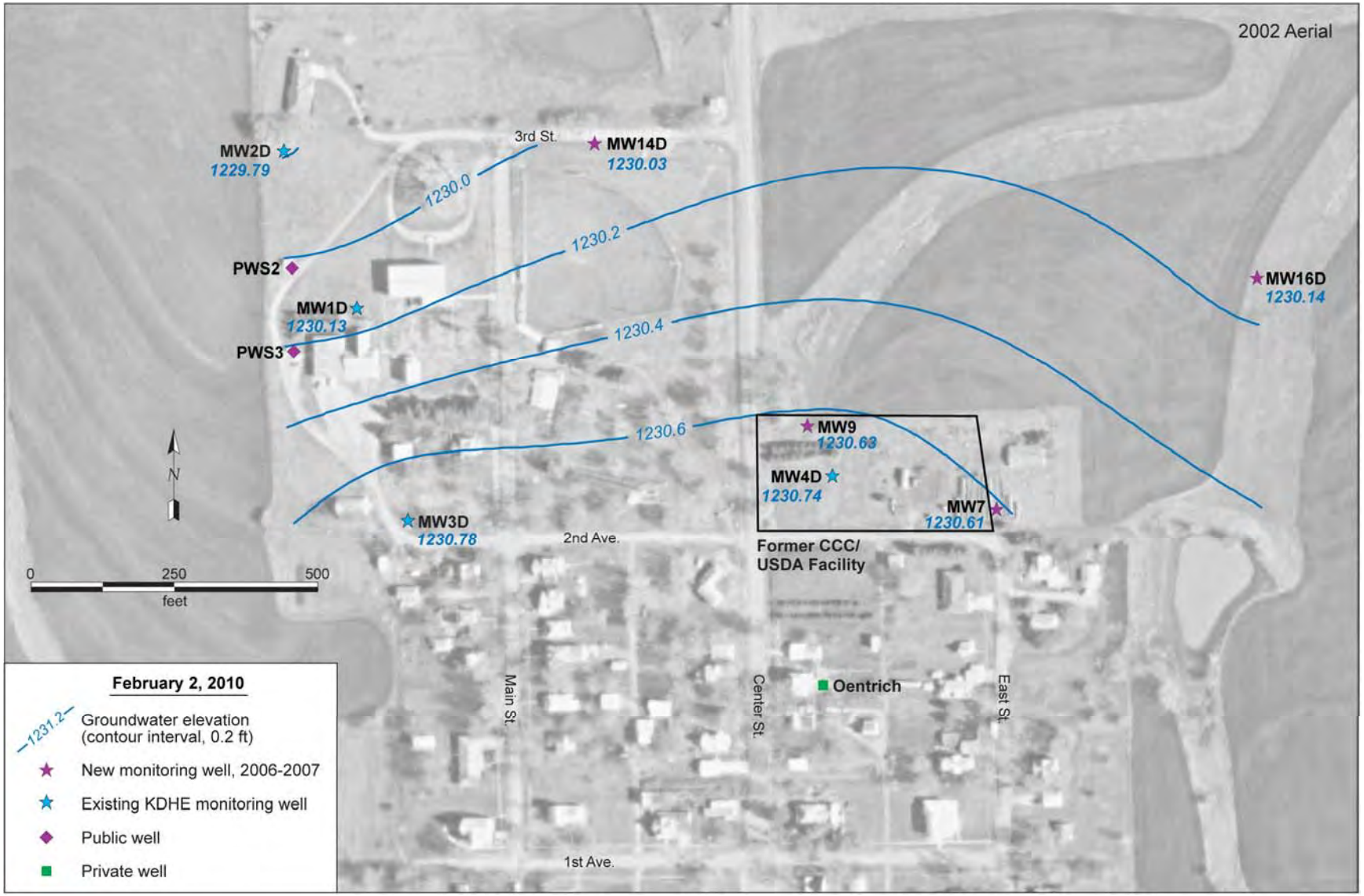


FIGURE 4.1b Potentiometric surface map depicting the groundwater flow direction in the deep aquifer zone at Barnes under pumping conditions on February 2, 2010. Source of photograph: NAPP (2002).

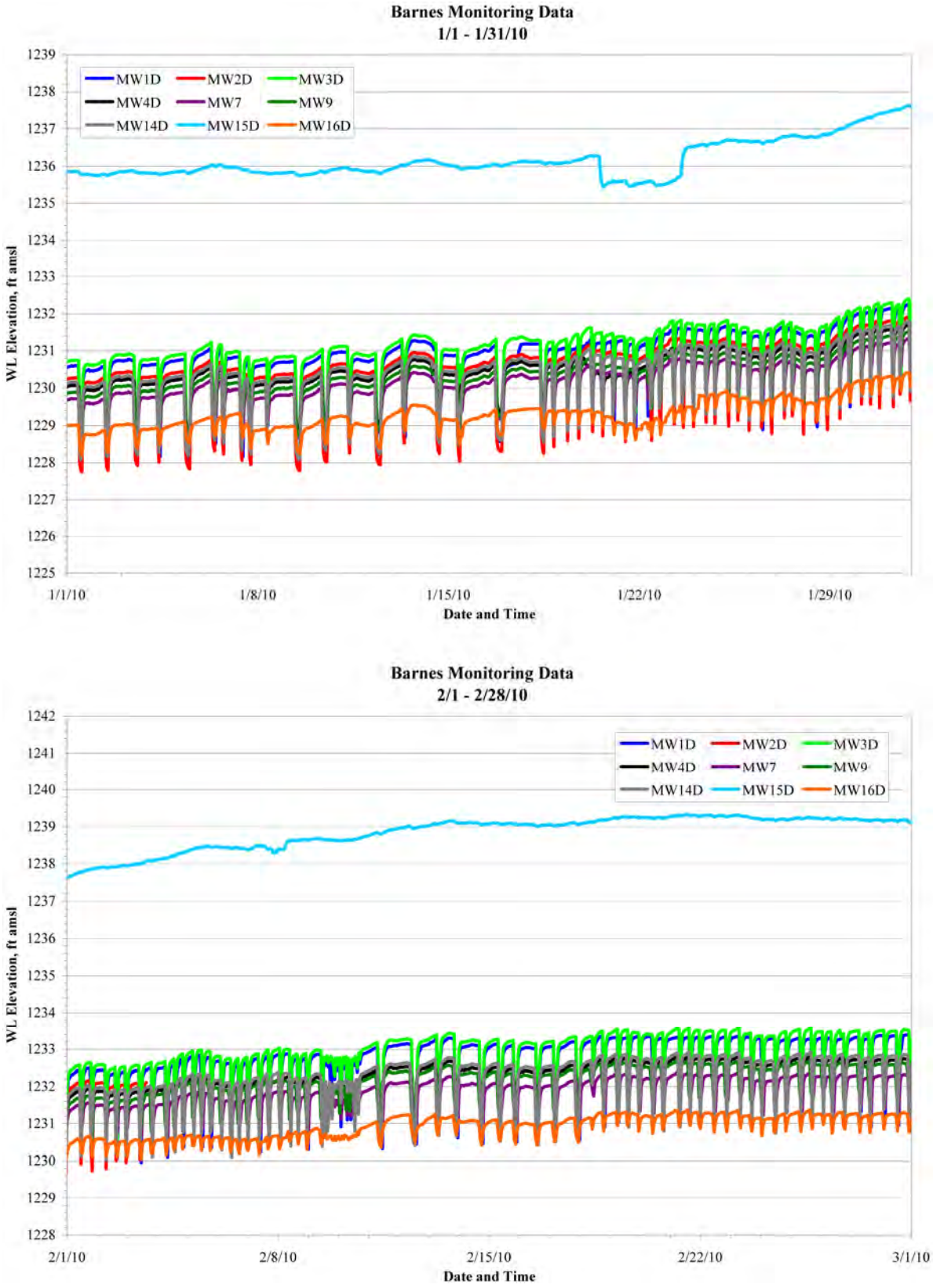
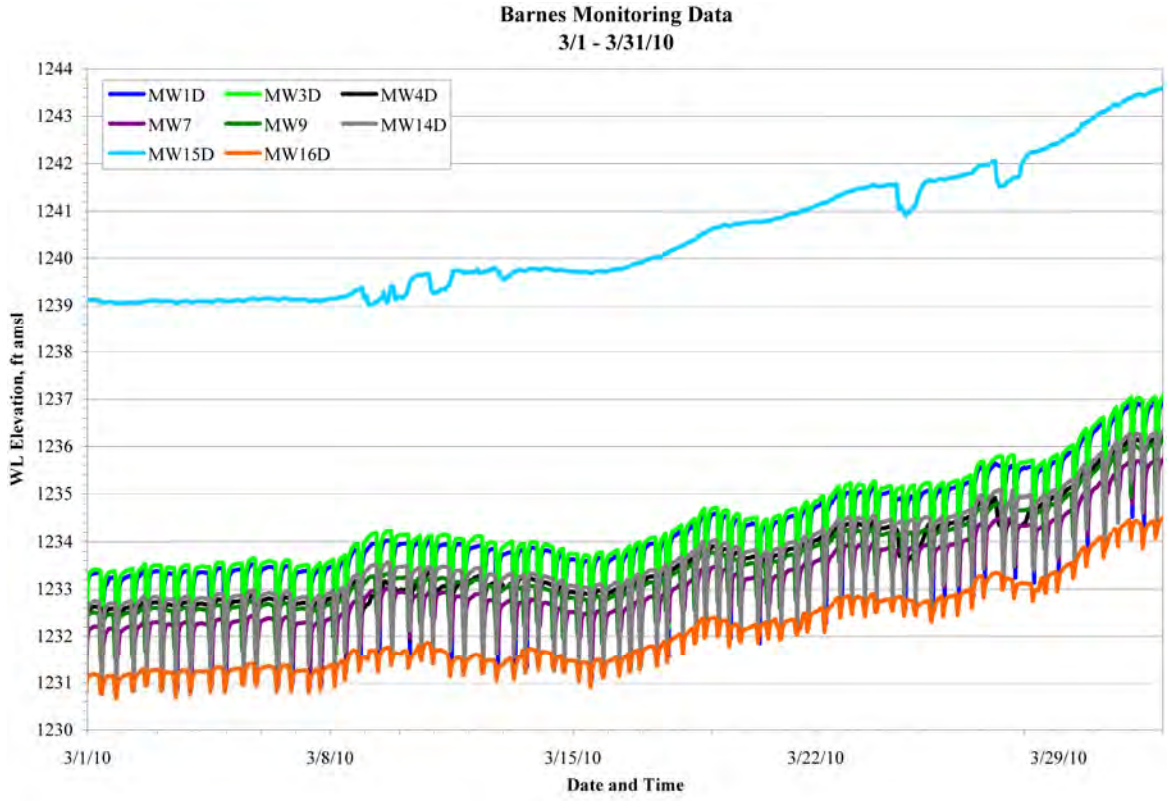


FIGURE 4.2a Hydrographs summarizing monthly results of long-term water level monitoring in the deep-zone wells at Barnes, January-December 2010.



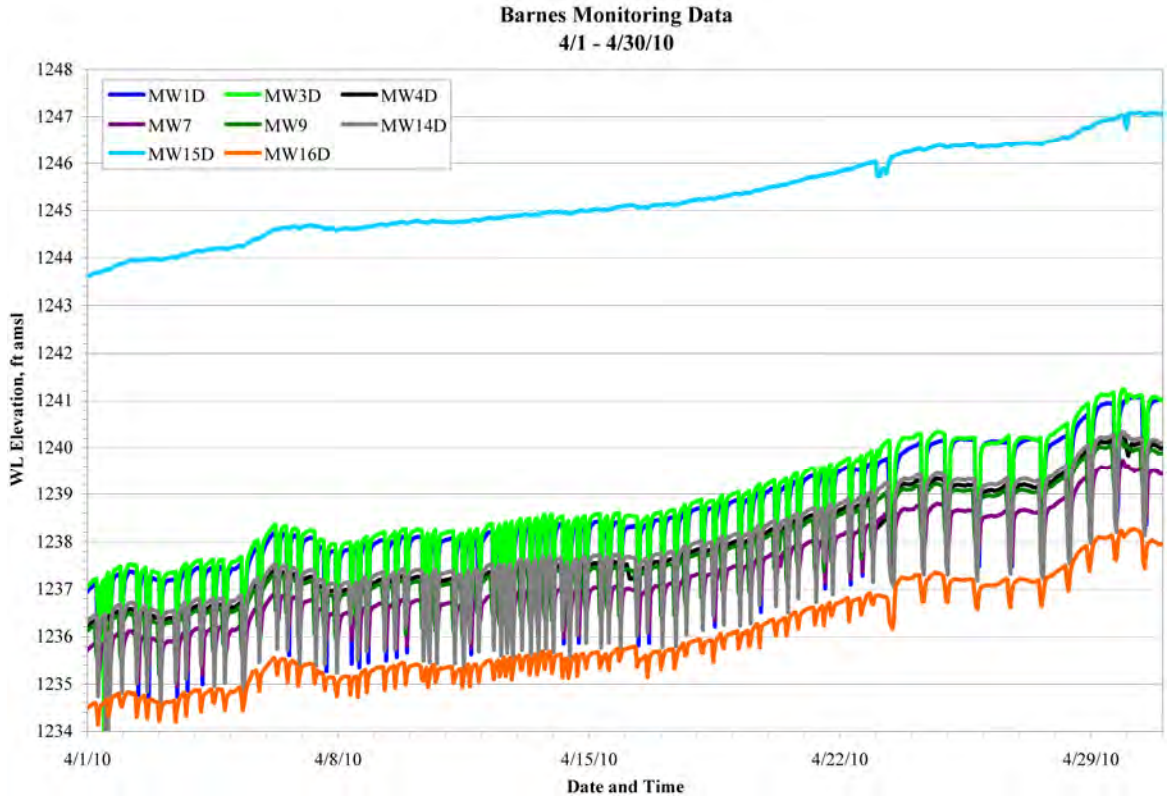
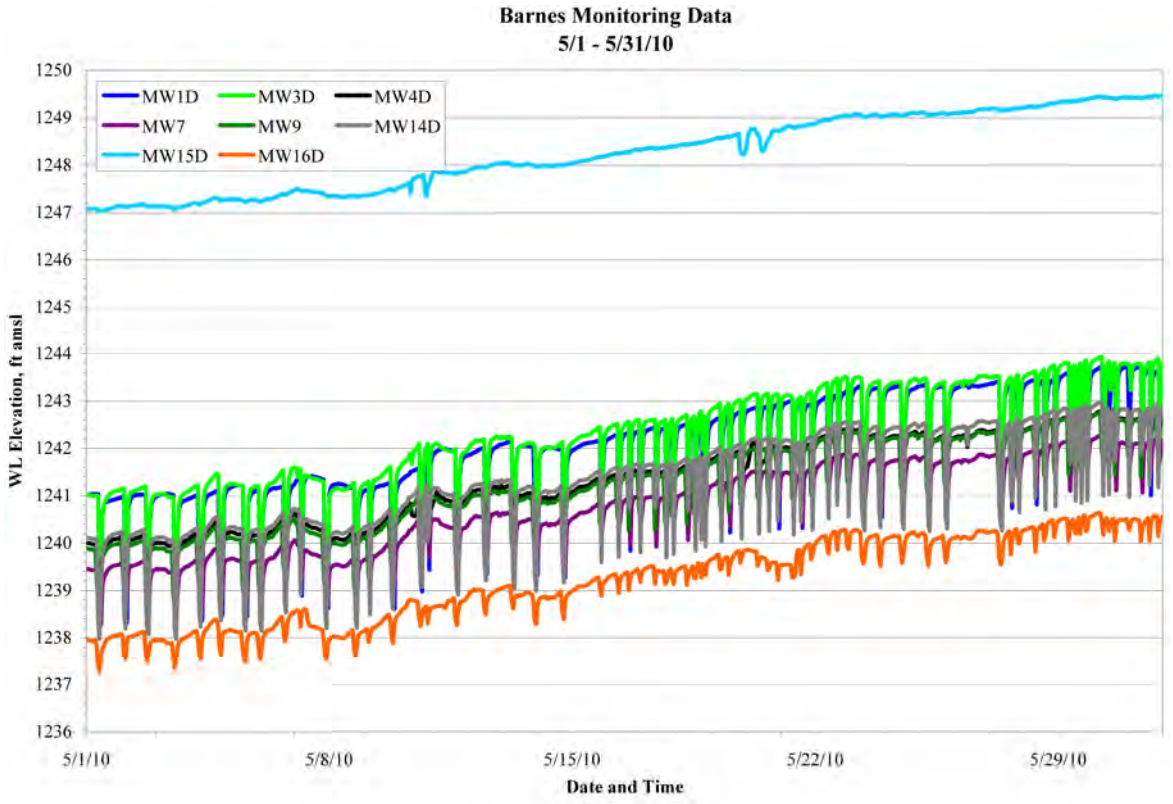


FIGURE 4.2a (Cont.)



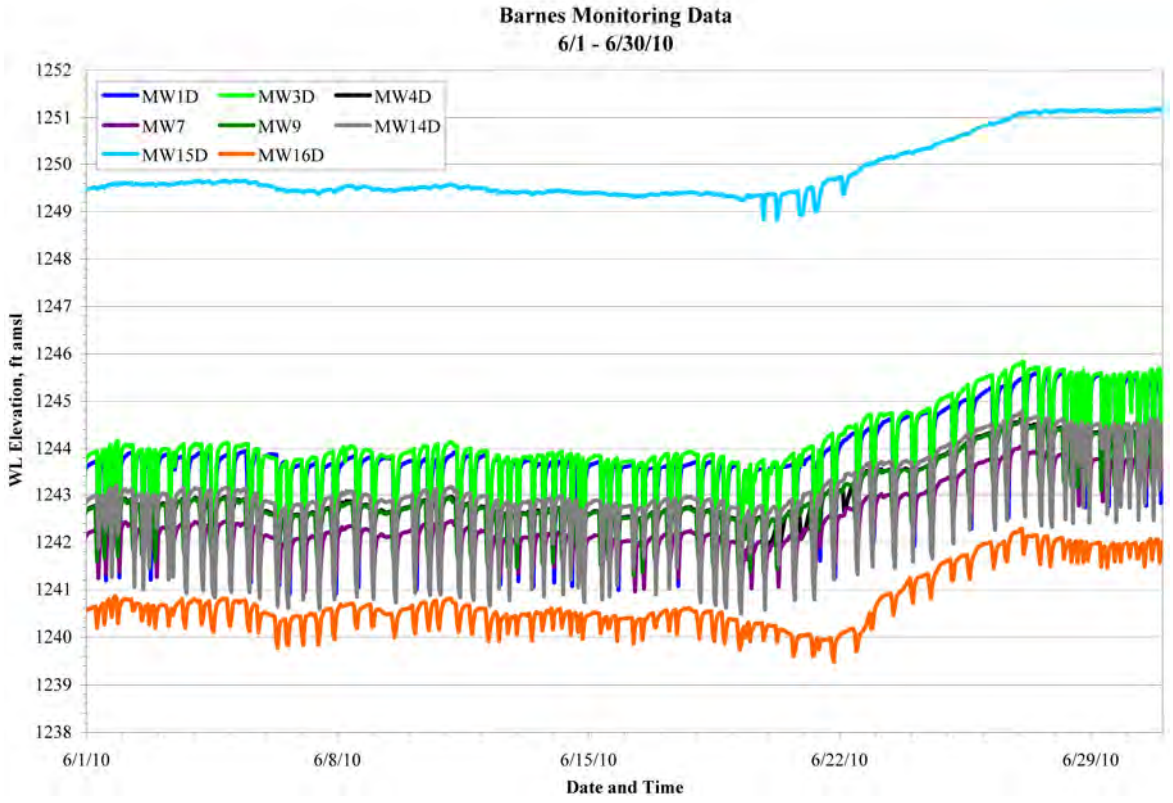
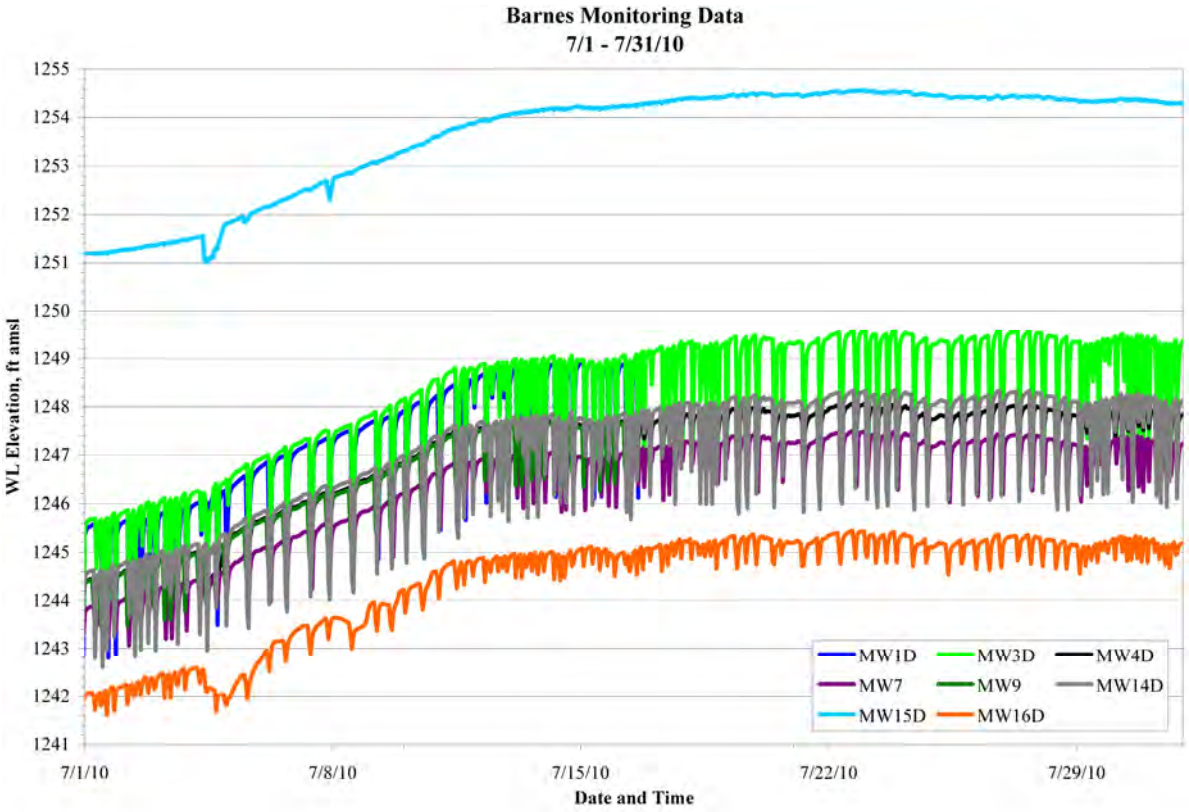


FIGURE 4.2a (Cont.)



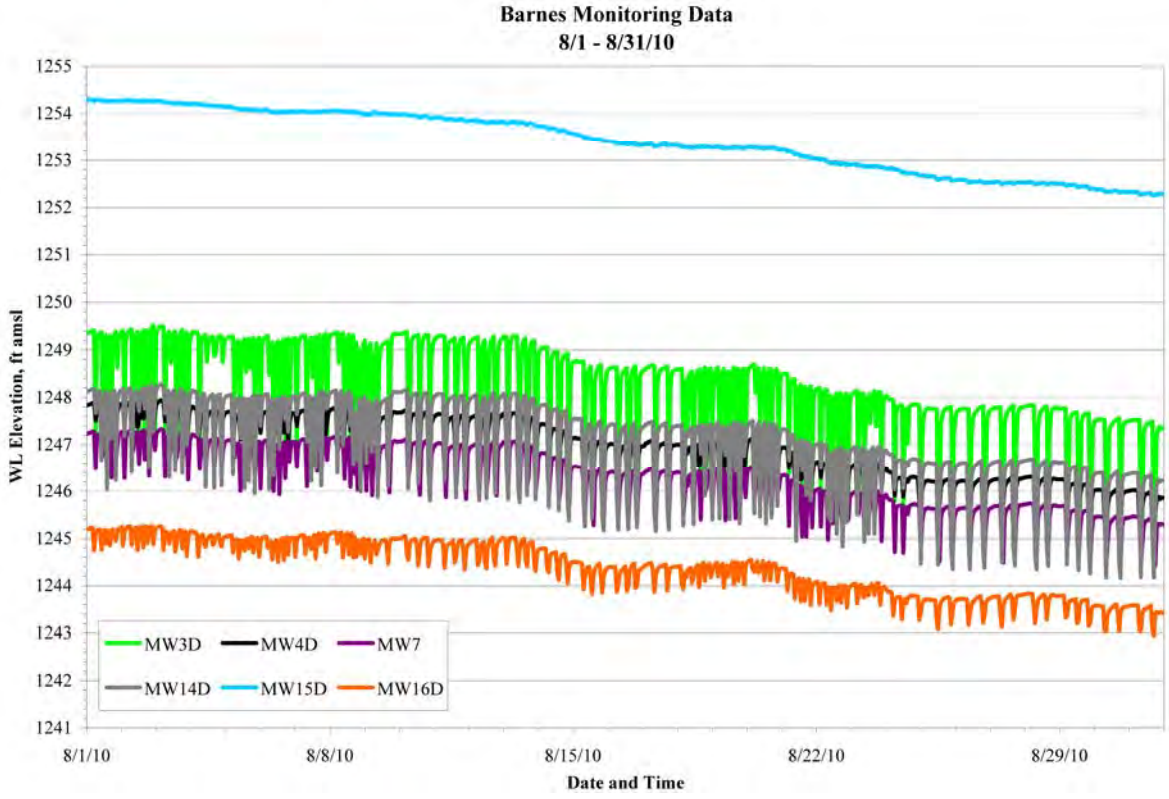
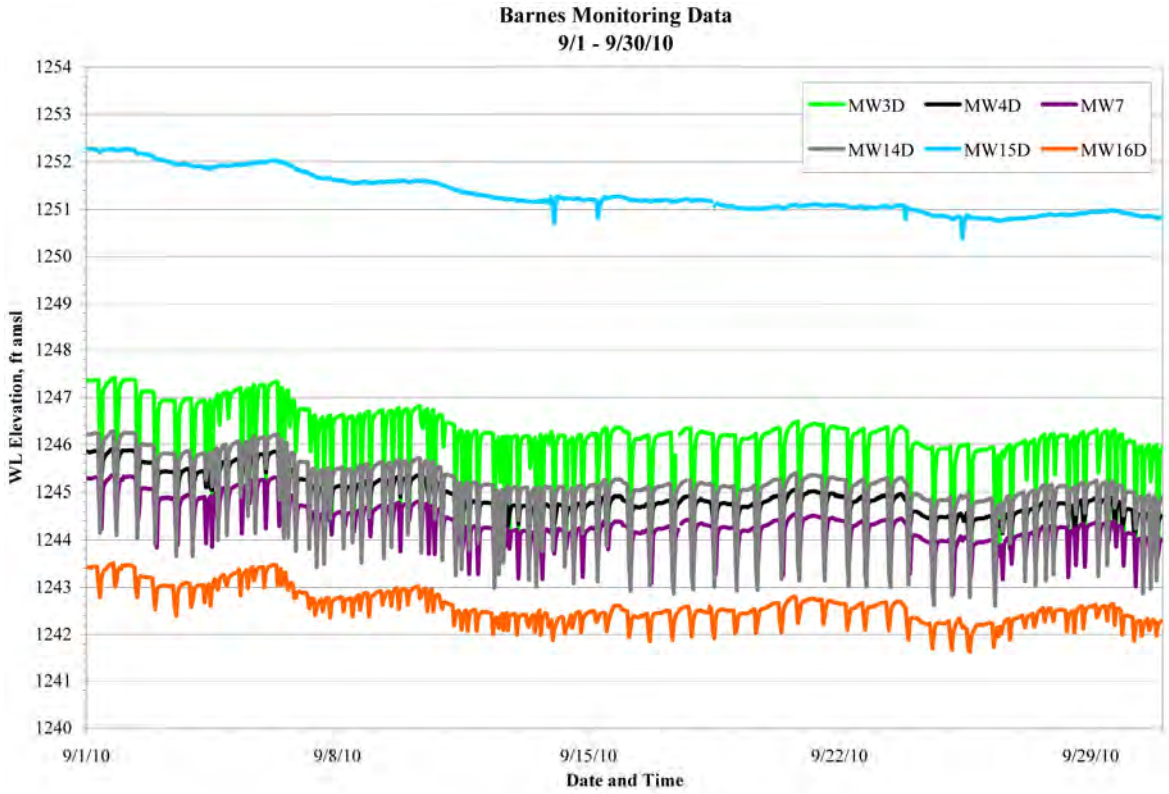


FIGURE 4.2a (Cont.)



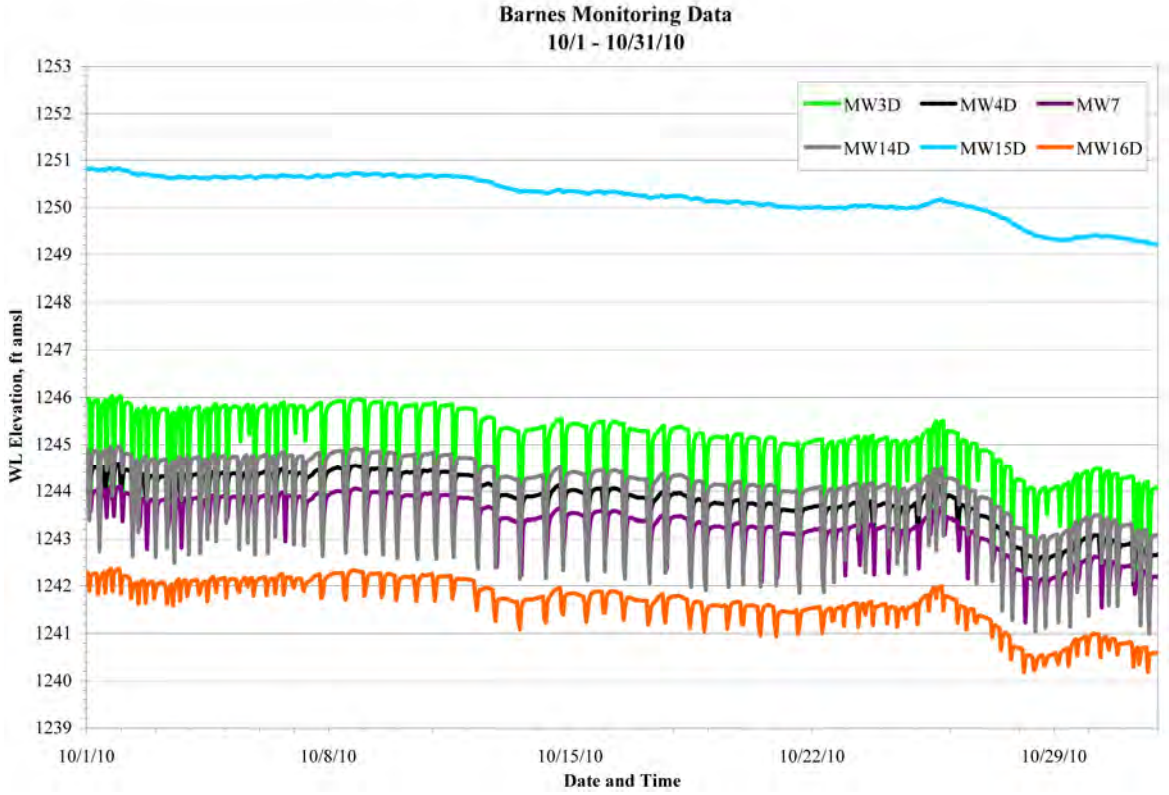
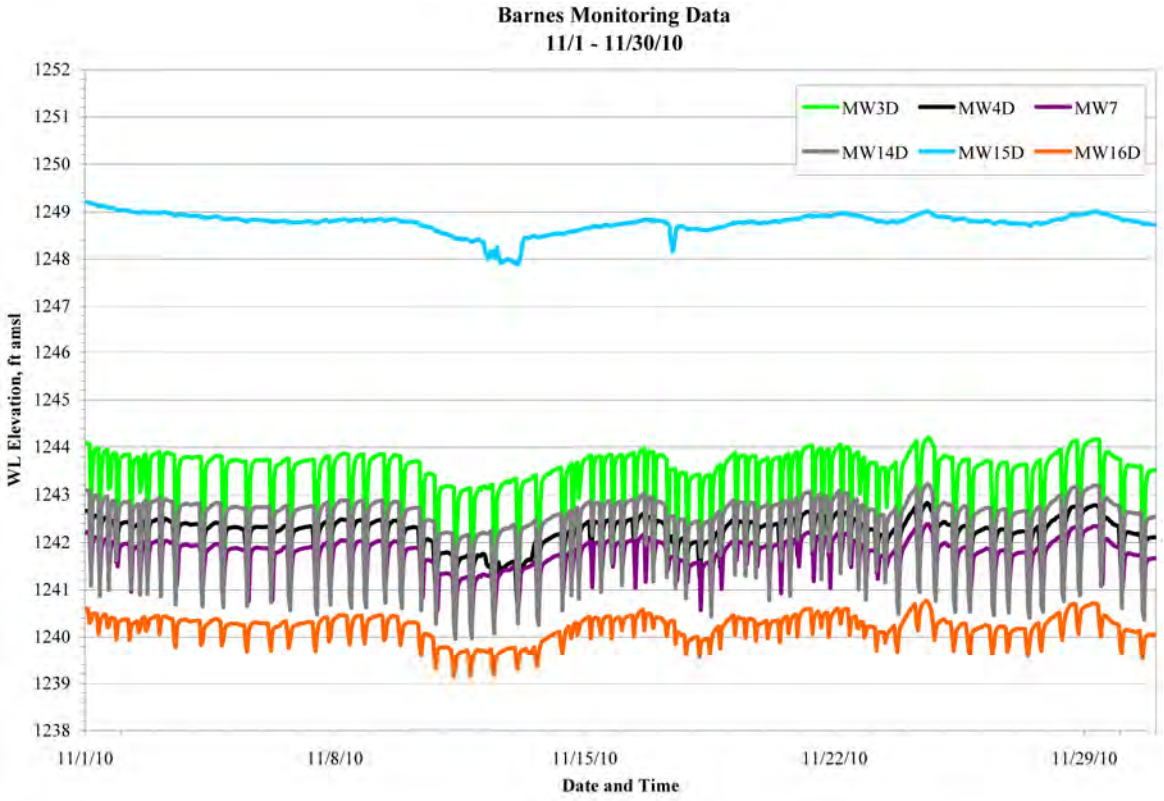


FIGURE 4.2a (Cont.)



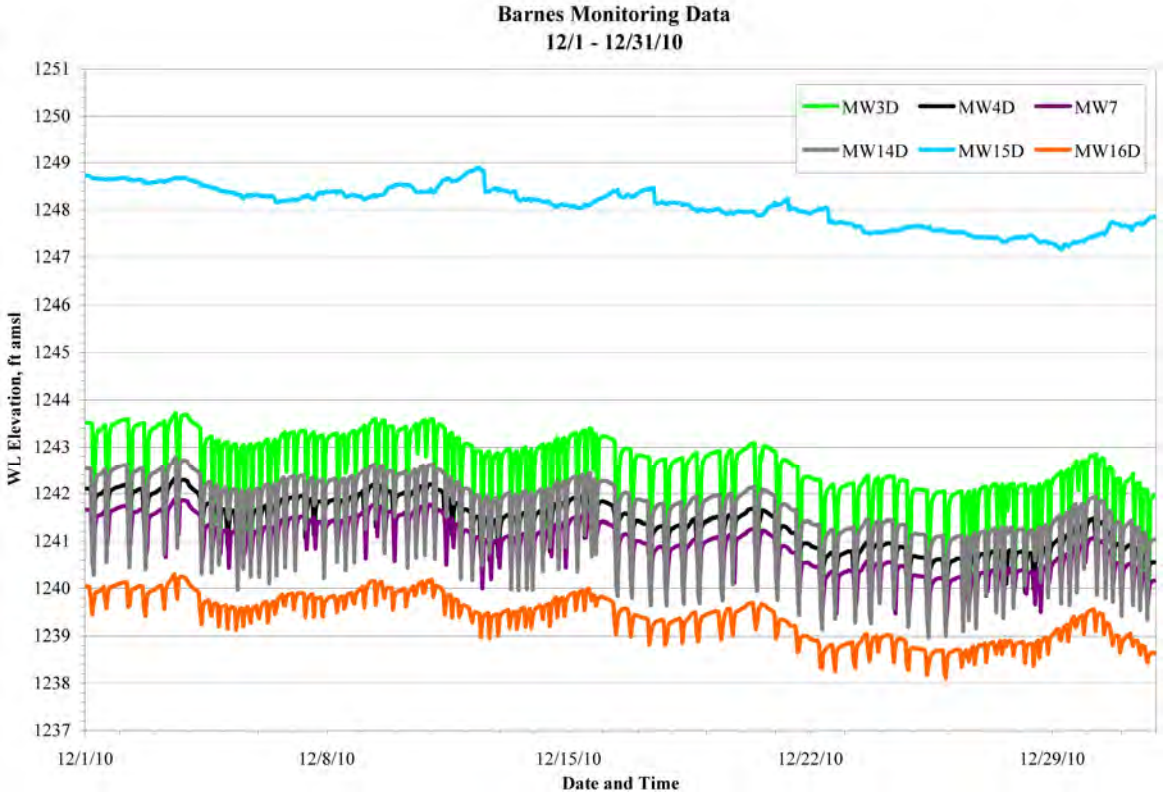


FIGURE 4.2a (Cont.)

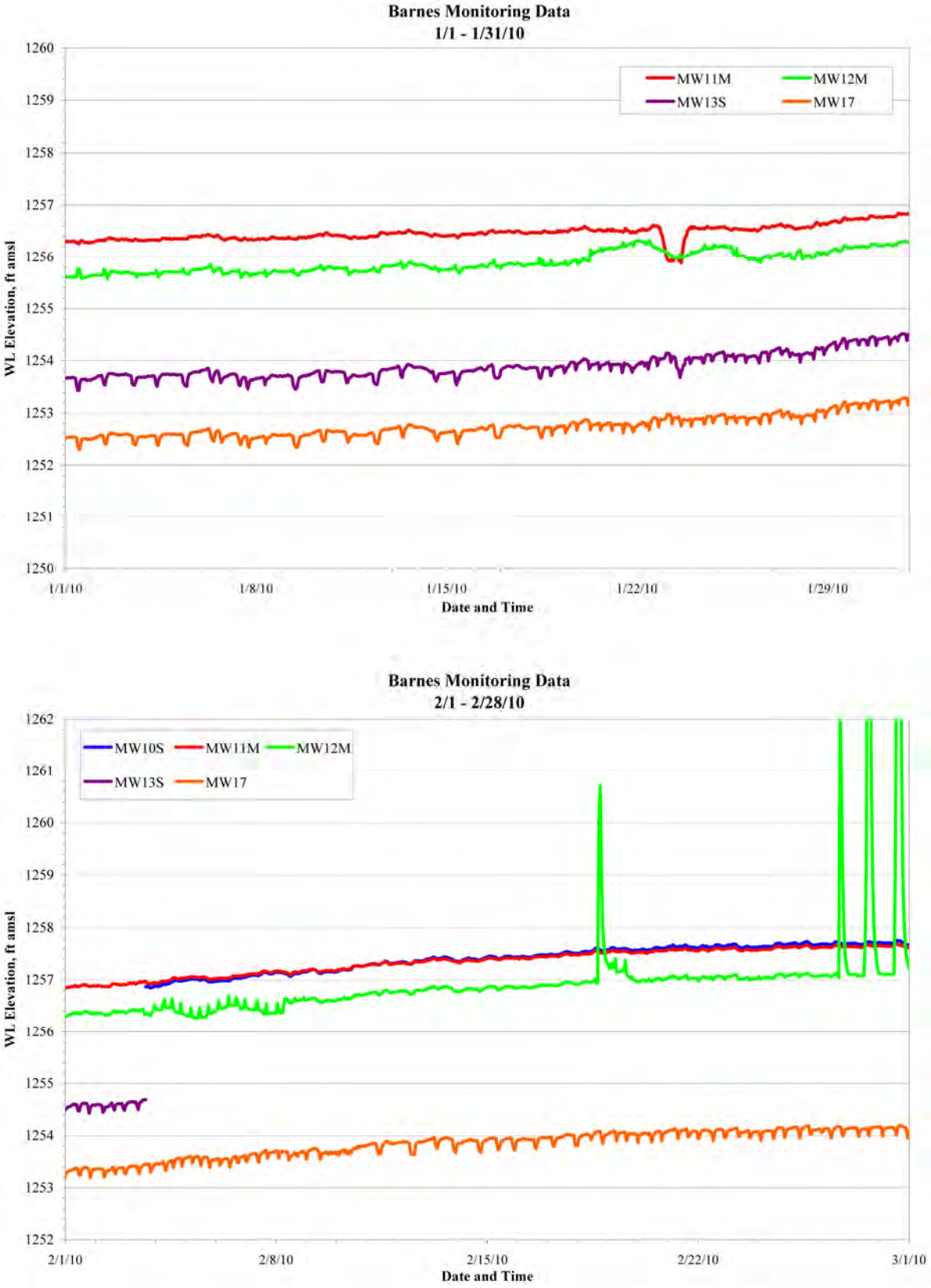
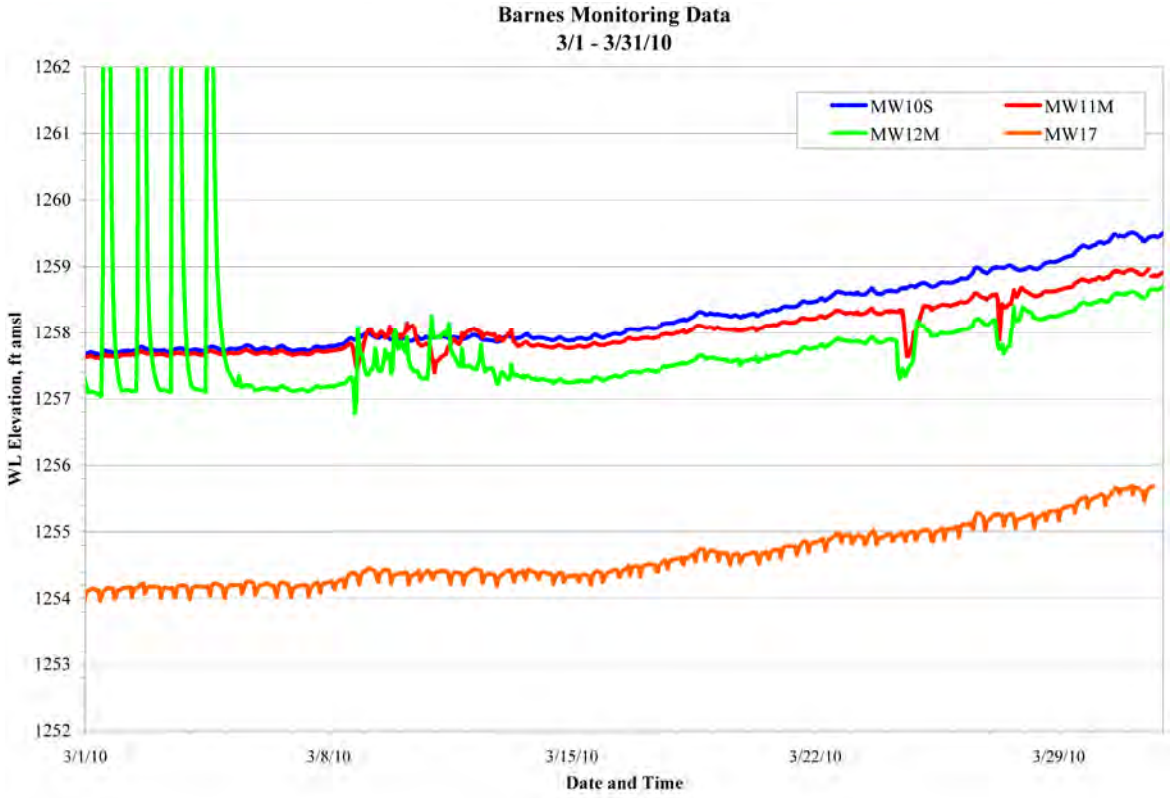


FIGURE 4.2b Hydrographs summarizing monthly results of long-term water level monitoring in the intermediate-zone wells at Barnes, January-September 2010.



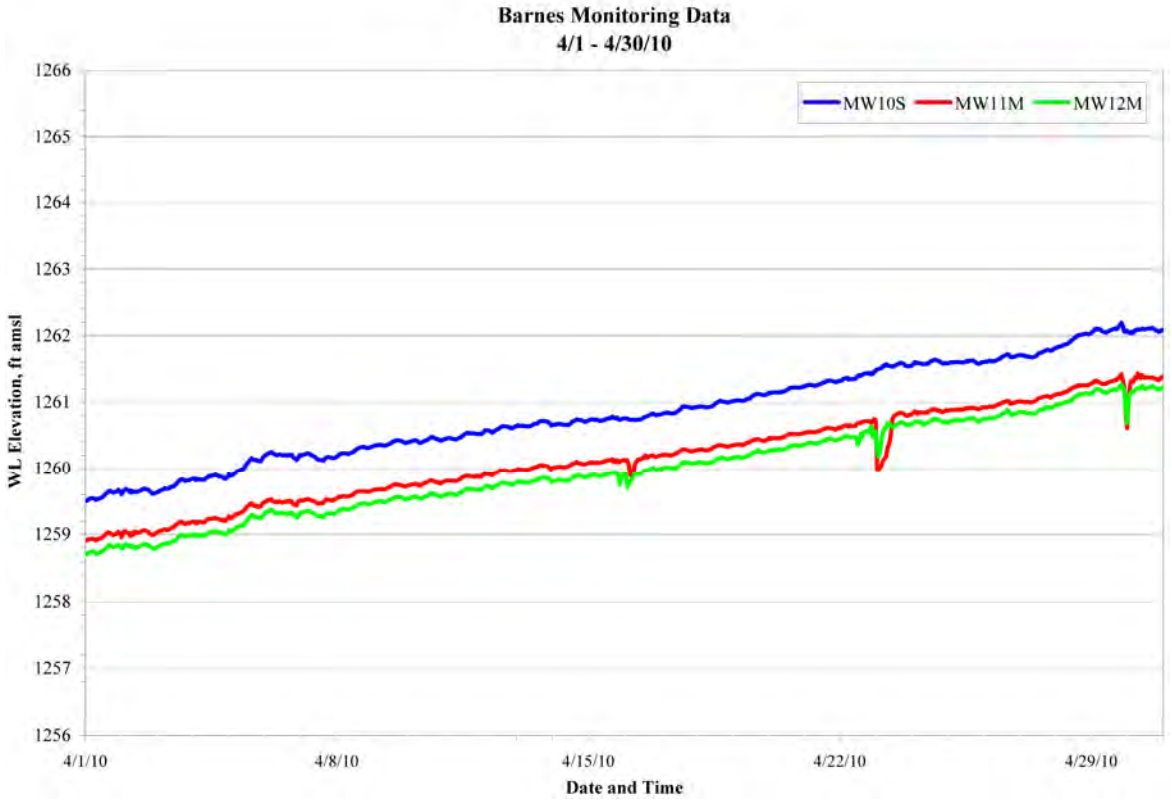
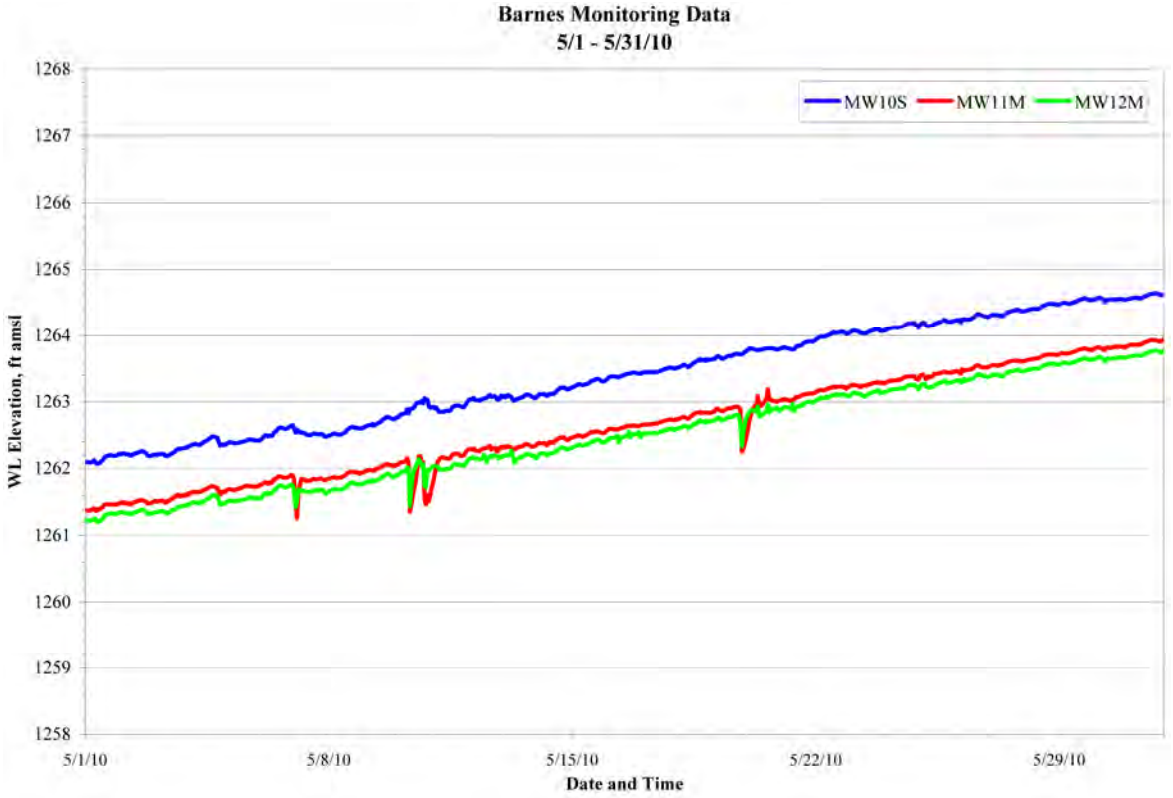


FIGURE 4.2b (Cont.)



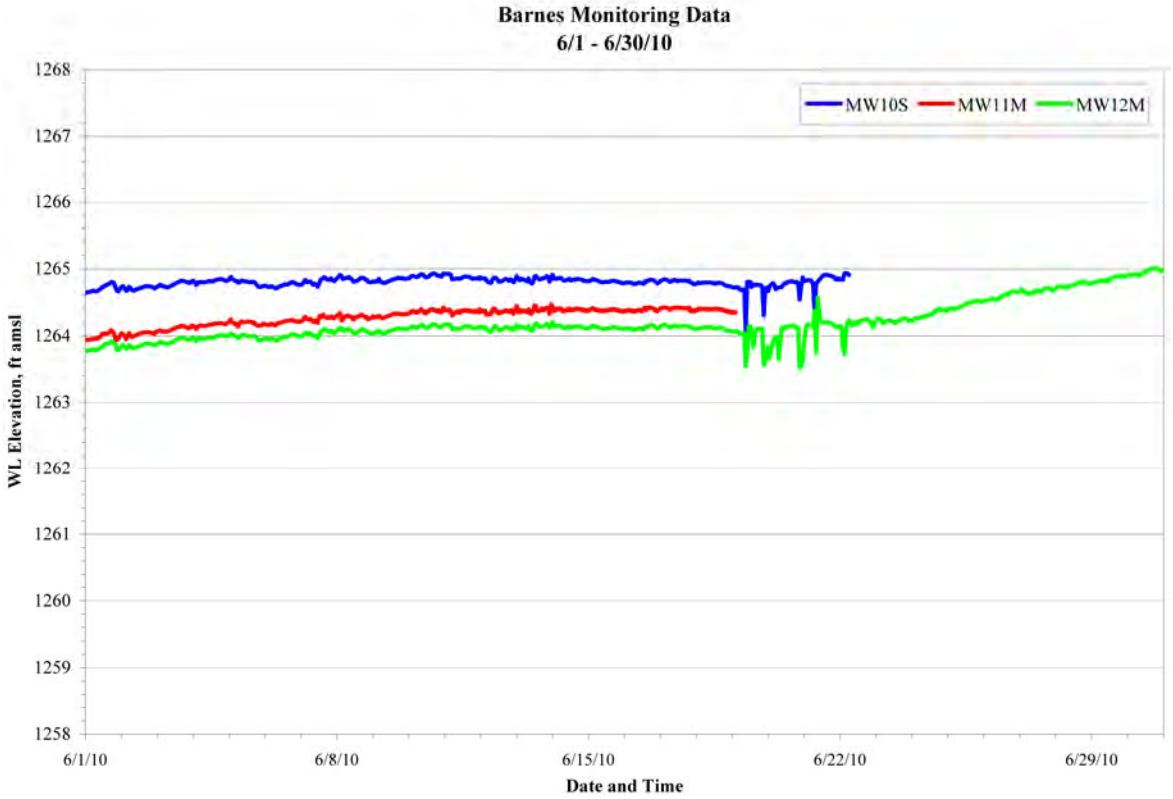
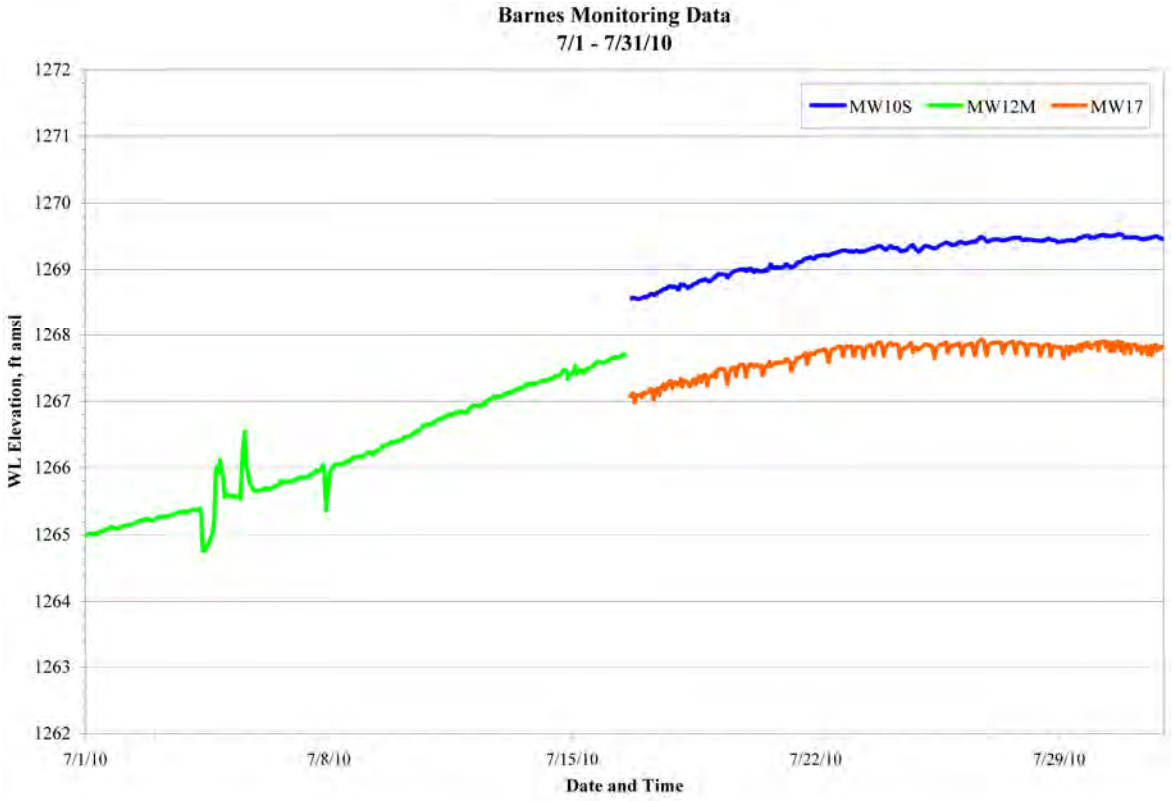


FIGURE 4.2b (Cont.)



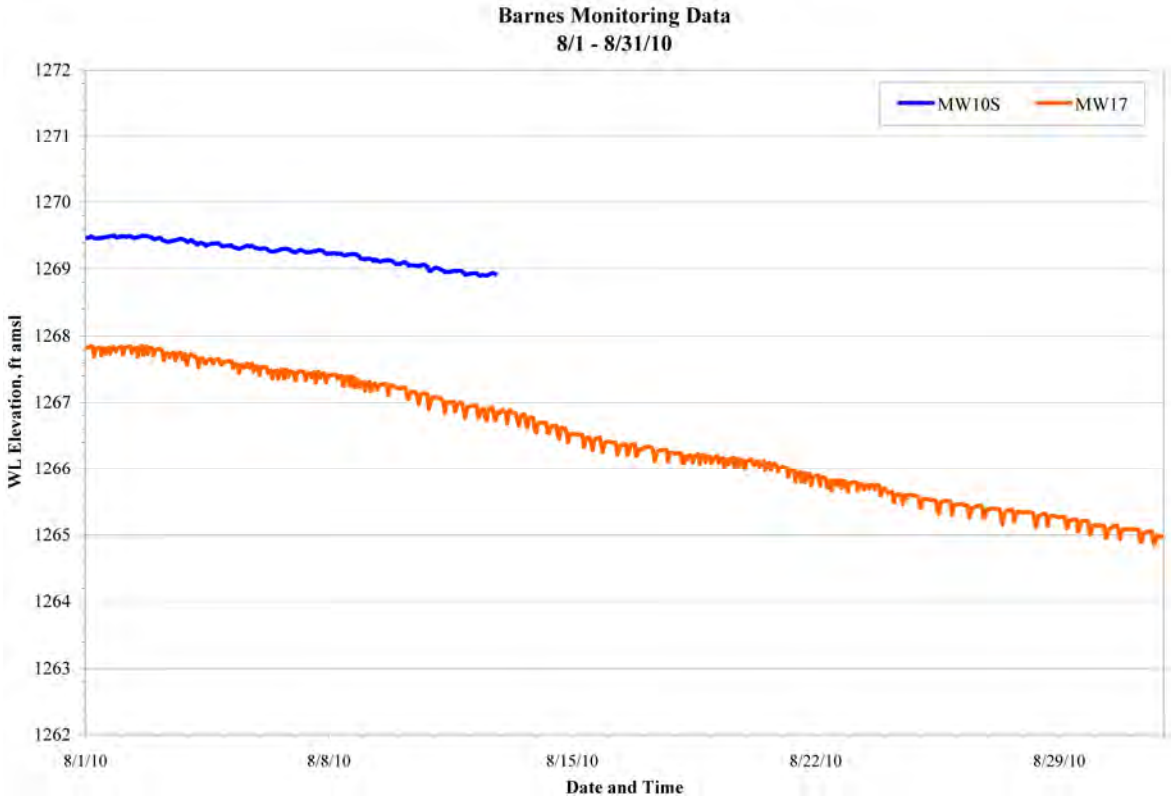


FIGURE 4.2b (Cont.)

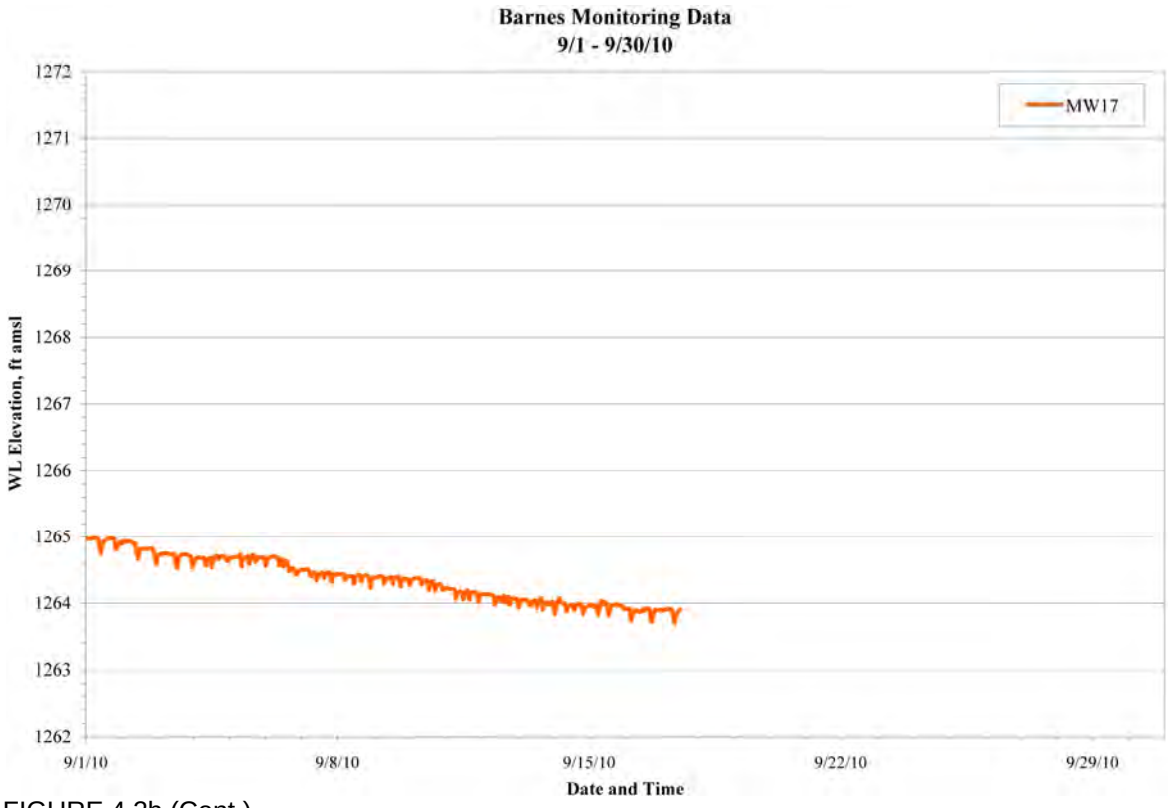


FIGURE 4.2b (Cont.)

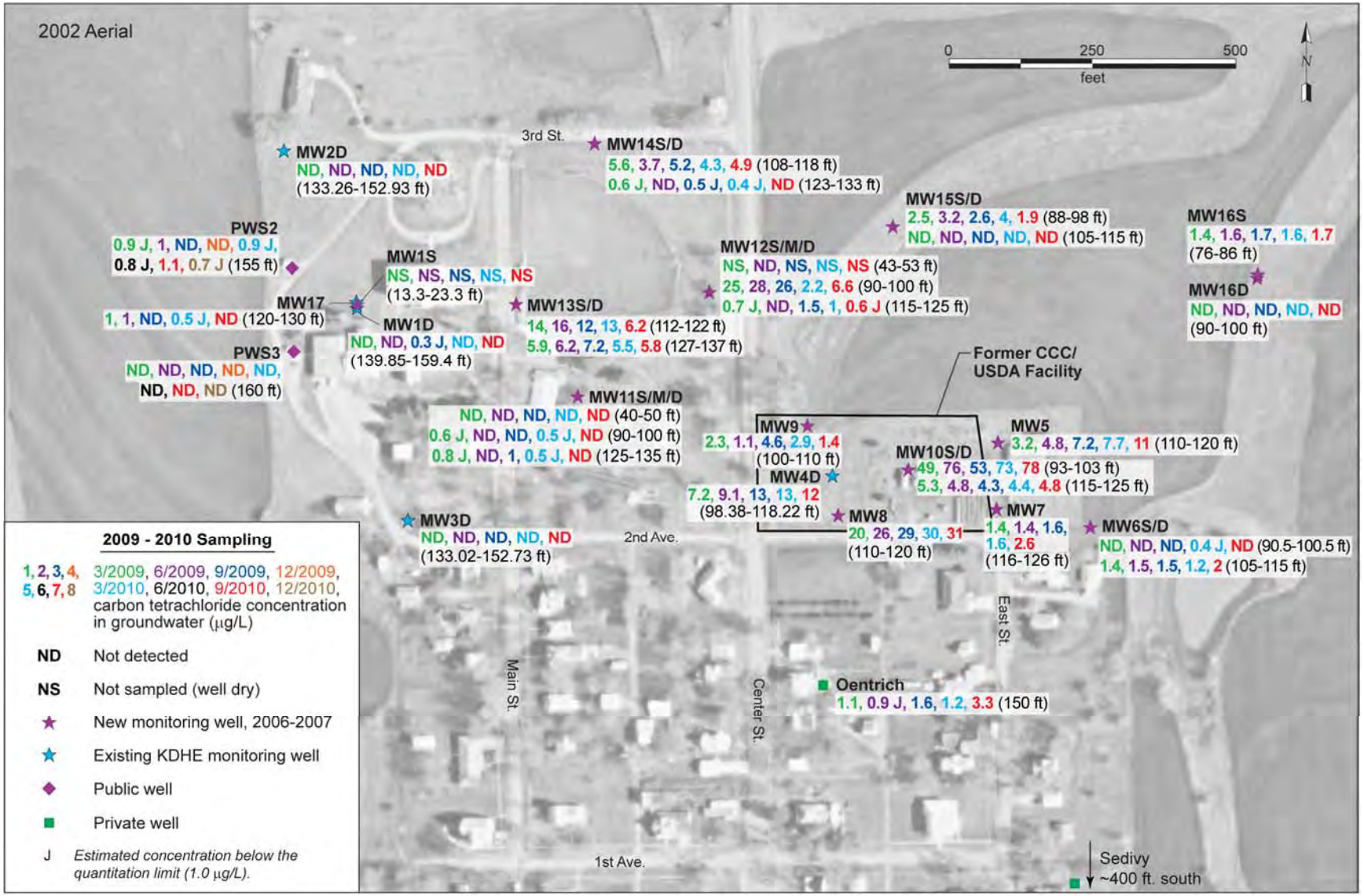


FIGURE 4.3 Analytical results for carbon tetrachloride in groundwater samples collected at Barnes in 2009-2010. Source of photograph: NAPP (2002).

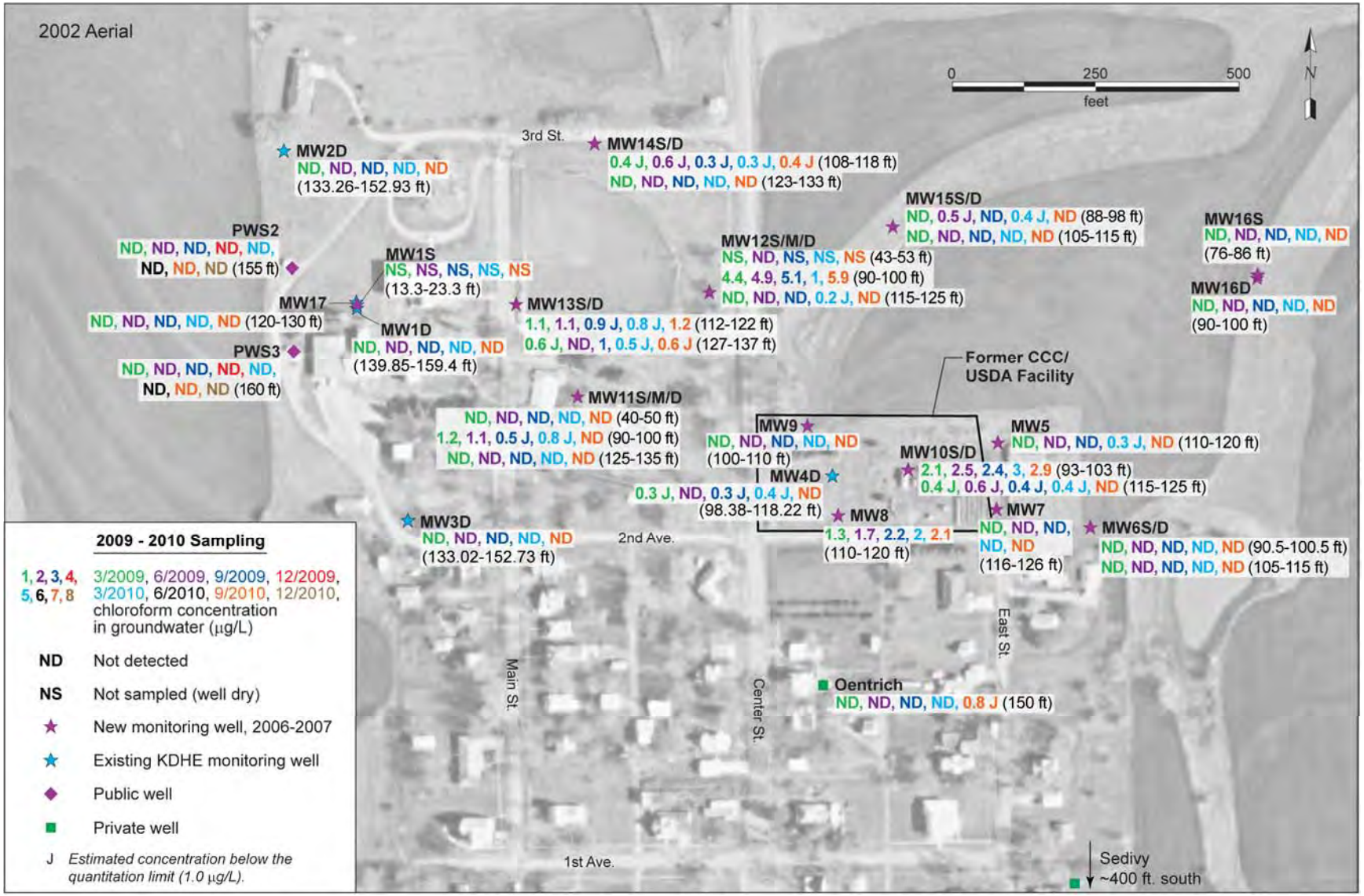


FIGURE 4.4 Analytical results for chloroform in groundwater samples collected at Barnes in 2009-2010. Source of photograph: NAPP (2002).

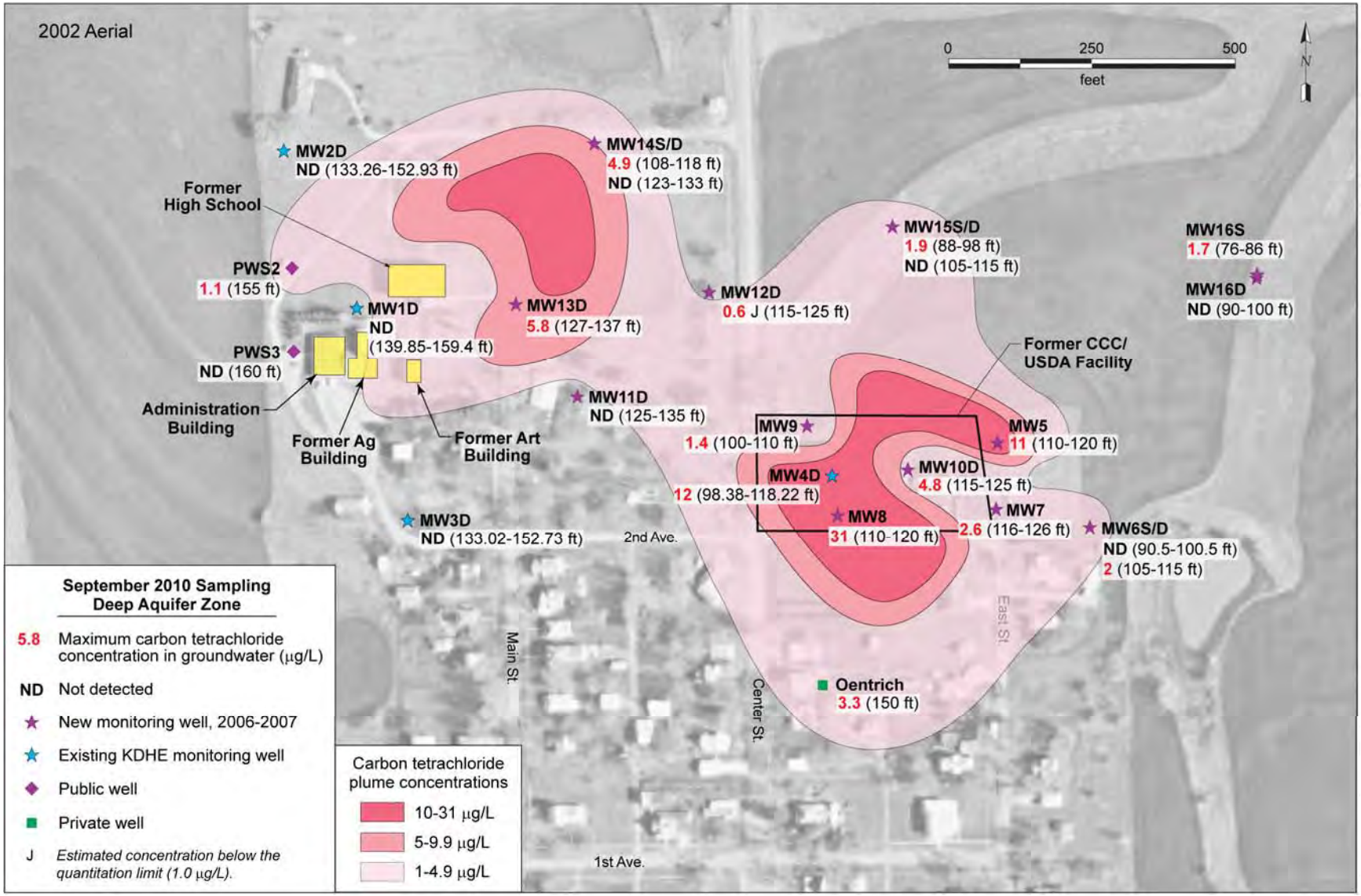


FIGURE 4.5 Interpreted carbon tetrachloride plume in 2010 in wells screened in the deep aquifer zone (groundwater elevations approximately 1,242-1,256 ft AMSL in September 2010). Source of photograph: NAPP (2002).

5 Conclusions and Recommendations

5.1 Conclusions

The findings of the monitoring events at Barnes in 2010 continued to support the following conclusions:

- Measurements of groundwater levels obtained manually and through the use of automatic recorders have consistently indicated that the flow direction is strongly influenced by pumping of the public water supply wells. The results have demonstrated

  - An apparent groundwater flow direction to the northeast when the public wells *are not pumping* and

  - A northwesterly groundwater flow trend when the public wells *are pumping*.

- Evaluation of manual water level measurements and carbon tetrachloride concentrations continues to suggest that three vertically distinguishable aquifer zones are present at Barnes: shallow, intermediate, and deep. All 5 monitoring wells screened in the intermediate aquifer zone and 9 of 20 wells completed in the deep aquifer zone were monitored with automatic water level recorders in 2010.

- The vertical distribution of carbon tetrachloride in groundwater continues to indicate that the highest concentrations occur in the intermediate aquifer zone. Lower concentrations have been detected in the deep aquifer zone, and no carbon tetrachloride has been detected in the shallow zone.

- The conceptual model of the groundwater flow system at Barnes, as previously postulated on the basis of the accumulated results, suggests that the observed vertical hydraulic gradients and higher carbon tetrachloride concentrations in the intermediate zone might reflect generally lower

permeability and hence less effective groundwater and contaminant migration in the intermediate zone than in the deep aquifer zone.

- As it has since March 2008, intermediate-zone well MW10S, in the eastern portion of the former CCC/USDA facility, contained the highest concentrations of carbon tetrachloride.

- Overall, the lateral distribution of carbon tetrachloride in groundwater in 2010 is similar to the distribution during previous sampling events. The accumulated data, including a trend analysis conducted in 2009, indicate stable contaminant concentrations, with no imminent impact to the public wells.

- A conceptual contingent interim measure work plan (Argonne 2009c), approved by the KDHE (2009), involves use of a granular activated carbon system for protection of the public water supply wells.

5.2 Recommendations

- In anticipation of a corrective action study, continue annual monitoring of the reduced set of wells approved by the KDHE (2010) and semi-annual sampling of the public water supply wells. The reduced set of wells is illustrated in Figure 5.1.

- Sampling schedules for the public wells will be coordinated so that the annual sampling by the city of Barnes serves as one of the two annual events and our sampling serves as the other. In 2011, the CCC/USDA proposes to conduct its annual sampling in December.

- Multiple water level recorder failures in 2010 led to reevaluation of the water level monitoring needs at Barnes. The conclusion was that water level monitoring should be discontinued in two deep-zone wells, as follows:

- Well MW4D, which is subject to water invasion and recorder failure and is close to monitoring point MW9.

- Well MW15D, which is not screened in the same part of the deep aquifer zone as the other deep wells and consequently does not yield comparable data (Section 4.1).

- Replacement recorders are being obtained to restore the monitoring capability in all of the remaining wells that were monitored in 2010, as follows (Figure 5.2):

  - Intermediate-zone wells MW10S, MW11M, MW12M, MW13S, MW17.

  - Deep-zone wells MW1D, MW2D, MW3D, MW7, MW9, MW14D, MW16D.

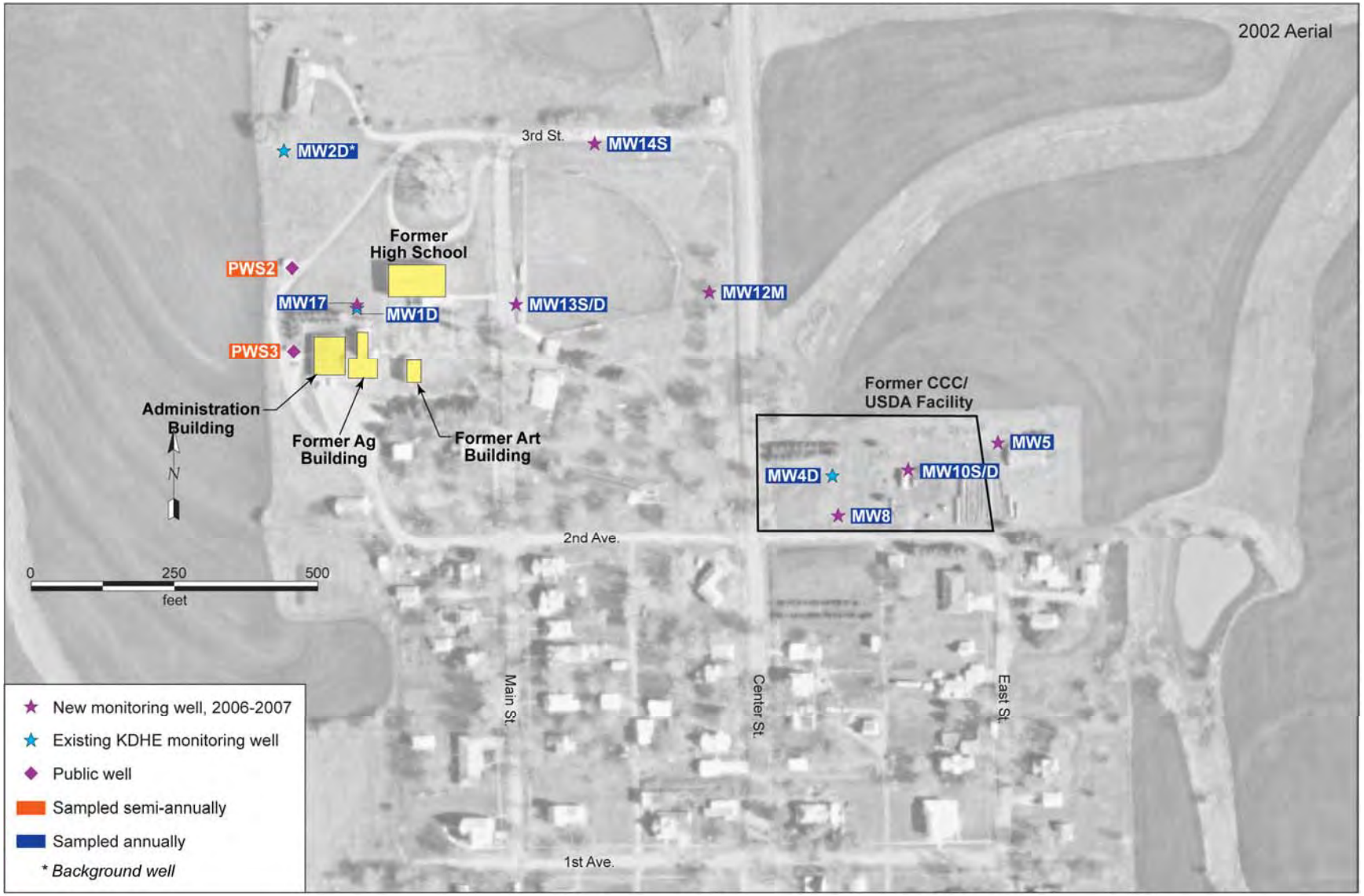


FIGURE 5.1 Wells in the approved monitoring network, beginning in 2011. Source of photograph: NAPP (2002).

FIGURE 5.2 Wells at Barnes equipped with data loggers for automatic water level monitoring in 2011. Source of photograph: NAPP (2002).

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Appendix A:

Sampling Activities and Field Measurements at Barnes in 2010

TABLE A.1 Sequence of groundwater sampling activities at Barnes in 2010.

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
3/30/10	14:29	BAMW16D-W-28743	MW	MW16D	90-100	2616	3/30/10	Depth to water = 65.95 ft. Depth of 2-in. well = 100 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 95 ft. Aliquots collected for verification analysis at TestAmerica.
3/30/10	14:40	BAMW5-W-28722	MW	MW5	110-120	2616	3/30/10	Depth to water = 92.06 ft. Depth of 2-in. well = 120 ft. Sample collected by using low-flow bladder pump after purging of 5.2 L. Pump intake positioned at 115 ft. Aliquots collected for verification analysis at TestAmerica.
3/30/10	15:31	BAMW16S-W-28742	MW	MW16S	76-86	2616	3/30/10	Depth to water = 66.1 ft. Depth of 2-in. well = 86 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 81 ft. Aliquots collected for verification analysis at TestAmerica.
3/30/10	16:10	BAMW7-W-28725	MW	MW7	116-126	2616	3/30/10	Depth to water = 94.56 ft. Depth of 2-in. well = 126 ft. Sample collected by using low-flow bladder pump after purging of 4.5 L. Pump intake positioned at 121 ft.
3/30/10	16:20	BAQCIR-W-28752[b]	RI	QC	–	2616	3/30/10	Rinsate of decontaminated sampling line after collection of sample BAMW7-W-28725.
3/30/10	17:04	BAMW15D-W-28741	MW	MW15D	105-115	2616	3/30/10	Depth to water = 66.5 ft. Depth of 2-in. well = 115 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 110 ft. Aliquots collected for verification analysis at TestAmerica.
3/30/10	17:30	BAMW10S-W-28728	MW	MW10S	93-103	2616	3/30/10	Depth to water = 71.96 ft. Depth of 2-in. well = 103 ft. Sample collected by using low-flow bladder pump after purging of 7.5 L. Pump intake positioned at 98 ft.
3/30/10	17:31	BAMW10SDUP-W-28749[b]	MW	MW10S	93-103	2616	3/30/10	Replicate of sample BAMW10S-W-28728.
3/30/10	18:04	BAMW15S-W-28740	MW	MW15S	88-98	2616	3/30/10	Depth to water = 75.65 ft. Depth of 2-in. well = 96.5 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 93 ft.

TABLE A.1 (Cont.)

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
3/30/10	18:30	BAMW10D-W-28729	MW	MW10D	115-125	2616	3/30/10	Depth to water = 96.86 ft. Depth of 2-in. well = 125 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 120 ft.
3/30/10	18:42	BAQCIR-W-28753[b]	RI	QC	–	2616	3/30/10	Rinsate of decontaminated sampling line after collection of sample BAMW15S-W-28740.
3/31/10	10:25	BAMW8-W-28726	MW	MW8	110-120	2617	3/31/10	Depth to water = 94.06 ft. Depth of 2-in. well = 120 ft. Sample collected by using low-flow bladder pump after purging of 5.5 L. Pump intake positioned at 115 ft. Aliquots collected for verification analysis at TestAmerica.
3/31/10	10:55	BAMW9-W-28727	MW	MW9	100-110	2617	3/31/10	Depth to water = 82.45 ft. Depth of 2-in. well = 110 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 105 ft.
3/31/10	11:26	BAPWS3-W-28747	PW	PWS3	160	2617	3/31/10	Well in use overnight. Allowed tap to run for 5 min and then sampled. Aliquots collected for verification analysis at TestAmerica.
3/31/10	11:30	BAMW4D-W-28721	MW	MW4D	98.38-118.22	2617	3/31/10	Depth to water = 91.45 ft. Depth of 2-in. well = 116.6 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 108.30 ft.
3/31/10	11:32	BAPWS2-W-28746	PW	PWS2	155	2617	3/31/10	Well used on March 30. Allowed well to run for 10 min and then sampled.
3/31/10	11:40	BAQCIRW-28754[b]	RI	QC	–	2617	3/31/10	Rinsate of decontaminated sampling line after collection of sample BAMW4D-W-28721.
3/31/10	12:00	BAMW12S-dry-Mar10	MW	MW12S	43-53			Well was dry.
3/31/10	12:19	BAMW12D-W-28735	MW	MW12D	115-125	2617	3/31/10	Depth to water = 93.55 ft. Depth of 2-in. well = 125 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 120 ft.
3/31/10	13:17	BAMW12M-W-28734	MW	MW12M	90-100	2617	3/31/10	Depth to water = 70.45 ft. Depth of 2-in. well = 100 ft. Sample collected by using low-flow bladder pump after purging of 4.5 L. Pump intake positioned at 95 ft.

TABLE A.1 (Cont.)

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
3/31/10	13:20	BAMW6S-W-28723	MW	MW6S	90.5-100.5	2617	3/31/10	Depth to water = 86.15 ft. Depth of 2-in. well = 99 ft. Sample collected by using low-flow bladder pump after purging of 13 L. Pump intake positioned at 95.50 ft. Aliquots collected for verification analysis at TestAmerica.
3/31/10	14:13	BAMW6D-W-28724	MW	MW6D	105-115	2617	3/31/10	Depth to water = 87.84 ft. Depth of 2-in. well = 115 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 110 ft.
3/31/10	14:54	BAMW11S-W-28730	MW	MW11S	40-50	2617	3/31/10	Depth to water = 21.5 ft. Depth of 1-in. well = 50 ft. Sample collected by using low-flow bladder pump after purging of 2 L. Pump intake positioned at 45 ft.
3/31/10	15:44	BAMW2D-W-28719	MW	MW2D	133.26-152.93	2619	4/1/10	Depth to water = 112.4 ft. Depth of 2-in. well = 152.90 ft. Sample collected by using low-flow bladder pump after purging of 6.5 L. Pump intake positioned at 143.10 ft.
3/31/10	16:00	BAQCTB-W-28756[b]	TB	QC	–	2617	3/31/10	Trip blank send to the AGEM Laboratory for organic analysis with water samples listed on COCs 2616 and 2617, and to Test America for verification organic analysis with water samples listed on COC 2618.
3/31/10	16:11	BAMW11M-W-28731	MW	MW11M	90-100	2619	4/1/10	Depth to water = 77.9 ft. Depth of 2-in. well = 100 ft. Sample collected by using low-flow bladder pump after purging of 8 L. Pump intake positioned at 95 ft.
3/31/10	16:50	BAMW1S-dry-Mar10	MW	MW1S	13.3-23.3			Well was dry.
3/31/10	17:14	BAMW1D-W-28718	MW	MW1D	139.85-159.4	2619	4/1/10	Depth to water = 114.55 ft. Depth of 2-in. well = 159.4 ft. Sample collected by using low-flow bladder pump after purging of 5.5 L. Pump intake positioned at 149.63 ft.
3/31/10	18:45	BAMW17-W-28744	MW	MW17	120-130	2619	4/1/10	Depth to water = 94.90 ft. Depth of 2-in. well = 130 ft. Sample collected by using low-flow bladder pump after purging of 5.5 L. Pump intake positioned at 125 ft.

TABLE A.1 (Cont.)

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
4/1/10	10:10	BAMW13S-W-28736	MW	MW13S	112-122	2619	4/1/10	Depth to water = 85.65 ft. Depth of 2-in. well = 122 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 117 ft.
4/1/10	11:05	BAMW13D-W-28737	MW	MW13D	127-137	2619	4/1/10	Depth to water = 105.75 ft. Depth of 2-in. well = 137 ft. Sample collected by using low-flow bladder pump after purging of 4.5 L. Pump intake positioned at 132 ft.
4/1/10	11:58	BAMW11D-W-28732	MW	MW11D	125-135	2619	4/1/10	Depth to water = 100.1 ft. Depth of 2-in. well = 135 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 130 ft.
4/1/10	11:59	BAMW11DDUP-W-28750[b]	MW	MW11D	125-135	2619	4/1/10	Replicate of sample BAMW11D-W-28732.
4/1/10	12:18	BAQCIR-W-28755[b]	RI	QC	–	2619	4/1/10	Rinsate of decontaminated sampling line after collection of sample BAMW11D-W-28732 and replicate BAMW11DDUP-W-28750.
4/1/10	12:25	BAMW3D-W-28720	MW	MW3D	133.02-152.73	2619	4/1/10	Depth to water = 108.86 ft. Depth of 2-in. well = 152.0 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 142.88 ft.
4/1/10	13:02	BAOENTRICH-W-28745	DW	Oentrich	150	2619	4/1/10	Purged of 10 gal and then sampled.
4/1/10	13:14	BAMW14D-W-28739	MW	MW14D	123-133	2619	4/1/10	Depth to water = 96.5 ft. Depth of 2-in. well = 133 ft. Sample collected by using low-flow bladder pump after purging of 4 L. Pump intake positioned at 128 ft.
4/1/10	13:15	BAMW14DDUP-W-28751[b]	MW	MW14D	123-133	2619	4/1/10	Replicate of sample BAMW14D-W-28739.
4/1/10	14:00	BAQCTB-W-28757[b]	TB	QC	–	2619	3/31/10	Trip blank sent to the AGEM Laboratory for organic analysis with water samples listed on COC 2619.
4/1/10	14:07	BAMW14S-W-28738	MW	MW14S	108-118	2619	4/1/10	Depth to water = 96.7 ft. Depth of 2-in. well = 118 ft. Sample collected by using low-flow bladder pump after purging of 4 L. Pump intake positioned at 113 ft.
6/17/10	12:31	BAPWS3-W-28759	PW	PWS3	160	2862	6/17/10	Recent use of well not stated in log.
6/17/10	12:39	BAPWS2-W-28758	PW	PWS2	155	2862	6/17/10	Recent use of well not stated in log.
6/17/10	14:30	BAQCTB-W-28760[b]	TB	QC	–	2862	6/17/10	Trip blank sent to the AGEM Laboratory for organic analysis with water samples listed on COC 2862.

TABLE A.1 (Cont.)

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
9/17/10	11:50	BAMW3D-W-28763	MW	MW3D	133.02-152.73	2744	9/18/10	Depth to water = 99.92 ft. Depth of 2-in. well = 152.73 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 142.88 ft.
9/17/10	13:03	BAMW2D-W-28762	MW	MW2D	133.26-152.93	2744	9/18/10	Depth to water = 103.38 ft. Depth of 2-in. well = 152.93 ft. Sample collected by using low-flow bladder pump after purging of 10.5 L. Pump intake positioned at 143.10 ft.
9/17/10	13:14	BAMW7-W-28768	MW	MW7	116-126	2744	9/18/10	Depth to water = 85.67 ft. Depth of 2-in. well = 126 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 121 ft.
9/17/10	14:12	BAMW5-W-28765	MW	MW5	110-120	2744	9/18/10	Depth to water = 70.45 ft. Depth of 2-in. well = 100 ft. Sample collected by using low-flow bladder pump after purging of 4.5 L. Pump intake positioned at 95 ft.
9/17/10	14:20	BAQCIR-W-28796	RI	QC	–	2744	9/18/10	Rinsate of decontaminated sampling line after collection of sample BAMW5-W-28765.
9/17/10	14:50	BAMW17-W-28787	MW	MW17	120-130	2744	9/18/10	Depth to water = 88.03 ft. Depth of 2-in. well = 130 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 125 ft.
9/17/10	15:30	BAMW10S-W-28771	MW	MW10S	93-103	2744	9/18/10	Depth to water = 65.95 ft. Depth of 2-in. well = 103 ft. Sample collected by using low-flow bladder pump after purging of 6.5 L. Pump intake positioned at 98 ft.
9/17/10	15:31	BAMW10SDUP-W-28791[b]	MW	MW10S	93-103	2744	9/18/10	Replicate of sample BAMW10S-W-28771.
9/17/10	16:26	BAMW10D-W-28772	MW	MW10D	115-125	2744	9/18/10	Depth to water = 86.92 ft. Depth of 2-in. well = 125 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 120 ft.
9/17/10	17:00	BAMW1D-W-28761	MW	MW1D	139.85-159.4	2744	9/18/10	Depth to water = 105.28 ft. Depth of 2-in. well = 159.4 ft. Sample collected by using low-flow bladder pump after purging of 9 L. Pump intake positioned at 149.63 ft.
9/17/10	17:00	BAQCTB-W-28802[b]	TB	QC	–	2744	9/18/10	Trip blank sent to the AGEM Laboratory for organic analysis with water samples listed on COC 2744.

TABLE A.1 (Cont.)

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
9/17/10	17:01	BAMW1DDUP-W-28792[b]	MW	MW1D	139.85-159.4	2744	9/18/10	Replicate of sample BAMW1D-W-28761.
9/17/10	17:35	BAQCIR-W-28797	RI	QC	–	2744	9/18/10	Rinsate of decontaminated sampling line after collection of sample BAMW1D-W-28761 and replicate BAMW1DDUP-W-28792.
9/17/10	17:48	BAMW8-W-28769	MW	MW8	110-120	2744	9/18/10	Depth to water = 84.95 ft. Depth of 2-in. well = 120 ft. Sample collected by using low-flow bladder pump after purging of 4 L. Pump intake positioned at 115 ft.
9/17/10	18:48	BAMW4D-W-28764	MW	MW4D	98.38-118.22	2744	9/18/10	Depth to water = 81.25 ft. Depth of 2-in. well = 118.22 ft. Sample collected by using low-flow bladder pump after purging of 4.5 L. Pump intake positioned at 108.30 ft.
9/17/10	18:49	BAMW4DDUP-W-28793[b]	MW	MW4D	98.38-118.22	2744	9/18/10	Replicate of sample BAMW4D-W-28764.
9/17/10	19:42	BAMW14D-W-28782	MW	MW14D	123-133	2744	9/18/10	Depth to water = 87.66 ft. Depth of 2-in. well = 133 ft. Sample collected by using low-flow bladder pump after purging of 9 L. Pump intake positioned at 128 ft.
9/18/10	9:06	BAMW16S-W-28785	MW	MW16S	76-86	2747	9/20/10	Depth to water = 57.24 ft. Depth of 2-in. well = 86 ft. Sample collected by using low-flow bladder pump after purging of 6.5 L. Pump intake positioned at 81 ft.
9/18/10	9:07	BAMW16SDUP-W-28794[b]	MW	MW16S	76-86	2747	9/20/10	Replicate of sample BAMW16S-W-28785.
9/18/10	9:11	BAMW14S-W-28781	MW	MW14S	108-118	2746	9/20/10	Depth to water = 87.82 ft. Depth of 2-in. well = 118 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 113 ft.
9/18/10	9:54	BAMW16D-W-28786	MW	MW16D	90-100	2747	9/20/10	Depth to water = 57.65 ft. Depth of 2-in. well = 100 ft. Sample collected by using low-flow bladder pump after purging of 4.5 L. Pump intake positioned at 95 ft.
9/18/10	10:04	BAQCIR-W-28798	RI	QC	–	2747	9/20/10	Rinsate of decontaminated sampling line after collection of sample BAMW16D-W-28786.
9/18/10	10:21	BAMW13S-W-28779	MW	MW13S	112-122	2746	9/20/10	Depth to water = 78.01 ft. Depth of 2-in. well = 122 ft. Sample collected by using low-flow bladder pump after purging of 7 L. Pump intake positioned at 117 ft.
9/18/10	10:22	BAMW13SDUP-W-28795[b]	MW	MW13S	112-122	2747	9/20/10	Replicate of sample BAMW13S-W-28779.

TABLE A.1 (Cont.)

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
9/18/10	11:20	BAMW15S-W-28783	MW	MW15S	88-98	2746	9/20/10	Depth to water = 66.07 ft. Depth of 2-in. well = 98 ft. Sample collected by using low-flow bladder pump after purging of 9 L. Pump intake positioned at 93 ft.
9/18/10	11:31	BAMW13D-W-28780	MW	MW13D	127-137	2746	9/20/10	Depth to water = 96.88 ft. Depth of 2-in. well = 137 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 132 ft.
9/18/10	11:45	BAPWS2-W-28789	PW	PWS2	155	2747	9/20/10	Well in use for past 2 days. Sampled from tap after purging for 5-10 min (approximately 500 gal).
9/18/10	11:55	BAPWS3-W-28790	PW	PWS3	160	2747	9/20/10	Well last used 2 days prior to sampling. Sampled from tap after purging for 5-10 min (approximately 500 gal).
9/18/10	12:00	BADIH2O-W-28800	FB	QC	–	2747	9/20/10	Blank of water used for equipment decontamination.
9/18/10	12:05	BAQCIR-W-28799[b]	RI	QC	–	2747	9/20/10	Rinsate of decontaminated sampling line after collection of sample BAMW13S-W-28779 and replicate BAMW13SDUP-W-28795.
9/18/10	12:10	BAMW15D-W-28784	MW	MW15D	105-115	2746	9/20/10	Depth to water = 58.11 ft. Depth of 2-in. well = 115 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 110 ft.
9/18/10	13:34	BAMW6S-W-28766	MW	MW6S	90.5-100.5	2746	9/20/10	Depth to water = 76.46 ft. Depth of 2-in. well = 100.5 ft. Sample collected by using low-flow bladder pump after purging of 7.5 L. Pump intake positioned at 95.50 ft.
9/18/10	14:04	BAMW9-W-28770	MW	MW9	100-110	2746	9/20/10	Depth to water = 75.46 ft. Depth of 2-in. well = 110 ft. Sample collected by using low-flow bladder pump after purging of 10 L. Pump intake positioned at 105 ft.
9/18/10	14:24	BAMW6D-W-28767	MW	MW6D	105-115	2746	9/20/10	Depth to water = 79.35 ft. Depth of 2-in. well = 115 ft. Sample collected by using low-flow bladder pump after purging of 5 L. Pump intake positioned at 110 ft.
9/18/10	14:44	BAOENTRICH-W-28788	DW	Oentrich	150	2747	9/20/10	Sampled from hydrant after purging of 5-10 gal.

TABLE A.1 (Cont.)

Sample Date	Time	Sample	Sample Type[a]	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
9/18/10	14:50	BAQCTB-W-28801[b]	TB	QC	–	2747	9/20/10	Trip blank sent to the AGEM Laboratory for organic analysis with water samples listed on COCs 2746 and 2747.
9/18/10	15:40	BAMW12M-W-28777	MW	MW12M	90-100	2746	9/20/10	Depth to water = 63.90 ft. Depth of 2-in. well = 100 ft. Sample collected by using low-flow bladder pump after purging of 6 L. Pump intake positioned at 95 ft.
9/18/10	16:30	BAMW12D-W-28778	MW	MW12D	115-125	2746	9/20/10	Depth to water = 83.10 ft. Depth of 2-in. well = 125 ft. Sample collected by using low-flow bladder pump after purging of 4.5 L. Pump intake positioned at 120 ft.
9/18/10	16:42	BAMW11M-W-28774	MW	MW11M	90-100	2746	9/20/10	Depth to water = 71.22 ft. Depth of 2-in. well = 100 ft. Sample collected by using low-flow bladder pump after purging of 10 L. Pump intake positioned at 95 ft.
9/18/10	17:42	BAMW11D-W-28775	MW	MW11D	125-135	2746	9/20/10	Depth to water = 90.97 ft. Depth of 2-in. well = 135 ft. Sample collected by using low-flow bladder pump after purging of 3 L. Pump intake positioned at 130 ft.
9/18/10	18:18	BAMW11S-W-28773	MW	MW11S	40-50	2746	9/20/10	Depth to water = 24.71 ft. Depth of 1-in. well = 50 ft. Sample collected by using low-flow bladder pump after purging of 1.75 L. Pump intake positioned at 45 ft.
12/15/10	12:00	BAPWS2-W-28803	PW	PWS2	155	2702	12/16/10	Recent well use not recorded in log.
12/15/10	12:20	BAPWS3-W-28804	PW	PWS3	160	2702	12/16/10	Recent well use not recorded in log.
12/15/10	12:45	BAQCTB-W-28805[b]	TB	QC	–	2702	12/16/10	Trip blank sent to the AGEM Laboratory for organic analysis with water samples listed on COC 2702.

[a] Sample types: DW, domestic well; MW, monitoring well; PW, public water supply well; RI, rinsate; TB, trip blank.

[b] Quality control sample.

TABLE A.2 Field measurements for groundwater samples collected at Barnes, 2006-2010.

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
Previously existing KDHE monitoring wells							
MW1S	13.3-23.3	7/19/06[a]	–	–	–	–	–
		4/4/07[a]	–	–	–	–	–
		11/18/07[a]	–	–	–	–	–
		3/4/08[a]	–	–	–	–	–
		7/9/08[a]	–	–	–	–	–
		10/22/08[a]	–	–	–	–	–
		3/4/09[a]	–	–	–	–	–
		6/17/09[a]	–	–	–	–	–
		9/30/09[a]	–	–	–	–	–
		3/31/10[a]	–	–	–	–	–
		9/17/10[a]	–	–	–	–	–
MW1D	139.85-159.4	7/19/06	22.8	7.15	945	–	–
		4/4/07	15.7	6.30	855	–	–
		11/18/07	12.7	7.62	712	–	–
		3/4/08	5.5	7.22	1167	11.6	244
		7/9/08	18.1	7.05	992	16.2	98
		10/22/08	12.6	7.07	937	8.95	108
		3/4/09	13.8	7.07	962	8.94	253
		6/17/09	23.3	7.07	1021	5.43	106
		9/30/09	16.3	6.87	1007	6.74	268
		3/31/10	16.6	7.08	760	6.57	-25
		9/17/10	17.5	7.14	851	8.22	160
MW2D	133.26-152.93	7/19/06	24.7	7.72	946	–	–
		4/4/07	15.1	6.32	887	–	–
		11/18/07	12.1	6.96	1448	–	–
		3/7/08	6.5	7.22	1198	4.61	197
		7/10/08	18.4	6.91	1163	5.03	155
		10/22/08	11.6	7.07	931	6.19	132
		3/4/09	14.5	7.06	1126	5.60	243
		6/18/09	18.7	6.97	1235	3.55	116
		9/30/09	17.0	6.15	1196	3.44	25
		3/31/10	16.2	7.09	827	5.18	-37
		9/17/10	20.1	7.13	945	5.00	150
MW3D	133.02-152.73	7/19/06	23.0	7.06	976	–	–
		4/4/07	15.6	6.37	989	–	–
		11/19/07	10.5	7.16	1093	–	–
		3/7/08	8.2	7.09	1195	5.34	255
		7/10/08	19.8	6.99	1177	13.8	110
		10/22/08	13.5	7.01	1238	4.46	84
		3/4/09	12.8	7.08	1062	7.00	210
		6/17/09	18.5	6.65	1038	5.90	110
		9/30/09	15.2	6.87	1057	5.96	209
		4/1/10	18.2	7.11	789	5.62	-60
		9/17/10	20.0	7.00	953	4.87	77

TABLE A.2 (Cont.)

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
Previously existing KDHE monitoring wells (cont.)							
MW4D	98.38-118.22	7/20/06	23.5	6.26	968	–	–
		4/6/07	11.3	6.21	1018	–	–
		11/19/07	15.7	6.98	1022	–	–
		3/9/08	11.5	7.14	859	6.57	201
		7/12/08	14.4	6.94	1001	6.77	149
		10/23/08	13.0	7.02	973	5.56	94
		3/5/09	15.9	7.61	1402	4.04	17
		6/18/09	18.5	7.03	975	5.72	127
		9/30/09	17.3	6.85	925	7.85	150
		3/31/10	15.1	7.09	785	7.19	22
		9/17/10	16.5	7.01	900	7.18	259
CCC/USDA wells installed during 2006-2007 investigation							
MW5	110-120	4/6/07	13.9	6.17	1705	–	–
		11/19/07	15.2	6.74	3070	–	–
		3/8/08	9.9	6.76	2770	0.66	123
		7/11/08	18.8	6.66	2930	1.32	37
		10/23/08	12.8	6.78	2384	0.67	20
		3/5/09	15.9	6.86	2146	2.36	56
		6/19/09	16.4	6.71	2292	1.01	45
		9/30/09	16.1	6.66	1780	3.08	72
		3/30/10	15.2	6.58	907	4.65	17
		9/17/10	17.2	6.96	1093	4.02	-20
MW6S	90.5-100.5	4/4/07[a]	–	–	–	–	–
		11/19/07	12.0	7.60	723	–	–
		3/8/08	4.7	7.77	673	6.72	272
		7/11/08	28.2	7.61	753	9.85	92
		10/23/08	11.9	11.17	582	5.12	91
		3/5/09	13.9	7.88	603	5.23	18
		6/18/09	19.5	7.70	698	4.52	27
		10/1/09	14.6	6.30	618	5.76	88
		3/31/10	16.4	7.52	584	5.78	-25
		9/18/10	15.8	11.16	568	2.26	35
MW6D	105-115	4/5/07	6.2	6.11	936	–	–
		11/19/07	13.6	7.00	1103	–	–
		3/8/08	9.1	7.15	908	5.56	241
		7/11/08	19.8	7.05	999	12.8	100
		10/23/08	12.0	7.18	957	6.27	128
		3/5/09	13.4	7.22	903	3.07	21
		6/18/09	19.0	6.86	992	4.44	114
		10/1/09	16.0	6.41	910	4.18	98
		3/31/10	17.6	7.10	821	5.04	-2
		9/18/10	15.9	7.06	981	4.94	147

TABLE A.2 (Cont.)

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
CCC/USDA wells installed during 2006-2007 investigation (cont.)							
MW7	116-126	4/6/07	14.1	6.30	1051	–	–
		11/19/07	14.6	7.16	890	–	–
		3/9/08	13.1	7.10	1068	4.24	186
		7/12/08	14.4	6.95	1238	4.36	98
		10/23/08	12.7	7.16	1191	8.61	122
		3/5/09	15.3	7.11	1141	9.93	126
		6/19/09	16.3	7.05	1174	4.32	48
		9/30/09	16.2	6.86	1132	8.24	216
		3/30/10	16.4	7.04	923	7.34	-48
		9/17/10	17.2	6.88	1149	4.18	104
MW8	110-120	4/6/07	12.1	6.23	974	–	–
		11/19/07	14.6	7.03	909	–	–
		3/10/08	13.1	7.09	961	6.71	182
		7/11/08	18.6	6.38	1049	6.19	152
		10/23/08	12.9	7.06	948	8.74	97
		3/5/09	16.2	7.12	985	9.43	165
		6/19/09	18.0	7.07	972	6.65	102
		9/30/09	16.7	6.15	889	6.22	33
		3/31/10	14.0	7.07	815	7.46	23
		9/17/10	17.4	7.05	940	6.85	231
MW9	100-110	4/5/07	12.9	6.20	976	–	–
		11/19/07	16.5	7.21	1066	–	–
		3/9/08	11.2	7.07	928	5.80	239
		7/11/08	17.7	6.58	1010	5.63	189
		10/24/08	13.0	7.06	888	5.42	79
		3/5/09	16.2	7.10	939	8.40	173
		6/17/09	15.9	6.87	907	5.62	146
		9/29/09	13.9	6.79	871	7.84	135
		3/31/10	15.4	6.88	754	7.25	123
		9/18/10	14.7	7.14	879	7.24	188
MW10S	93-103	4/6/07	13.2	6.36	1004	–	–
		11/19/07	14.5	7.22	942	–	–
		3/10/08	12.7	7.08	912	5.18	176
		7/11/08	17.3	6.91	975	12.8	119
		10/23/08	13.4	7.08	913	5.39	78
		3/5/09	15.3	7.25	895	2.66	13
		6/19/09	16.0	7.12	925	5.44	104
		9/30/09	15.8	6.58	829	4.63	31
		3/30/10	15.3	7.08	776	6.88	-25
		9/17/10	17.2	7.02	865	5.21	164

TABLE A.2 (Cont.)

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
CCC/USDA wells installed during 2006-2007 investigation (cont.)							
MW10D	115-125	4/6/07	12.1	6.21	992	–	–
		11/19/07	14.5	7.42	1175	–	–
		3/9/08	13.7	7.01	1024	5.07	236
		7/11/08	17.4	6.78	1090	12.6	117
		10/23/08	13.5	7.01	1000	5.00	93
		3/5/09	15.9	7.20	969	4.37	12
		6/19/09	16.9	7.08	1035	5.70	109
		9/30/09	15.8	6.62	922	5.48	32
		3/30/10	15.1	7.00	835	6.42	-34
		9/17/10	17.6	6.97	955	5.71	204
MW11S	40-50	4/4/07	12.8	6.14	1027	–	–
		11/19/07	11.2	7.15	1174	–	–
		3/5/08	9.4	6.81	1122	2.26	241
		7/10/08	19.5	6.47	1224	1.86	166
		10/23/08	10.2	6.99	1085	5.80	146
		3/4/09	14.5	7.11	1186	4.32	37
		6/19/09	15.0	6.81	1159	3.11	173
		10/1/09	15.9	6.67	1114	2.16	203
		3/31/10	18.0	6.81	958	6.05	84
		9/18/10	15.8	6.98	1178	1.95	185
MW11M	90-100	4/5/07	7.5	7.60	1097	–	–
		11/19/07	11.9	7.17	1144	–	–
		3/6/08	10.8	7.06	997	2.65	254
		7/10/08	31.9	7.08	1124	3.88	149
		10/23/08	12.4	7.06	962	3.19	116
		3/4/09	13.6	7.33	910	4.90	28
		6/19/09	14.7	6.92	973	4.84	185
		10/1/09	14.5	6.85	919	6.66	153
		3/31/10	17.4	6.96	742	5.49	67
		9/18/10	16.0	7.22	846	8.82	174
MW11D	125-135	4/4/07	13.8	6.18	990	–	–
		11/19/07	13.1	7.22	987	–	–
		3/5/08	6.0	7.06	872	6.85	252
		7/10/08	17.5	6.25	957	7.14	177
		10/23/08	12.3	7.11	863	8.71	123
		3/4/09	14.3	7.23	848	4.47	27
		6/19/09	17.4	6.96	885	5.92	131
		10/1/09	14.7	6.85	854	6.91	154
		4/1/10	17.4	6.91	750	7.35	99
		9/18/10	15.8	7.11	871	6.49	189

TABLE A.2 (Cont.)

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
CCC/USDA wells installed during 2006-2007 investigation (cont.)							
MW12S	43-53	4/5/07[a]	–	–	–	–	–
		11/19/07[a]	–	–	–	–	–
		3/10/08[a]	–	–	–	–	–
		7/10/08[a]	–	–	–	–	–
		10/22/08[a]	–	–	–	–	–
		3/4/09[a]	–	–	–	–	–
		6/19/09	20.5	7.00	1436	–	–
		10/1/09[a]	–	–	–	–	–
		3/31/10[a]	–	–	–	–	–
		9/18/10[a]	–	–	–	–	–
MW12M	90-100	4/5/07	12.6	6.42	867	–	–
		11/19/07	14.9	7.13	835	–	–
		3/10/08	12.6	7.13	665	1.81	212
		7/10/08	16.9	7.09	878	8.17	87
		10/22/08	12.2	7.20	785	8.93	126
		3/4/09	14.1	7.24	851	2.15	20
		6/19/09	17.0	6.99	856	2.34	112
		10/1/09	14.4	6.81	840	3.41	52
		3/31/10	17.5	7.05	334	0.40	36
		9/18/10	15.8	7.13	649	0.24	-61
MW12D	115-125	4/5/07	14.0	6.36	930	–	–
		11/18/07	15.6	6.95	571	–	–
		3/9/08	8.8	7.13	881	5.25	237
		7/11/08	19.9	6.01	987	4.72	197
		10/22/08	12.3	7.09	873	7.96	136
		3/4/09	14.4	7.25	923	4.06	21
		6/19/09	16.4	6.96	895	5.08	150
		10/1/09	15.8	6.85	869	6.74	154
		3/31/10	16.6	6.89	753	6.57	103
		9/18/10	15.5	6.97	872	6.17	139
MW13S	112-122	4/5/07	9.8	6.42	946	–	–
		11/19/07	16.5	7.21	893	–	–
		3/10/08	12.2	7.13	810	6.21	199
		7/9/08	17.4	6.99	875	7.72	116
		10/22/08	13.5	7.08	793	5.08	100
		3/4/09	13.8	7.23	818	4.39	29
		6/18/09	17.6	7.04	803	6.12	104
		9/30/09	15.4	5.74	721	6.06	177
		4/1/10	15.0	7.14	667	7.47	64
		9/18/10	16.7	7.42	772	12.9	186

TABLE A.2 (Cont.)

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
CCC/USDA wells installed during 2006-2007 investigation (cont.)							
MW13D	127-137	4/5/07	14.9	6.25	397	–	–
		11/19/07	17.0	7.00	763	–	–
		3/9/08	13.1	7.09	758	5.95	213
		7/9/08	18.6	7.07	848	18.1	57
		10/22/08	13.3	7.06	824	5.28	98
		3/4/09	14.5	7.19	833	4.01	25
		6/18/09	17.5	6.93	828	5.60	117
		9/30/09	17.4	5.99	706	5.60	142
		4/1/10	16.3	7.09	694	6.62	21
		9/18/10	17.3	7.14	803	6.26	189
MW14S	108-118	4/4/07	13.4	6.50	704	–	–
		11/18/07	12.9	7.26	966	–	–
		3/8/08	13.2	7.20	729	6.59	208
		7/10/08	17.4	7.16	775	16.4	87
		10/22/08	13.2	7.11	716	5.81	90
		3/4/09	13.8	7.15	736	8.96	268
		6/18/09	17.5	7.01	742	5.18	97
		10/1/09	16.0	6.25	663	5.78	99
		4/1/10	17.8	6.96	625	7.66	73
		9/18/10	16.4	7.11	705	6.76	193
MW14D	123-133	4/4/07	14.7	6.34	932	–	–
		11/18/07	13.2	7.47	739	–	–
		3/8/08	12.0	7.06	1424	1.95	282
		7/10/08	17.7	7.07	1459	14.5	86
		10/22/08	13.0	7.00	1212	1.41	79
		3/5/09	13.6	7.06	1339	2.15	69
		6/18/09	19.8	7.04	1523	1.99	46
		10/1/09	15.5	6.21	1154	1.59	90
		4/1/10	17.8	6.93	1189	1.75	67
		9/17/10	16.1	7.09	1162	6.46	45
MW15S	88-98	4/4/07	13.1	8.03	854	–	–
		11/18/07	13.9	NR	1883	–	–
		3/10/08	12.1	8.67	697	5.49	173
		7/12/08	14.0	8.88	660	11.6	94
		10/23/08	13.0	8.00	789	5.27	67
		3/5/09	15.7	8.78	589	7.48	163
		6/17/09	18.2	9.13	386	4.84	62
		9/29/09	15.4	7.40	786	6.93	181
		3/30/10	15.7	7.81	467	6.73	63
		9/18/10	16.4	7.49	776	5.83	127

TABLE A.2 (Cont.)

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
CCC/USDA wells installed during 2006-2007 investigation (cont.)							
MW15D	105-115	4/4/07	14.8	6.15	2980	–	–
		11/18/07	13.1	6.85	2190	–	–
		3/8/08	9.0	6.85	2912	0.57	131
		7/12/08	14.1	6.80	3067	1.05	90
		10/24/08	13.0	6.81	2876	0.34	27
		3/5/09	15.8	6.82	2945	0.41	-15
		6/17/09	18.6	6.71	2887	0.61	51
		9/29/09	15.6	6.53	2848	0.25	92
		3/30/10	17.3	6.68	2486	0.30	54
		9/18/10	16.2	6.75	2778	0.21	-38
MW16S	76-86	4/4/07	12.8	6.35	1708	–	–
		11/19/07	15.0	6.94	1616	–	–
		3/7/08	7.3	6.96	1968	3.45	184
		7/11/08	18.8	6.71	2883	1.13	52
		10/23/08	11.6	7.01	1350	6.01	136
		3/5/09	16.3	7.19	1505	2.49	12
		6/18/09	15.9	7.03	971	5.57	101
		9/29/09	14.3	6.76	963	7.50	123
		3/30/10	16.6	6.92	828	6.90	90
		9/18/10	17.0	6.84	966	5.58	106
MW16D	90-100	4/4/07	14.1	6.17	2910	–	–
		11/19/07	12.5	6.78	2400	–	–
		3/7/08	7.0	6.86	2866	0.50	140
		7/11/08	18.9	6.64	3134	0.41	32
		10/23/08	11.3	6.79	2791	0.45	37
		3/5/09	15.6	6.94	2926	0.27	14
		6/18/09	18.3	6.77	2867	0.30	46
		9/29/09	14.4	6.67	2583	0.64	17
		3/30/10	16.3	6.59	2429	0.24	78
		9/18/10	15.7	6.68	2759	0.22	-53
MW17	120-130	4/4/07	16.0	6.44	861	–	–
		11/19/07	8.3	7.15	610	–	–
		3/5/08	5.5	7.12	804	7.02	239
		7/9/08	17.5	7.11	843	20.6	89
		10/22/08	13.1	7.10	777	8.35	110
		3/4/09	14.1	7.12	823	8.47	258
		6/17/09	18.4	7.01	825	5.65	103
		9/30/09	14.8	6.89	800	7.74	248
		3/31/10	14.1	7.15	687	6.96	-66
		9/17/10	19.2	7.22	790	9.60	153

TABLE A.2 (Cont.)

Well	Screen Interval (ft BGL)	Sample Date	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)
Private wells							
Oentrich	150	7/20/06	–	–	–	–	–
		8/2/06	–	–	–	–	–
		4/5/07	–	–	–	–	–
		11/19/07	12.1	8.26	1830	–	–
		3/6/08	–	–	–	–	–
		7/11/08	–	–	–	–	–
		10/23/08	–	–	–	–	–
		3/5/09	–	–	–	–	–
		6/18/09	15.3	7.15	1270	–	–
		9/30/09	15.6	7.14	1275	–	–
		4/1/10	12.8	7.41	1017	–	–
		9/18/10	–	–	–	–	–
Sedivy	138	8/22/06	–	–	–	–	–
		9/13/06	22.5	6.57	739	–	–

[a] Not sampled (well dry).

Appendix B:

Results from the AGEM Laboratory for Dual Analyses of Samples Collected at Barnes in 2010 and for Quality Control Samples

TABLE B.1 Analytical results from the AGEM Laboratory for quality control samples collected to monitor sample collection and handling activities at Barnes in 2010.

Sample Date	Sample	Type	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methlene Chloride
3/30/10	BAQCIR-W-28752	Equipment rinsate	ND[a]	ND	ND
3/30/10	BAQCIR-W-28753	Equipment rinsate	ND	ND	ND
3/31/10	BAQCIRW-28754	Equipment rinsate	ND	ND	ND
3/31/10	BAQCTB-W-28756	Trip blank	ND	ND	ND
4/1/10	BAQCIR-W-28755	Equipment rinsate	ND	ND	ND
4/1/10	BAQCTB-W-28757	Trip blank	ND	ND	ND
6/17/10	BAQCTB-W-28760	Trip blank	ND	ND	ND
9/17/10	BAQCIR-W-28796	Equipment rinsate	ND	ND	ND
9/17/10	BAQCIR-W-28797	Equipment rinsate	ND	ND	ND
9/17/10	BAQCTB-W-28802	Trip blank	ND	ND	ND
9/18/10	BADIH2O-W-28800	Field blank	ND	ND	ND
9/18/10	BAQCIR-W-28798	Equipment rinsate	ND	ND	ND
9/18/10	BAQCIR-W-28799	Equipment rinsate	ND	ND	ND
9/18/10	BAQCTB-W-28801	Trip blank	ND	ND	ND
12/15/10	BAQCTB-W-28805	Trip blank	ND	ND	ND

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

TABLE B.2 Analytical results from the AGEM Laboratory for dual analyses of samples collected at Barnes in 2010.

Sample Date	Location	Sample	Analysis Type	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
March 30-April 1, 2010, sampling event						
3/31/10	MW1D	BAMW1D-W-28718	Primary	ND[a]	ND	ND
3/31/10	MW1D	BAMW1D-W-28718DUP	Duplicate	ND	ND	ND
3/31/10	MW8	BAMW8-W-28726	Primary	30	2.0	ND
3/31/10	MW8	BAMW8-W-28726DUP	Duplicate	28	1.9	ND
3/30/10	MW10S	BAMW10S-W-28728	Primary	73	3.0	ND
3/30/10	MW10S	BAMW10SDUP-W-28749	Replicate	61	2.6	ND
4/1/10	MW11D	BAMW11D-W-28732	Primary	0.5 J[b]	ND	ND
4/1/10	MW11D	BAMW11DDUP-W-28750	Replicate	0.7 J	ND	ND
4/1/10	MW14D	BAMW14D-W-28739	Primary	0.4 J	ND	ND
4/1/10	MW14D	BAMW14DDUP-W-28751	Replicate	0.5 J	ND	ND
4/1/10	Oentrich	BAOENTRICH-W-28745	Primary	1.2	ND	ND
4/1/10	Oentrich	BAOENTRICH-28745DUP	Duplicate	1.4	ND	ND
September 17-18, 2010, sampling event						
9/17/10	MW1D	BAMW1D-W-28761	Primary	ND	ND	ND
9/17/10	MW1D	BAMW1DDUP-W-28792	Replicate	ND	ND	ND
9/17/10	MW4D	BAMW4D-W-28764	Primary	12	ND	ND
9/17/10	MW4D	BAMW4DDUP-W-28793	Replicate	11	ND	ND
9/17/10	MW8	BAMW8-W-28769	Primary	31	2.1	ND
9/17/10	MW8	BAMW8-W-28769DUP	Duplicate	31	2.1	ND
9/18/10	MW9	BAMW9-W-28770	Primary	1.4	ND	ND
9/18/10	MW9	BAMW9-W-28770DUP	Duplicate	1.4	ND	ND
9/17/10	MW10S	BAMW10S-W-28771	Primary	78	2.9	ND
9/17/10	MW10S	BAMW10SDUP-W-28791	Replicate	80	2.9	ND
9/18/10	MW13S	BAMW13S-W-28779	Primary	6.2	1.2	ND
9/18/10	MW13S	BAMW13SDUP-W-28795	Replicate	6.4	1.1	ND
9/18/10	MW16S	BAMW16S-W-28785	Primary	1.7	ND	ND
9/18/10	MW16S	BAMW16SDUP-W-28794	Replicate	1.7	0.3 J	ND

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

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

Supplement 1:

Waste Characterization Data

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

October 14, 2010

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

RE: Project: Kansas Waste Water
Pace Project No.: 6086606

Dear Mr. Kamler:
Enclosed are the analytical results for sample(s) received by the laboratory on October 01, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated 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@pacelabs.com
Project Manager

Enclosures

cc: Mr. David Surgnier

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: Kansas Waste Water
Pace Project No.: 6086606

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: Kansas Waste Water
Pace Project No.: 6086606

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6086606001	**BAPURGE-W-930101**	Water	09/30/10 09:00	10/01/10 09:15
6086606002	**CNPURGE-W-930102**	Water	09/30/10 10:00	10/01/10 09:15
6086606003	**EVPURGE-W-930103**	Water	09/30/10 11:32	10/01/10 09:15
6086606004	**MRPURGE-W-930104**	Water	09/30/10 13:42	10/01/10 09:15

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SAMPLE ANALYTE COUNT

Project: Kansas Waste Water
Pace Project No.: 6086606

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6086606001	**BAPURGE-W-930101**	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 300.0	RAB	1
6086606002	**CNPURGE-W-930102**	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 300.0	RAB	1
6086606003	**EVPURGE-W-930103**	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 300.0	RAB	1
6086606004	**MRPURGE-W-930104**	EPA 504.1	NAW	1
		EPA 5030B/8260	HMW	70
		EPA 300.0	RAB	1

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: BAPURGE-W-930101 **Lab ID: 6086606001** Collected: 09/30/10 09:00 Received: 10/01/10 09:15 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	10/07/10 00:00	10/07/10 21:23	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	**293**	ug/L	10.0	1		10/03/10 12:46	67-64-1	
Benzene	ND	ug/L	1.0	1		10/03/10 12:46	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/03/10 12:46	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/03/10 12:46	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/03/10 12:46	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/03/10 12:46	75-25-2	
Bromomethane	ND	ug/L	1.0	1		10/03/10 12:46	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/03/10 12:46	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		10/03/10 12:46	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/03/10 12:46	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/03/10 12:46	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/03/10 12:46	75-15-0	L3
Carbon tetrachloride	ND	ug/L	1.0	1		10/03/10 12:46	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/03/10 12:46	108-90-7	L3
Chloroethane	ND	ug/L	1.0	1		10/03/10 12:46	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/03/10 12:46	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/03/10 12:46	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 12:46	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 12:46	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/03/10 12:46	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/03/10 12:46	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/03/10 12:46	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/03/10 12:46	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 12:46	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 12:46	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 12:46	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/03/10 12:46	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/03/10 12:46	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/03/10 12:46	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		10/03/10 12:46	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/03/10 12:46	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 12:46	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 12:46	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 12:46	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/03/10 12:46	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 12:46	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/03/10 12:46	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 12:46	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 12:46	10061-02-6	L3
Ethylbenzene	ND	ug/L	1.0	1		10/03/10 12:46	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/03/10 12:46	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/03/10 12:46	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/03/10 12:46	98-82-8	L3
p-Isopropyltoluene	ND	ug/L	1.0	1		10/03/10 12:46	99-87-6	

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: BAPURGE-W-930101 **Lab ID: 6086606001** Collected: 09/30/10 09:00 Received: 10/01/10 09:15 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		10/03/10 12:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/03/10 12:46	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/10 12:46	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		10/03/10 12:46	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/03/10 12:46	103-65-1	
Styrene	ND	ug/L	1.0	1		10/03/10 12:46	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 12:46	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 12:46	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/03/10 12:46	127-18-4	
Toluene	ND	ug/L	1.0	1		10/03/10 12:46	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 12:46	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 12:46	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/03/10 12:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/03/10 12:46	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/03/10 12:46	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/03/10 12:46	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/03/10 12:46	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 12:46	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 12:46	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/03/10 12:46	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/03/10 12:46	1330-20-7	
4-Bromofluorobenzene (S)	93	%	87-113	1		10/03/10 12:46	460-00-4	
Dibromofluoromethane (S)	103	%	86-112	1		10/03/10 12:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	82-119	1		10/03/10 12:46	17060-07-0	
Toluene-d8 (S)	102	%	90-110	1		10/03/10 12:46	2037-26-5	
Preservation pH	**7.0**		0.10	1		10/03/10 12:46		
300.0 IC Anions	Analytical Method: EPA 300.0							
Nitrate as N	**2.7**	mg/L	0.10	1		10/01/10 18:59	14797-55-8	

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: CNPURGE-W-930102 **Lab ID: 6086606002** Collected: 09/30/10 10:00 Received: 10/01/10 09:15 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	10/07/10 00:00	10/07/10 21:34	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	**474**	ug/L	10.0	1		10/03/10 13:01	67-64-1	
Benzene	ND	ug/L	1.0	1		10/03/10 13:01	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/03/10 13:01	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/03/10 13:01	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/03/10 13:01	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/03/10 13:01	75-25-2	
Bromomethane	ND	ug/L	1.0	1		10/03/10 13:01	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/03/10 13:01	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:01	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:01	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:01	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/03/10 13:01	75-15-0	L3
Carbon tetrachloride	ND	ug/L	1.0	1		10/03/10 13:01	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/03/10 13:01	108-90-7	L3
Chloroethane	ND	ug/L	1.0	1		10/03/10 13:01	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/03/10 13:01	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/03/10 13:01	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 13:01	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 13:01	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/03/10 13:01	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/03/10 13:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/03/10 13:01	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/03/10 13:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:01	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/03/10 13:01	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/03/10 13:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/03/10 13:01	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		10/03/10 13:01	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:01	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:01	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:01	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:01	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:01	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:01	10061-02-6	L3
Ethylbenzene	ND	ug/L	1.0	1		10/03/10 13:01	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/03/10 13:01	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/03/10 13:01	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/03/10 13:01	98-82-8	L3
p-Isopropyltoluene	ND	ug/L	1.0	1		10/03/10 13:01	99-87-6	

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: CNPURGE-W-930102 **Lab ID: 6086606002** Collected: 09/30/10 10:00 Received: 10/01/10 09:15 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		10/03/10 13:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/03/10 13:01	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/10 13:01	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		10/03/10 13:01	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/03/10 13:01	103-65-1	
Styrene	ND	ug/L	1.0	1		10/03/10 13:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 13:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 13:01	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/03/10 13:01	127-18-4	
Toluene	ND	ug/L	1.0	1		10/03/10 13:01	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:01	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:01	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/03/10 13:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/03/10 13:01	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/03/10 13:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/03/10 13:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/03/10 13:01	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 13:01	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 13:01	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/03/10 13:01	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/03/10 13:01	1330-20-7	
4-Bromofluorobenzene (S)	96	%	87-113	1		10/03/10 13:01	460-00-4	
Dibromofluoromethane (S)	105	%	86-112	1		10/03/10 13:01	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	82-119	1		10/03/10 13:01	17060-07-0	
Toluene-d8 (S)	101	%	90-110	1		10/03/10 13:01	2037-26-5	
Preservation pH	**7.0**		0.10	1		10/03/10 13:01		
300.0 IC Anions	Analytical Method: EPA 300.0							
Nitrate as N	**1.7**	mg/L	0.10	1		10/01/10 19:15	14797-55-8	

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: EVPURGE-W-930103 **Lab ID: 6086606003** Collected: 09/30/10 11:32 Received: 10/01/10 09:15 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	10/07/10 00:00	10/07/10 21:44	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	**787**	ug/L	10.0	1		10/03/10 13:16	67-64-1	E,P2
Benzene	ND	ug/L	1.0	1		10/03/10 13:16	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/03/10 13:16	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/03/10 13:16	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/03/10 13:16	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/03/10 13:16	75-25-2	
Bromomethane	ND	ug/L	1.0	1		10/03/10 13:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/03/10 13:16	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:16	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:16	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:16	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/03/10 13:16	75-15-0	L3
Carbon tetrachloride	ND	ug/L	1.0	1		10/03/10 13:16	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/03/10 13:16	108-90-7	L3
Chloroethane	ND	ug/L	1.0	1		10/03/10 13:16	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/03/10 13:16	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/03/10 13:16	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 13:16	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 13:16	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/03/10 13:16	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/03/10 13:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/03/10 13:16	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/03/10 13:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:16	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/03/10 13:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/03/10 13:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/03/10 13:16	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		10/03/10 13:16	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:16	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:16	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:16	10061-02-6	L3
Ethylbenzene	ND	ug/L	1.0	1		10/03/10 13:16	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/03/10 13:16	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/03/10 13:16	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/03/10 13:16	98-82-8	L3
p-Isopropyltoluene	ND	ug/L	1.0	1		10/03/10 13:16	99-87-6	

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: EVPURGE-W-930103 **Lab ID: 6086606003** Collected: 09/30/10 11:32 Received: 10/01/10 09:15 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		10/03/10 13:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/03/10 13:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/10 13:16	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		10/03/10 13:16	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/03/10 13:16	103-65-1	
Styrene	ND	ug/L	1.0	1		10/03/10 13:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 13:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 13:16	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/03/10 13:16	127-18-4	
Toluene	ND	ug/L	1.0	1		10/03/10 13:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/03/10 13:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/03/10 13:16	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/03/10 13:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/03/10 13:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/03/10 13:16	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 13:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 13:16	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/03/10 13:16	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/03/10 13:16	1330-20-7	
4-Bromofluorobenzene (S)	96	%	87-113	1		10/03/10 13:16	460-00-4	
Dibromofluoromethane (S)	98	%	86-112	1		10/03/10 13:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	92	%	82-119	1		10/03/10 13:16	17060-07-0	
Toluene-d8 (S)	100	%	90-110	1		10/03/10 13:16	2037-26-5	
Preservation pH	**7.0**		0.10	1		10/03/10 13:16		
300.0 IC Anions	Analytical Method: EPA 300.0							
Nitrate as N	**2.0**	mg/L	0.10	1		10/01/10 19:32	14797-55-8	

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: MRPURGE-W-930104 **Lab ID: 6086606004** Collected: 09/30/10 13:42 Received: 10/01/10 09:15 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	10/07/10 00:00	10/07/10 21:55	106-93-4	
8260 MSV	Analytical Method: EPA 5030B/8260							
Acetone	**351**	ug/L	10.0	1		10/03/10 13:31	67-64-1	
Benzene	ND	ug/L	1.0	1		10/03/10 13:31	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		10/03/10 13:31	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		10/03/10 13:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		10/03/10 13:31	75-27-4	
Bromoform	ND	ug/L	1.0	1		10/03/10 13:31	75-25-2	
Bromomethane	ND	ug/L	1.0	1		10/03/10 13:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		10/03/10 13:31	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:31	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:31	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		10/03/10 13:31	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		10/03/10 13:31	75-15-0	L3
Carbon tetrachloride	ND	ug/L	1.0	1		10/03/10 13:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		10/03/10 13:31	108-90-7	L3
Chloroethane	ND	ug/L	1.0	1		10/03/10 13:31	75-00-3	
Chloroform	ND	ug/L	1.0	1		10/03/10 13:31	67-66-3	
Chloromethane	ND	ug/L	1.0	1		10/03/10 13:31	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 13:31	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		10/03/10 13:31	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		10/03/10 13:31	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		10/03/10 13:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		10/03/10 13:31	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		10/03/10 13:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:31	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		10/03/10 13:31	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		10/03/10 13:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		10/03/10 13:31	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		10/03/10 13:31	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		10/03/10 13:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:31	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		10/03/10 13:31	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:31	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		10/03/10 13:31	10061-02-6	L3
Ethylbenzene	ND	ug/L	1.0	1		10/03/10 13:31	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		10/03/10 13:31	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		10/03/10 13:31	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		10/03/10 13:31	98-82-8	L3
p-Isopropyltoluene	ND	ug/L	1.0	1		10/03/10 13:31	99-87-6	

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ANALYTICAL RESULTS

Project: Kansas Waste Water
Pace Project No.: 6086606

Sample: MRPURGE-W-930104 **Lab ID: 6086606004** Collected: 09/30/10 13:42 Received: 10/01/10 09:15 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		10/03/10 13:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		10/03/10 13:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/03/10 13:31	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		10/03/10 13:31	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		10/03/10 13:31	103-65-1	
Styrene	ND	ug/L	1.0	1		10/03/10 13:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 13:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		10/03/10 13:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		10/03/10 13:31	127-18-4	
Toluene	ND	ug/L	1.0	1		10/03/10 13:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		10/03/10 13:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		10/03/10 13:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		10/03/10 13:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		10/03/10 13:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		10/03/10 13:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		10/03/10 13:31	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 13:31	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/03/10 13:31	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		10/03/10 13:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		10/03/10 13:31	1330-20-7	
4-Bromofluorobenzene (S)	95	%	87-113	1		10/03/10 13:31	460-00-4	
Dibromofluoromethane (S)	105	%	86-112	1		10/03/10 13:31	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	82-119	1		10/03/10 13:31	17060-07-0	
Toluene-d8 (S)	103	%	90-110	1		10/03/10 13:31	2037-26-5	
Preservation pH	**7.0**		0.10	1		10/03/10 13:31		
300.0 IC Anions	Analytical Method: EPA 300.0							
Nitrate as N	**0.99**	mg/L	0.10	1		10/01/10 19:48	14797-55-8	

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QUALITY CONTROL DATA

Project: Kansas Waste Water
Pace Project No.: 6086606

QC Batch: OEXT/25923 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: GCS 504 EDB DBCP
Associated Lab Samples: 6086606001, 6086606002, 6086606003, 6086606004

METHOD BLANK: 713551 Matrix: Water
Associated Lab Samples: 6086606001, 6086606002, 6086606003, 6086606004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.030	10/07/10 20:50	

LABORATORY CONTROL SAMPLE & LCSD: 713552 713553

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	0.29	0.28	114	112	70-130	2	20	

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QUALITY CONTROL DATA

Project: Kansas Waste Water
Pace Project No.: 6086606

QC Batch: MSV/32160 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day
Associated Lab Samples: 6086606001, 6086606002, 6086606003, 6086606004

METHOD BLANK: 711291 Matrix: Water
Associated Lab Samples: 6086606001, 6086606002, 6086606003, 6086606004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	10/03/10 11:44	
1,1,1-Trichloroethane	ug/L	ND	1.0	10/03/10 11:44	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	10/03/10 11:44	
1,1,2-Trichloroethane	ug/L	ND	1.0	10/03/10 11:44	
1,1-Dichloroethane	ug/L	ND	1.0	10/03/10 11:44	
1,1-Dichloroethene	ug/L	ND	1.0	10/03/10 11:44	
1,1-Dichloropropene	ug/L	ND	1.0	10/03/10 11:44	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	10/03/10 11:44	
1,2,3-Trichloropropane	ug/L	ND	2.5	10/03/10 11:44	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	10/03/10 11:44	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/03/10 11:44	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	10/03/10 11:44	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	10/03/10 11:44	
1,2-Dichlorobenzene	ug/L	ND	1.0	10/03/10 11:44	
1,2-Dichloroethane	ug/L	ND	1.0	10/03/10 11:44	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	10/03/10 11:44	
1,2-Dichloropropane	ug/L	ND	1.0	10/03/10 11:44	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/03/10 11:44	
1,3-Dichlorobenzene	ug/L	ND	1.0	10/03/10 11:44	
1,3-Dichloropropane	ug/L	ND	1.0	10/03/10 11:44	
1,4-Dichlorobenzene	ug/L	ND	1.0	10/03/10 11:44	
2,2-Dichloropropane	ug/L	ND	1.0	10/03/10 11:44	
2-Butanone (MEK)	ug/L	ND	10.0	10/03/10 11:44	
2-Chlorotoluene	ug/L	ND	1.0	10/03/10 11:44	
2-Hexanone	ug/L	ND	10.0	10/03/10 11:44	
4-Chlorotoluene	ug/L	ND	1.0	10/03/10 11:44	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	10/03/10 11:44	
Acetone	ug/L	ND	10.0	10/03/10 11:44	
Benzene	ug/L	ND	1.0	10/03/10 11:44	
Bromobenzene	ug/L	ND	1.0	10/03/10 11:44	
Bromochloromethane	ug/L	ND	1.0	10/03/10 11:44	
Bromodichloromethane	ug/L	ND	1.0	10/03/10 11:44	
Bromoform	ug/L	ND	1.0	10/03/10 11:44	
Bromomethane	ug/L	ND	1.0	10/03/10 11:44	
Carbon disulfide	ug/L	ND	5.0	10/03/10 11:44	
Carbon tetrachloride	ug/L	ND	1.0	10/03/10 11:44	
Chlorobenzene	ug/L	ND	1.0	10/03/10 11:44	
Chloroethane	ug/L	ND	1.0	10/03/10 11:44	
Chloroform	ug/L	ND	1.0	10/03/10 11:44	
Chloromethane	ug/L	ND	1.0	10/03/10 11:44	
cis-1,2-Dichloroethene	ug/L	ND	1.0	10/03/10 11:44	
cis-1,3-Dichloropropene	ug/L	ND	1.0	10/03/10 11:44	
Dibromochloromethane	ug/L	ND	1.0	10/03/10 11:44	

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QUALITY CONTROL DATA

Project: Kansas Waste Water
Pace Project No.: 6086606

METHOD BLANK: 711291 Matrix: Water

Associated Lab Samples: 6086606001, 6086606002, 6086606003, 6086606004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	1.0	10/03/10 11:44	
Dichlorodifluoromethane	ug/L	ND	1.0	10/03/10 11:44	
Ethylbenzene	ug/L	ND	1.0	10/03/10 11:44	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	10/03/10 11:44	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	10/03/10 11:44	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/03/10 11:44	
Methylene chloride	ug/L	ND	1.0	10/03/10 11:44	
n-Butylbenzene	ug/L	ND	1.0	10/03/10 11:44	
n-Propylbenzene	ug/L	ND	1.0	10/03/10 11:44	
Naphthalene	ug/L	ND	10.0	10/03/10 11:44	
p-Isopropyltoluene	ug/L	ND	1.0	10/03/10 11:44	
sec-Butylbenzene	ug/L	ND	1.0	10/03/10 11:44	
Styrene	ug/L	ND	1.0	10/03/10 11:44	
tert-Butylbenzene	ug/L	ND	1.0	10/03/10 11:44	
Tetrachloroethene	ug/L	ND	1.0	10/03/10 11:44	
Toluene	ug/L	ND	1.0	10/03/10 11:44	
trans-1,2-Dichloroethene	ug/L	ND	1.0	10/03/10 11:44	
trans-1,3-Dichloropropene	ug/L	ND	1.0	10/03/10 11:44	
Trichloroethene	ug/L	ND	1.0	10/03/10 11:44	
Trichlorofluoromethane	ug/L	ND	1.0	10/03/10 11:44	
Vinyl chloride	ug/L	ND	1.0	10/03/10 11:44	
Xylene (Total)	ug/L	ND	3.0	10/03/10 11:44	
1,2-Dichloroethane-d4 (S)	%	93	82-119	10/03/10 11:44	
4-Bromofluorobenzene (S)	%	101	87-113	10/03/10 11:44	
Dibromofluoromethane (S)	%	102	86-112	10/03/10 11:44	
Toluene-d8 (S)	%	102	90-110	10/03/10 11:44	

LABORATORY CONTROL SAMPLE: 711292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	22.0	110	79-116	
1,1,1-Trichloroethane	ug/L	20	21.2	106	77-113	
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	94	68-122	
1,1,2-Trichloroethane	ug/L	20	20.9	104	82-117	
1,1-Dichloroethane	ug/L	20	20.7	103	67-122	
1,1-Dichloroethene	ug/L	20	23.7	118	70-119	
1,1-Dichloropropene	ug/L	20	21.1	106	81-115	
1,2,3-Trichlorobenzene	ug/L	20	19.9	99	66-135	
1,2,3-Trichloropropane	ug/L	20	18.4	92	76-126	
1,2,4-Trichlorobenzene	ug/L	20	19.7	99	66-126	
1,2,4-Trimethylbenzene	ug/L	20	19.8	99	78-115	
1,2-Dibromo-3-chloropropane	ug/L	20	24.1	121	58-147	
1,2-Dibromoethane (EDB)	ug/L	20	21.2	106	84-121	
1,2-Dichlorobenzene	ug/L	20	20.9	105	79-116	
1,2-Dichloroethane	ug/L	20	19.2	96	74-119	

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: Kansas Waste Water
Pace Project No.: 6086606

LABORATORY CONTROL SAMPLE: 711292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	44.0	110	78-117	
1,2-Dichloropropane	ug/L	20	19.6	98	77-115	
1,3,5-Trimethylbenzene	ug/L	20	19.5	98	83-117	
1,3-Dichlorobenzene	ug/L	20	21.7	108	79-112	
1,3-Dichloropropane	ug/L	20	20.7	103	82-119	
1,4-Dichlorobenzene	ug/L	20	21.8	109	78-111	
2,2-Dichloropropane	ug/L	20	22.1	110	57-130	
2-Butanone (MEK)	ug/L	100	89.9	90	41-157	
2-Chlorotoluene	ug/L	20	20.1	100	82-118	
2-Hexanone	ug/L	100	96.1	96	57-137	
4-Chlorotoluene	ug/L	20	22.5	112	83-114	
4-Methyl-2-pentanone (MIBK)	ug/L	100	92.9	93	62-118	
Acetone	ug/L	100	93.6	94	38-174	
Benzene	ug/L	20	19.5	97	79-116	
Bromobenzene	ug/L	20	18.9	95	81-115	
Bromochloromethane	ug/L	20	20.3	102	72-123	
Bromodichloromethane	ug/L	20	21.9	110	76-113	
Bromoform	ug/L	20	22.9	115	62-129	
Bromomethane	ug/L	20	23.6	118	24-168	
Carbon disulfide	ug/L	20	28.3	142	45-129	L3
Carbon tetrachloride	ug/L	20	19.7	99	67-124	
Chlorobenzene	ug/L	20	23.0	115	79-113	L3
Chloroethane	ug/L	20	21.4	107	57-153	
Chloroform	ug/L	20	21.3	107	74-116	
Chloromethane	ug/L	20	17.7	88	51-138	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	77-120	
cis-1,3-Dichloropropene	ug/L	20	22.9	114	76-116	
Dibromochloromethane	ug/L	20	23.0	115	73-115	
Dibromomethane	ug/L	20	19.1	95	75-115	
Dichlorodifluoromethane	ug/L	20	13.9	69	6-181	
Ethylbenzene	ug/L	20	19.8	99	76-122	
Hexachloro-1,3-butadiene	ug/L	20	20.4	102	68-129	
Isopropylbenzene (Cumene)	ug/L	20	21.4	107	71-104	L3
Methyl-tert-butyl ether	ug/L	20	21.4	107	62-131	
Methylene chloride	ug/L	20	22.8	114	61-137	
n-Butylbenzene	ug/L	20	20.7	104	75-124	
n-Propylbenzene	ug/L	20	20.0	100	79-116	
Naphthalene	ug/L	20	18.3	91	60-145	
p-Isopropyltoluene	ug/L	20	19.4	97	79-114	
sec-Butylbenzene	ug/L	20	20.4	102	83-119	
Styrene	ug/L	20	21.0	105	70-125	
tert-Butylbenzene	ug/L	20	22.2	111	81-118	
Tetrachloroethene	ug/L	20	23.1	116	77-117	
Toluene	ug/L	20	20.3	101	75-120	
trans-1,2-Dichloroethene	ug/L	20	23.0	115	76-119	
trans-1,3-Dichloropropene	ug/L	20	21.3	106	64-105	L3
Trichloroethene	ug/L	20	19.4	97	78-118	
Trichlorofluoromethane	ug/L	20	20.9	105	73-118	

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: Kansas Waste Water
Pace Project No.: 6086606

LABORATORY CONTROL SAMPLE: 711292

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	20	22.6	113	60-122	
Xylene (Total)	ug/L	60	61.1	102	74-124	
1,2-Dichloroethane-d4 (S)	%			89	82-119	
4-Bromofluorobenzene (S)	%			97	87-113	
Dibromofluoromethane (S)	%			105	86-112	
Toluene-d8 (S)	%			101	90-110	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: Kansas Waste Water
Pace Project No.: 6086606

QC Batch: WETA/14191 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 6086606001, 6086606002, 6086606003, 6086606004

METHOD BLANK: 710224 Matrix: Water
Associated Lab Samples: 6086606001, 6086606002, 6086606003, 6086606004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.10	10/01/10 18:26	

LABORATORY CONTROL SAMPLE: 710225

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	5	4.9	99	90-110	

MATRIX SPIKE SAMPLE: 710226

Parameter	Units	6086606004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	0.99	5	5.5	91	68-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 710227 710228

Parameter	Units	6086604004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrate as N	mg/L	0.18	5	5	5.1	5.2	99	100	68-120	1	16	

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: Kansas Waste Water
Pace Project No.: 6086606

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

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 NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/32160

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

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
P2	Re-extraction or re-analysis could not be performed due to insufficient sample amount.

Sample Condition Upon Receipt

Pace Analytical® www.pacelabs.com

Client Name: TCW Project # Geo 866606

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

Tracking #: 8717 9523 1713 Pace Shipping Label Used? ☐ Yes ☐ No

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

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

Thermometer Used: T-191 / T-194 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature: 2.2

Temperature should be above freezing to 6°C

Optional	
Proj. Due Date:	10/13
Proj. Name:	

Date and Initials of person examining contents: 10/11/10 LG

		Comments:
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: WT		
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 ✓ Lot # of added preservative
Trip Blank present:	☐Yes ☑No ☐N/A	15.
Pace Trip Blank lot # (if purchased):		
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: MDL Date: 10-1-10

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)

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1

1272142

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: TCW Construction	Report To: tKamler@tcwconstruction.com	Attention: Travis Kamler
Address: 141 M Street	Copy To: Sargnier@prodigy.net	Company Name: TCW
Lincoln NE 68508		Address:
Email To: tKamler@tcwconstruction	Purchase Order No.:	Pace Quote Reference:
Phone: 402 416 7255 Fax:	Project Name: Kansas Waste Water	Pace Project Manager: Trudy Gipson
Requested Due Date/TAT:	Project Number:	Pace Profile #:

REGULATORY AGENCY

- NPDES
- [X] GROUND WATER
- DRINKING WATER
- UST
- RCRA
- OTHER ______

Site Location STATE: KS

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N)

Cle 8Le Cole

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE (2010)	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	VOC	EDB	NITRATES	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BAPURGE-W-930101	WW	C	3/10		9/30	900	58	5	3					2				2	2	1		BP2U 2(DG9U) 2(DG9T)
2	CNPURGE-W-930102	WW	C	4/10		9-30	1000	60	5	3					2				2	2	1		↓
3	EVPURGE-W-930103	WW	C	4/10		9-30	1132	65	5	3					2				2	2	1		↓
4	MRPURGE-W-930104	WW	C	4/10		9-30	1342		5	3					2				2	2	1		↓
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
All samples Collected from 55 gal Drum Stored at Each Site	[signature] / TCW	9-30-10	1830	[signature]	10/1/10	0915	2.2	Y	Y	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Travis Kamler

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 09/30/10

INVOICE

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: (913)599-5665

Invoice Number: 106081867
Date: 10/14/2010
Total Amount Due: $592.00

Sold To:

Mr. Travis Kamler
TCW Construction Inc
141 M Street
Lincoln, NE 68508
402-475-5030

Please Remit To:

Pace Analytical Services, Inc.
P.O. Box 684056
Milwaukee, WI 53268-4056

Client Number/Client ID	*Purchase Order No*	*Pace Project Mgr*	*Terms*	*Page*
60-508440 / TCW Const	Credit Card	Trudy Gipson	Net 30 Days**	1

Client Project: Kansas Waste Water
Client Name: TCW Construction Inc
Pace Project No: 6086606
Sample Received: 10/1/2010
Report Sent To: Mr. David Surgnier,
Mr. Travis Kamler, TCW Construction Inc
Comments:

ANALYTICAL CHARGES

Quantity	Unit	Description	Method	Matrix	Price	Total
4	Ea	300.0 IC Anions-Nitrate	EPA 300.0	Water	$18.00	$72.00
4	Ea	504 GCS EDB DBCP	EPA 504.1	Water	$60.00	$240.00
4	Ea	8260 VOC by GC/MS-Full Scan	EPA 5030B/8260	Water	$70.00	$280.00
					Analytical Subtotal	$592.00

Total Number of Charges 12 **Total Invoice Amount** **$592.00**

Samples Received for analysis:

Lab ID	Client Sample ID	Received
6086606001	BAPURGE-W-930101	10/1/2010 9:15:00
6086606002	CNPURGE-W-930102	10/1/2010 9:15:00
6086606003	EVPURGE-W-930103	10/1/2010 9:15:00
6086606004	MRPURGE-W-930104	10/1/2010 9:15:00

If you have any questions or to pay by credit card, please contact Trudy Gipson at Pace.
Phone: 1(913)563-1405 Email: trudy.gipson@pacelabs.com

****1.5% MONTHLY FINANCE CHARGE ASSESSED AFTER 30 DAYS OR TERMS OF CONTRACT.**
PLEASE REFERENCE THE INVOICE NUMBER ON ALL REMITTANCE ADVICE.

Please complete and return copy of invoice with your payment.

INVOICE TOTAL $592.00

Amount Paid: $ _____

Check No: _____

Customer No: 60-508440 Invoice No: 106081867

AGEM 40 L

CITY OF SABETHA Cash - Matt
805 MAIN
PO BOX 187
SABETHA KS 66534 785-284-2158

Receipt No: 2.001326 Dec 17, 2010

TCW Construction

WASTEWATER FUND-MISC
MISCELLANEOUS INCOME-purged water 50.00

Total: 50.00

Cash 50.00
Total Applied: 50.00

Change Tendered: .00

12/17/10 01:28PM

Supplement 2:

Sample Documentation from TestAmerica Laboratories, Inc.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

April 16, 2010

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Bldg. 203, Office B149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: BARNES; SDG: 136602

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by TestAmerica Burlington on April 1st, 2010. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 04/01/10 ETR No: 136602		
824497	BAMW5-W-28722	03/30/10	WATER
824498	BAMW15D-W-28741	03/30/10	WATER
824499	BAMW16S-W-28742	03/30/10	WATER
824500	BAMW16D-W-28743	03/30/10	WATER
824501	BAMW6S-W-28723	03/31/10	WATER
824502	BAMW8-W-28726	03/31/10	WATER
824503	BAPWS3-W-28747	03/31/10	WATER
824504	BAQCTB-W-28756	03/31/10	WATER
824505	VHBLK01	04/01/10	WATER

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.

In order to accommodate field length limitations in processing the data summary forms, the laboratory did, in certain instances, abbreviate the sample identifier. The electronically formatted data provides for the full sample identifier.

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.

It should be noted that the derived result for carbon tetrachloride (24.6 ug/L) from the analysis of sample BAMW8-W-28726 did exceed the concentration in the high calibration point (20.0 ug/L), and the result is qualified accordingly. An additional, dilution analysis of sample BAMW8-W-28726 could not be performed as the test volume was consumed in performing the primary analysis.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of each method blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of 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 and 2-butanone were identified in the analysis of each of the method blanks associated with the analytical work. The concentration of each compound in each analysis was below the established reporting limit, and each analysis did meet the technical acceptance criteria for a compliant method blank analysis. A trace concentration of acetone was identified in the analysis of the storage blank associated with the sample set. The concentration of acetone 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 represented 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 each continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in each 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 in the Sample Preparation section of this submittal.

Any reference within this report to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.) The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release

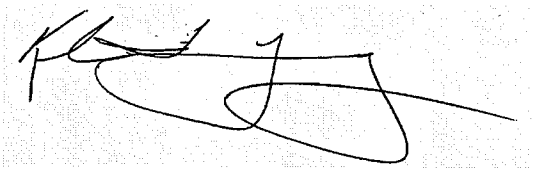
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,



Kirk F. Young
Project Manager

KFY/hsf
Enclosure

TestAmerica Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: The relative percent difference for detected concentrations between two GC columns is greater than 40%. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

2618

FedEx # 6558 7682 9521

MATRIX: Water	ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*	Shipping Container No.
RECEIVING LAB: Test America		Shipping Info:
PROJECT/SITE: Barnes KS	ANALYSIS	ANL Field Contact (Name & Temporary Phone): Dave Surgnier 630 408 7114
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	VOC	REMARKS
March 30, 2010	BAMW5-W-28722	2	2	2 x 40 mL for VOC
"	BAMW15D-W-28741	2	2	
"	BAMW16S-W-28742	2	2	
March 30, 2010	BAMW16D-W-28743	2	2	
March 31, 2010	BAMW6S-W-28723	2	2	
"	BAMW8-W-28726	2	2	
"	BAPW53-W-28747	2	2	
March 31, 2010	BAQCTB-W-28756	2	2	2 x 40 mL for VOC

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	3/31/10	17:00					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
			Clark Kalb	4/1/10	1200	0.6

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
X		Shipment was at required temperature when received.
	X	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)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – SOM01.2 Volatiles – Trace

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

EPA SAMPLE NO.
BAMW15D28741

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824498

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824498

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	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.
BAMW15D28741

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824498

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824498

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	0.38	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.
BAMW15D28741

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824498

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824498

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.2	JXB
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
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13					
14					
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21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAMW16D28743

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824500

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824500

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	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.
BAMW16D28743

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824500

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824500

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	0.55	
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.
BAMW16D28743

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824500

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824500

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.2	JXB
02					
03					
04					
05					
06					
07					
08					
09					
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13					
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19					
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21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAMW16S28742

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824499

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824499

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.21	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	1.3	
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.
BAMW16S28742

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824499

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824499

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	0.41	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.
BAMW16S28742

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824499

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824499

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.1	JXB
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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19					
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22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAMW528722

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824497

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824497

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.34	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	6.2	
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.
BAMW528722

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824497

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824497

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	0.34	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.
BAMW528722

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824497

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824497

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.2	JXB
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAMW6S28723

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824501

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824501

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.32	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.
BAMW6S28723

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824501

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824501

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	0.21	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.
BAMW6S28723

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824501

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824501

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.1	JXB
02					
03					
04					
05					
06					
07					
08					
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13					
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24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAMW828726

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824502

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824502

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	1.7	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	25	E
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.
BAMW828726

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824502

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824502

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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.
BAMW828726

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824502

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824502

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.0	JXB
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
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19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAPWS328747

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824503

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824503

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	1.1	JB
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	0.46	JB
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.
BAPWS328747

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824503

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824503

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	0.33	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.
BAPWS328747

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824503

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824503

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.1	JXB
02					
03					
04					
05					
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25					
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27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1) EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAQCTB28756

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824504

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824504

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	6.7	B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	1.2	JB
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.
BAQCTB28756

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824504

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824504

Level: (TRACE/LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	0.34	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.52	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.25	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.
BAQCTB28756

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824504

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824504

Level: (TRACE or LOW/MED) TRACE Date Received: 04/01/2010

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.1	JXB
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A	1.2	J

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
VBLKJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VBLKJH

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JAQB01A

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

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	3.0	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	1.4	J
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.
VBLKJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VBLKJH

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JAQB01A

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

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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.
VBLKJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VBLKJH

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JAQB01A

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

% Moisture: not dec. Date Analyzed: 04/05/2010

GC Column: DB-624 ID: 0.53 (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	7.01	3.1	JX
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1)EPA-designated Registry Number.

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

EPA SAMPLE NO.
VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VBLKJK

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JAQB01C

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

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	2.4	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	1.3	J
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.
VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VBLKJK

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JAQB01C

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

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Purge Volume: 25.0 (mL)

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

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

EPA SAMPLE NO.
VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VBLKJK

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JAQB01C

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

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	7.01	2.8	JX
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
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13					
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19					
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21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	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.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824505

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824505

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

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	JB
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	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.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824505

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824505

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

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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.: BARNES Mod. Ref No.: SDG No.: 136602

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 824505

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 824505

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

% Moisture: not dec. Date Analyzed: 04/06/2010

GC Column: DB-624 ID: 0.53 (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	7.01	2.6	JXB
02					
03					
04					
05					
06					
07					
08					
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13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796(1)	Total Alkanes	N/A		

(1) EPA-designated Registry Number.

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJH	90	95	73	102	94	99	95
02	BAMW528722	86	93	73	147	93	101	97
03	BAMW15D28741	85	93	73	136	94	104	97
04	BAMW16S28742	84	89	73	144	93	100	95
05	BAMW16D28743	86	91	73	133	96	103	99
06	BAMW6S28723	87	93	75	145	95	102	98
07	BAPWS328747	87	94	72	122	91	98	98
08	BAQCTB28756	89	94	74	155	92	101	95
09	BAMW828726	88	93	75	101	94	96	97
10	VBLKJK	91	95	74	85	92	95	93
11	VHBLK01	95	102	77	60	90	86	97
12								
13								
14								
15								
16								
17								
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19								
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23								
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25								
26								
27								
28								
29								
30								

		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.: BARNES Mod. Ref No.: SDG No.: 136602

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA)#	VDMC9 (TOL)#	VDMC10 (TDP)#	VDMC11 (HEX)#	VDMC12 (TCA)#	VDMC13 (DCZ)#	VDMC14 ( )#	TOT OUT
01	VBLKJH	85	94	97	98	96	96		0
02	BAMW528722	88	98	103	138*	100	100		1
03	BAMW15D28741	87	96	103	125	101	98		0
04	BAMW16S28742	87	96	101	131	101	98		0
05	BAMW16D28743	87	99	104	122	103	100		0
06	BAMW6S28723	89	98	102	136*	102	100		1
07	BAPWS328747	87	98	100	117	95	97		0
08	BAQCTB28756	86	96	99	143*	96	99		1
09	BAMW828726	86	99	97	103	93	103		0
10	VBLKJK	81	95	92	84	88	91		0
11	VHBLK01	80	98	85	57	76	89		0
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	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

SOM01.2

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
VBLKJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Lab File ID: JAQB01A Lab Sample ID: VBLKJH

Instrument ID: J.i

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 04/05/2010

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 2158

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	BAMW528722	824497	824497	2301
02	BAMW15D28741	824498	824498	2329
03	BAMW16S28742	824499	824499	2355
04	BAMW16D28743	824500	824500	0022
05	BAMW6S28723	824501	824501	0050
06	BAPWS328747	824503	824503	0118
07	BAQCTB28756	824504	824504	0144
08	BAMW828726	824502	824502	0334
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COMMENTS: _____

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
VBLKJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Lab File ID: JAQB01C Lab Sample ID: VBLKJK

Instrument ID: J.i

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 04/06/2010

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1222

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK01	824505	824505	1342
02				
03				
04				
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09				
10				
11				
12				
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COMMENTS:

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

EPA SAMPLE NO.
BFBJG

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Lab File ID: JAQ01PV BFB Injection Date: 04/05/2010

Instrument ID: J.i BFB Injection Time: 1223

GC Column: DB-624 ID: 0.53 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.0
75	30.0 - 80.0% of mass 95	48.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	66.9
175	5.0 - 9.0% of mass 174	6.0 (8.9)1
176	95.0 - 101.0% of mass 174	66.3 (99.2)1
177	5.0 - 9.0% of mass 176	4.5 (6.8)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	VSTD0.5JG	VSTD0.5JG	JAQ0005V	04/05/2010	1318
02	VSTD001JG	VSTD001JG	JAQ001V	04/05/2010	1345
03	VSTD005JG	VSTD005JG	JAQ005V	04/05/2010	1412
04	VSTD010JG	VSTD010JG	JAQ010V	04/05/2010	1438
05	VSTD020JG	VSTD020JG	JAQ020V	04/05/2010	1505
06					
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5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.
BFBJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Lab File ID: JAQ02PV BFB Injection Date: 04/05/2010

Instrument ID: J.i BFB Injection Time: 2109

GC Column: DB-624 ID: 0.53 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.2
75	30.0 - 80.0% of mass 95	47.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	77.0
175	5.0 - 9.0% of mass 174	5.7 (7.5)1
176	95.0 - 101.0% of mass 174	73.4 (95.3)1
177	5.0 - 9.0% of mass 176	4.3 (5.9)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	VSTD005JH	VSTD005JH	JAQ005AV	04/05/2010	2130
02	VBLKJH	VBLKJH	JAQB01A	04/05/2010	2158
03	BAMW528722	824497	824497	04/05/2010	2301
04	BAMW15D28741	824498	824498	04/05/2010	2329
05	BAMW16S28742	824499	824499	04/05/2010	2355
06	BAMW16D28743	824500	824500	04/06/2010	0022
07	BAMW6S28723	824501	824501	04/06/2010	0050
08	BAPWS328747	824503	824503	04/06/2010	0118
09	BAQCTB28756	824504	824504	04/06/2010	0144
10	BAMW828726	824502	824502	04/06/2010	0334
11	VSTD005HJ	VSTD005HJ	JAQ05AC1	04/06/2010	0428
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5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.
BFBJK

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Lab File ID: JAQ10PV BFB Injection Date: 04/06/2010

Instrument ID: J.i BFB Injection Time: 1133

GC Column: DB-624 ID: 0.53 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.9
75	30.0 - 80.0% of mass 95	47.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.5 (0.8)1
174	50.0 - 120.0% of mass 95	70.9
175	5.0 - 9.0% of mass 174	5.9 (8.4)1
176	95.0 - 101.0% of mass 174	68.6 (96.9)1
177	5.0 - 9.0% of mass 176	4.1 (6.0)2

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JK	VSTD005JK	JAQ005CV	04/06/2010	1156
02	VBLKJK	VBLKJK	JAQB01C	04/06/2010	1222
03	VHBLK01	824505	824505	04/06/2010	1342
04	VSTD005KJ	VSTD005KJ	JAQ005C1	04/06/2010	1830
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6A - FORM VI VOA-1
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date(s): 04/05/2010 04/05/2010

Heated Purge: (Y/N)N Calibration Time(s): 1318 1505

Purge Volume: 25.0 (mL)

GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

LAB FILE ID: RRF0.5 = JAQ0005V RRF1.0 = JAQ001V
RRF5.0 = JAQ005V RRF10 = JAQ010V RRF20 = JAQ020V

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.457	0.437	0.408	0.407	0.415	0.425	5.1
Chloromethane	0.462	0.439	0.449	0.448	0.455	0.451	1.9
Vinyl chloride	0.488	0.458	0.442	0.443	0.442	0.454	4.4
Bromomethane	0.187	0.173	0.161	0.165	0.170	0.171	5.8
Chloroethane	0.273	0.279	0.254	0.254	0.254	0.263	4.6
Trichlorofluoromethane	0.524	0.522	0.507	0.501	0.502	0.511	2.2
1,1-Dichloroethene	0.320	0.313	0.300	0.296	0.301	0.306	3.3
1,1,2-Trichloro-1,2,2-trifluoroethane	0.348	0.330	0.315	0.310	0.314	0.323	4.8
Acetone	0.016	0.015	0.013	0.013	0.013	0.014	10.1
Carbon disulfide	1.128	0.982	0.959	0.931	0.933	0.986	8.3
Methyl acetate	0.067	0.054	0.048	0.047	0.047	0.053	16.1
Methylene chloride	0.262	0.252	0.250	0.242	0.246	0.250	3.0
trans-1,2-Dichloroethene	0.336	0.344	0.321	0.313	0.314	0.326	4.3
Methyl tert-butyl ether	0.403	0.409	0.394	0.383	0.395	0.397	2.5
1,1-Dichloroethane	0.606	0.610	0.595	0.588	0.584	0.597	1.9
cis-1,2-Dichloroethene	0.328	0.321	0.316	0.305	0.308	0.316	3.0
2-Butanone	0.029	0.028	0.027	0.027	0.028	0.028	3.2
Bromochloromethane	0.093	0.092	0.091	0.086	0.087	0.090	3.5
Chloroform	0.531	0.499	0.491	0.488	0.493	0.500	3.5
1,1,1-Trichloroethane	0.663	0.647	0.610	0.604	0.599	0.625	4.6
Cyclohexane	0.995	0.891	0.871	0.854	0.838	0.890	7.0
Carbon tetrachloride	0.554	0.529	0.509	0.510	0.507	0.522	3.8
Benzene	1.911	1.904	1.793	1.765	1.725	1.820	4.6
1,2-Dichloroethane	0.215	0.208	0.206	0.200	0.199	0.206	3.1
Trichloroethene	0.440	0.432	0.423	0.420	0.419	0.427	2.1
Methylcyclohexane	0.708	0.715	0.665	0.662	0.646	0.679	4.5

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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date(s): 04/05/2010 04/05/2010

Heated Purge: (Y/N)N Calibration Time(s): 1318 1505

Purge Volume: 25.0 (mL)

GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

LAB FILE ID: RRF0.5 = JAQ0005V RRF1.0 = JAQ001V
RRF5.0 = JAQ005V RRF10 = JAQ010V RRF20 = JAQ020V

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
1,2-Dichloropropane	0.395	0.375	0.374	0.364	0.359	0.373	3.8
Bromodichloromethane	0.404	0.377	0.383	0.382	0.386	0.386	2.6
cis-1,3-Dichloropropene	0.507	0.506	0.496	0.496	0.495	0.500	1.2
4-Methyl-2-pentanone	0.096	0.098	0.097	0.095	0.097	0.096	1.0
Toluene	2.055	1.965	1.891	1.836	1.831	1.916	4.9
trans-1,3-Dichloropropene	0.343	0.336	0.348	0.343	0.345	0.343	1.3
1,1,2-Trichloroethane	0.145	0.173	0.157	0.153	0.153	0.156	6.6
Tetrachloroethene	0.361	0.353	0.329	0.327	0.329	0.340	4.6
2-Hexanone	0.059	0.062	0.061	0.061	0.062	0.061	2.0
Dibromochloromethane	0.180	0.177	0.185	0.180	0.186	0.182	2.1
1,2-Dibromoethane	0.139	0.136	0.137	0.136	0.136	0.137	1.1
Chlorobenzene	1.030	1.037	1.003	0.993	1.006	1.014	1.9
Ethylbenzene	2.210	2.158	2.092	2.087	2.091	2.128	2.6
o-Xylene	0.780	0.732	0.712	0.713	0.711	0.730	4.0
m,p-Xylene	0.804	0.815	0.785	0.777	0.783	0.793	2.0
Styrene	1.065	1.065	1.069	1.071	1.078	1.070	0.5
Bromoform	0.173	0.191	0.197	0.198	0.195	0.191	5.4
Isopropylbenzene	2.046	2.083	2.024	2.024	2.025	2.040	1.3
1,1,2,2-Tetrachloroethane	0.144	0.152	0.144	0.147	0.146	0.147	2.1
1,3-Dichlorobenzene	1.688	1.654	1.599	1.626	1.601	1.634	2.3
1,4-Dichlorobenzene	1.655	1.589	1.520	1.528	1.510	1.560	3.9
1,2-Dichlorobenzene	1.282	1.238	1.179	1.183	1.162	1.209	4.1
1,2-Dibromo-3-chloropropane	0.063	0.052	0.044	0.045	0.044	0.050	16.8
1,2,4-Trichlorobenzene	0.546	0.549	0.542	0.558	0.571	0.553	2.1
1,2,3-Trichlorobenzene	0.323	0.373	0.373	0.381	0.396	0.369	7.5

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date(s): 04/05/2010 04/05/2010

Heated Purge: (Y/N)N Calibration Time(s): 1318 1505

Purge Volume: 25.0 (mL)

GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

LAB FILE ID: RRF0.5 = JAQ0005V RRF1.0 = JAQ001V
RRF5.0 = JAQ005V RRF10 = JAQ010V RRF20 = JAQ020V

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Vinyl chloride-d3	0.452	0.420	0.399	0.389	0.396	0.411	6.2
Chloroethane-d5	0.316	0.320	0.304	0.305	0.305	0.310	2.4
1,1-Dichloroethene-d2	0.724	0.703	0.670	0.657	0.660	0.683	4.3
2-Butanone-d5	0.026	0.027	0.027	0.027	0.028	0.027	2.3
Chloroform-d	0.571	0.539	0.540	0.525	0.528	0.541	3.3
1,2-Dichloroethane-d4	0.172	0.176	0.167	0.165	0.165	0.169	3.0
Benzene-d6	1.846	1.824	1.730	1.708	1.689	1.760	4.0
1,2-Dichloropropane-d6	0.539	0.500	0.497	0.481	0.478	0.499	4.9
Toluene-d8	1.627	1.628	1.563	1.556	1.543	1.583	2.6
trans-1,3-Dichloropropene-d4	0.319	0.311	0.304	0.309	0.315	0.312	1.9
2-Hexanone-d5	0.032	0.033	0.034	0.034	0.034	0.033	2.9
1,1,2,2-Tetrachloroethane-d2	0.158	0.156	0.148	0.146	0.149	0.151	3.2
1,2-Dichlorobenzene-d4	0.774	0.783	0.759	0.761	0.744	0.764	1.9

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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/05/2010 Time: 2130

Lab File ID: JAQ005AV Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JH Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.425	0.432	0.010	1.7	40.0
Chloromethane	0.451	0.466	0.010	3.4	40.0
Vinyl chloride	0.454	0.470	0.100	3.4	30.0
Bromomethane	0.171	0.173	0.100	1.3	30.0
Chloroethane	0.263	0.270	0.010	2.6	40.0
Trichlorofluoromethane	0.511	0.518	0.010	1.4	40.0
1,1-Dichloroethene	0.306	0.313	0.100	2.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.323	0.333	0.010	3.1	40.0
Acetone	0.014	0.013	0.010	-10.0	40.0
Carbon disulfide	0.986	1.087	0.010	10.2	40.0
Methyl acetate	0.053	0.052	0.010	-0.9	40.0
Methylene chloride	0.250	0.250	0.010	-0.3	40.0
trans-1,2-Dichloroethene	0.326	0.331	0.010	1.8	40.0
Methyl tert-butyl ether	0.397	0.367	0.010	-7.5	40.0
1,1-Dichloroethane	0.597	0.613	0.200	2.8	30.0
cis-1,2-Dichloroethene	0.316	0.317	0.010	0.6	40.0
2-Butanone	0.028	0.025	0.010	-9.9	40.0
Bromochloromethane	0.090	0.089	0.050	-0.9	30.0
Chloroform	0.500	0.521	0.200	4.1	30.0
1,1,1-Trichloroethane	0.625	0.628	0.100	0.5	30.0
Cyclohexane	0.890	0.889	0.010	-0.1	40.0
Carbon tetrachloride	0.522	0.536	0.100	2.7	30.0
Benzene	1.820	1.821	0.400	0.1	30.0
1,2-Dichloroethane	0.206	0.208	0.100	1.3	30.0
Trichloroethene	0.427	0.427	0.300	0.0	30.0
Methylcyclohexane	0.679	0.687	0.010	1.1	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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/05/2010 Time: 2130

Lab File ID: JAQ005AV Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JH Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.373	0.379	0.010	1.6	40.0
Bromodichloromethane	0.386	0.383	0.200	-0.9	30.0
cis-1,3-Dichloropropene	0.500	0.503	0.200	0.6	30.0
4-Methyl-2-pentanone	0.096	0.088	0.010	-8.4	40.0
Toluene	1.916	1.915	0.400	-0.0	30.0
trans-1,3-Dichloropropene	0.343	0.340	0.100	-0.9	30.0
1,1,2-Trichloroethane	0.156	0.149	0.100	-4.4	30.0
Tetrachloroethene	0.340	0.344	0.100	1.2	30.0
2-Hexanone	0.061	0.056	0.010	-9.0	40.0
Dibromochloromethane	0.182	0.184	0.100	1.6	30.0
1,2-Dibromoethane	0.137	0.136	0.010	-0.5	30.0
Chlorobenzene	1.014	1.008	0.500	-0.5	30.0
Ethylbenzene	2.128	2.139	0.100	0.5	30.0
o-Xylene	0.730	0.727	0.300	-0.4	30.0
m,p-Xylene	0.793	0.817	0.300	3.1	30.0
Styrene	1.070	1.082	0.300	1.1	30.0
Bromoform	0.191	0.189	0.050	-0.8	30.0
Isopropylbenzene	2.040	2.095	0.010	2.7	40.0
1,1,2,2-Tetrachloroethane	0.147	0.139	0.100	-5.1	30.0
1,3-Dichlorobenzene	1.634	1.679	0.400	2.8	30.0
1,4-Dichlorobenzene	1.560	1.557	0.400	-0.2	30.0
1,2-Dichlorobenzene	1.209	1.192	0.400	-1.4	30.0
1,2-Dibromo-3-chloropropane	0.050	0.040	0.010	-19.2	40.0
1,2,4-Trichlorobenzene	0.553	0.543	0.200	-1.9	30.0
1,2,3-Trichlorobenzene	0.369	0.353	0.200	-4.3	30.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/05/2010 Time: 2130

Lab File ID: JAQ005AV Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JH Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl chloride-d3	0.411	0.421	0.010	2.4	30.0
Chloroethane-d5	0.310	0.329	0.010	6.1	40.0
1,1-Dichloroethene-d2	0.683	0.687	0.010	0.6	30.0
2-Butanone-d5	0.027	0.023	0.010	-12.6	40.0
Chloroform-d	0.541	0.537	0.010	-0.8	30.0
1,2-Dichloroethane-d4	0.169	0.168	0.010	-0.4	30.0
Benzene-d6	1.760	1.764	0.400	0.2	30.0
1,2-Dichloropropane-d6	0.499	0.443	0.010	-11.2	40.0
Toluene-d8	1.583	1.601	0.010	1.1	30.0
trans-1,3-Dichloropropene-d4	0.312	0.304	0.010	-2.5	30.0
2-Hexanone-d5	0.033	0.027	0.010	-18.0	40.0
1,1,2,2-Tetrachloroethane-d2	0.151	0.142	0.010	-6.0	30.0
1,2-Dichlorobenzene-d4	0.764	0.745	0.010	-2.5	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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 0428

Lab File ID: JAQ05AC1 Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005HJ Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.425	0.435	0.010	2.4	50.0
Chloromethane	0.451	0.468	0.010	3.9	50.0
Vinyl chloride	0.454	0.477	0.010	4.9	50.0
Bromomethane	0.171	0.167	0.010	-2.7	50.0
Chloroethane	0.263	0.265	0.010	0.9	50.0
Trichlorofluoromethane	0.511	0.537	0.010	5.1	50.0
1,1-Dichloroethene	0.306	0.311	0.010	1.7	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.323	0.329	0.010	1.7	50.0
Acetone	0.014	0.012	0.010	-12.9	50.0
Carbon disulfide	0.986	1.006	0.010	1.9	50.0
Methyl acetate	0.053	0.045	0.010	-14.3	50.0
Methylene chloride	0.250	0.253	0.010	1.0	50.0
trans-1,2-Dichloroethene	0.326	0.327	0.010	0.4	50.0
Methyl tert-butyl ether	0.397	0.382	0.010	-3.7	50.0
1,1-Dichloroethane	0.597	0.609	0.010	2.1	50.0
cis-1,2-Dichloroethene	0.316	0.317	0.010	0.4	50.0
2-Butanone	0.028	0.025	0.010	-8.9	50.0
Bromochloromethane	0.090	0.088	0.010	-1.5	50.0
Chloroform	0.500	0.505	0.010	1.0	50.0
1,1,1-Trichloroethane	0.625	0.645	0.010	3.2	50.0
Cyclohexane	0.890	0.917	0.010	3.0	50.0
Carbon tetrachloride	0.522	0.538	0.010	3.1	50.0
Benzene	1.820	1.851	0.010	1.7	50.0
1,2-Dichloroethane	0.206	0.205	0.010	-0.5	50.0
Trichloroethene	0.427	0.441	0.010	3.4	50.0
Methylcyclohexane	0.679	0.698	0.010	2.7	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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 0428

Lab File ID: JAQ05AC1 Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005HJ Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.373	0.370	0.010	-0.9	50.0
Bromodichloromethane	0.386	0.390	0.010	1.0	50.0
cis-1,3-Dichloropropene	0.500	0.500	0.010	-0.0	50.0
4-Methyl-2-pentanone	0.096	0.094	0.010	-2.8	50.0
Toluene	1.916	1.928	0.010	0.6	50.0
trans-1,3-Dichloropropene	0.343	0.340	0.010	-0.7	50.0
1,1,2-Trichloroethane	0.156	0.155	0.010	-0.5	50.0
Tetrachloroethene	0.340	0.348	0.010	2.5	50.0
2-Hexanone	0.061	0.060	0.010	-2.1	50.0
Dibromochloromethane	0.182	0.183	0.010	0.8	50.0
1,2-Dibromoethane	0.137	0.135	0.010	-1.2	50.0
Chlorobenzene	1.014	1.034	0.010	2.0	50.0
Ethylbenzene	2.128	2.201	0.010	3.4	50.0
o-Xylene	0.730	0.737	0.010	0.9	50.0
m,p-Xylene	0.793	0.807	0.010	1.9	50.0
Styrene	1.070	1.086	0.010	1.5	50.0
Bromoform	0.191	0.196	0.010	2.8	50.0
Isopropylbenzene	2.040	2.116	0.010	3.7	50.0
1,1,2,2-Tetrachloroethane	0.147	0.142	0.010	-3.4	50.0
1,3-Dichlorobenzene	1.634	1.677	0.010	2.7	50.0
1,4-Dichlorobenzene	1.560	1.594	0.010	2.1	50.0
1,2-Dichlorobenzene	1.209	1.222	0.010	1.1	50.0
1,2-Dibromo-3-chloropropane	0.050	0.043	0.010	-14.0	50.0
1,2,4-Trichlorobenzene	0.553	0.544	0.010	-1.7	50.0
1,2,3-Trichlorobenzene	0.369	0.375	0.010	1.6	50.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 0428

Lab File ID: JAQ05AC1 Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005HJ Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl chloride-d3	0.411	0.422	0.010	2.6	50.0
Chloroethane-d5	0.310	0.321	0.010	3.5	50.0
1,1-Dichloroethene-d2	0.683	0.699	0.010	2.3	50.0
2-Butanone-d5	0.027	0.026	0.010	-4.0	50.0
Chloroform-d	0.541	0.548	0.010	1.3	50.0
1,2-Dichloroethane-d4	0.169	0.167	0.010	-1.3	50.0
Benzene-d6	1.760	1.788	0.010	1.6	50.0
1,2-Dichloropropane-d6	0.499	0.495	0.010	-0.7	50.0
Toluene-d8	1.583	1.617	0.010	2.1	50.0
trans-1,3-Dichloropropene-d4	0.312	0.307	0.010	-1.4	50.0
2-Hexanone-d5	0.033	0.032	0.010	-4.5	50.0
1,1,2,2-Tetrachloroethane-d2	0.151	0.144	0.010	-5.2	50.0
1,2-Dichlorobenzene-d4	0.764	0.775	0.010	1.4	50.0

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

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 1156

Lab File ID: JAQ005CV Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JK Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.425	0.445	0.010	4.8	40.0
Chloromethane	0.451	0.488	0.010	8.2	40.0
Vinyl chloride	0.454	0.497	0.100	9.5	30.0
Bromomethane	0.171	0.193	0.100	12.8	30.0
Chloroethane	0.263	0.279	0.010	6.1	40.0
Trichlorofluoromethane	0.511	0.529	0.010	3.4	40.0
1,1-Dichloroethene	0.306	0.315	0.100	3.0	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.323	0.342	0.010	5.6	40.0
Acetone	0.014	0.011	0.010	-20.6	40.0
Carbon disulfide	0.986	0.987	0.010	0.0	40.0
Methyl acetate	0.053	0.045	0.010	-13.6	40.0
Methylene chloride	0.250	0.245	0.010	-2.2	40.0
trans-1,2-Dichloroethene	0.326	0.331	0.010	1.6	40.0
Methyl tert-butyl ether	0.397	0.326	0.010	-17.7	40.0
1,1-Dichloroethane	0.597	0.604	0.200	1.2	30.0
cis-1,2-Dichloroethene	0.316	0.315	0.010	-0.3	40.0
2-Butanone	0.028	0.022	0.010	-20.8	40.0
Bromochloromethane	0.090	0.085	0.050	-5.3	30.0
Chloroform	0.500	0.503	0.200	0.6	30.0
1,1,1-Trichloroethane	0.625	0.663	0.100	6.2	30.0
Cyclohexane	0.890	0.951	0.010	6.9	40.0
Carbon tetrachloride	0.522	0.559	0.100	7.0	30.0
Benzene	1.820	1.883	0.400	3.5	30.0
1,2-Dichloroethane	0.206	0.192	0.100	-6.4	30.0
Trichloroethene	0.427	0.455	0.300	6.7	30.0
Methylcyclohexane	0.679	0.733	0.010	8.0	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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 1156

Lab File ID: JAQ005CV Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JK Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.373	0.374	0.010	0.2	40.0
Bromodichloromethane	0.386	0.374	0.200	-3.3	30.0
cis-1,3-Dichloropropene	0.500	0.486	0.200	-2.7	30.0
4-Methyl-2-pentanone	0.096	0.081	0.010	-16.1	40.0
Toluene	1.916	1.959	0.400	2.3	30.0
trans-1,3-Dichloropropene	0.343	0.328	0.100	-4.2	30.0
1,1,2-Trichloroethane	0.156	0.146	0.100	-6.6	30.0
Tetrachloroethene	0.340	0.355	0.100	4.4	30.0
2-Hexanone	0.061	0.050	0.010	-17.7	40.0
Dibromochloromethane	0.182	0.169	0.100	-7.0	30.0
1,2-Dibromoethane	0.137	0.129	0.010	-6.0	30.0
Chlorobenzene	1.014	1.025	0.500	1.1	30.0
Ethylbenzene	2.128	2.246	0.100	5.5	30.0
o-Xylene	0.730	0.742	0.300	1.7	30.0
m,p-Xylene	0.793	0.843	0.300	6.4	30.0
Styrene	1.070	1.080	0.300	0.9	30.0
Bromoform	0.191	0.181	0.050	-4.8	30.0
Isopropylbenzene	2.040	2.209	0.010	8.3	40.0
1,1,2,2-Tetrachloroethane	0.147	0.125	0.100	-14.5	30.0
1,3-Dichlorobenzene	1.634	1.668	0.400	2.1	30.0
1,4-Dichlorobenzene	1.560	1.561	0.400	0.0	30.0
1,2-Dichlorobenzene	1.209	1.183	0.400	-2.1	30.0
1,2-Dibromo-3-chloropropane	0.050	0.040	0.010	-19.4	40.0
1,2,4-Trichlorobenzene	0.553	0.497	0.200	-10.1	30.0
1,2,3-Trichlorobenzene	0.369	0.325	0.200	-11.8	30.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 1156

Lab File ID: JAQ005CV Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JK Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl chloride-d3	0.411	0.431	0.010	4.8	30.0
Chloroethane-d5	0.310	0.334	0.010	7.6	40.0
1,1-Dichloroethene-d2	0.683	0.716	0.010	4.9	30.0
2-Butanone-d5	0.027	0.019	0.010	-28.9	40.0
Chloroform-d	0.541	0.528	0.010	-2.3	30.0
1,2-Dichloroethane-d4	0.169	0.159	0.010	-5.7	30.0
Benzene-d6	1.760	1.784	0.400	1.4	30.0
1,2-Dichloropropane-d6	0.499	0.445	0.010	-10.9	40.0
Toluene-d8	1.583	1.650	0.010	4.2	30.0
trans-1,3-Dichloropropene-d4	0.312	0.289	0.010	-7.1	30.0
2-Hexanone-d5	0.033	0.022	0.010	-34.8	40.0
1,1,2,2-Tetrachloroethane-d2	0.151	0.127	0.010	-16.1	30.0
1,2-Dichlorobenzene-d4	0.764	0.750	0.010	-1.8	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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 1830

Lab File ID: JAQ005C1 Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005KJ Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.425	0.430	0.010	1.3	50.0
Chloromethane	0.451	0.458	0.010	1.7	50.0
Vinyl chloride	0.454	0.473	0.010	4.2	50.0
Bromomethane	0.171	0.175	0.010	1.9	50.0
Chloroethane	0.263	0.269	0.010	2.4	50.0
Trichlorofluoromethane	0.511	0.526	0.010	2.9	50.0
1,1-Dichloroethene	0.306	0.306	0.010	0.1	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.323	0.332	0.010	2.8	50.0
Acetone	0.014	0.013	0.010	-10.1	50.0
Carbon disulfide	0.986	0.964	0.010	-2.2	50.0
Methyl acetate	0.053	0.053	0.010	-0.1	50.0
Methylene chloride	0.250	0.255	0.010	1.8	50.0
trans-1,2-Dichloroethene	0.326	0.325	0.010	-0.2	50.0
Methyl tert-butyl ether	0.397	0.394	0.010	-0.7	50.0
1,1-Dichloroethane	0.597	0.608	0.010	2.0	50.0
cis-1,2-Dichloroethene	0.316	0.317	0.010	0.6	50.0
2-Butanone	0.028	0.027	0.010	-3.2	50.0
Bromochloromethane	0.090	0.087	0.010	-2.3	50.0
Chloroform	0.500	0.509	0.010	1.8	50.0
1,1,1-Trichloroethane	0.625	0.646	0.010	3.5	50.0
Cyclohexane	0.890	0.908	0.010	2.0	50.0
Carbon tetrachloride	0.522	0.548	0.010	5.0	50.0
Benzene	1.820	1.853	0.010	1.8	50.0
1,2-Dichloroethane	0.206	0.211	0.010	2.9	50.0
Trichloroethene	0.427	0.445	0.010	4.4	50.0
Methylcyclohexane	0.679	0.705	0.010	3.7	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.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 1830

Lab File ID: JAQ005C1 Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005KJ Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.373	0.386	0.010	3.4	50.0
Bromodichloromethane	0.386	0.394	0.010	1.9	50.0
cis-1,3-Dichloropropene	0.500	0.509	0.010	1.8	50.0
4-Methyl-2-pentanone	0.096	0.098	0.010	1.5	50.0
Toluene	1.916	1.962	0.010	2.4	50.0
trans-1,3-Dichloropropene	0.343	0.351	0.010	2.4	50.0
1,1,2-Trichloroethane	0.156	0.158	0.010	1.3	50.0
Tetrachloroethene	0.340	0.353	0.010	3.8	50.0
2-Hexanone	0.061	0.062	0.010	1.8	50.0
Dibromochloromethane	0.182	0.193	0.010	6.1	50.0
1,2-Dibromoethane	0.137	0.141	0.010	2.8	50.0
Chlorobenzene	1.014	1.050	0.010	3.6	50.0
Ethylbenzene	2.128	2.190	0.010	2.9	50.0
o-Xylene	0.730	0.749	0.010	2.6	50.0
m,p-Xylene	0.793	0.831	0.010	4.8	50.0
Styrene	1.070	1.119	0.010	4.6	50.0
Bromoform	0.191	0.194	0.010	1.9	50.0
Isopropylbenzene	2.040	2.135	0.010	4.7	50.0
1,1,2,2-Tetrachloroethane	0.147	0.146	0.010	-0.2	50.0
1,3-Dichlorobenzene	1.634	1.683	0.010	3.0	50.0
1,4-Dichlorobenzene	1.560	1.611	0.010	3.3	50.0
1,2-Dichlorobenzene	1.209	1.240	0.010	2.6	50.0
1,2-Dibromo-3-chloropropane	0.050	0.049	0.010	-1.8	50.0
1,2,4-Trichlorobenzene	0.553	0.566	0.010	2.4	50.0
1,2,3-Trichlorobenzene	0.369	0.373	0.010	1.0	50.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

Instrument ID: J.i Calibration Date: 04/06/2010 Time: 1830

Lab File ID: JAQ005C1 Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005KJ Init. Calib. Time(s): 1318 1505

Heated Purge: (Y/N)N GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

Purge Volume: 25.0 (mL)

COMPOUND	$\overline{RRF}$	RRF5.0	MIN RRF	%D	MAX %D
Vinyl chloride-d3	0.411	0.419	0.010	1.9	50.0
Chloroethane-d5	0.310	0.327	0.010	5.6	50.0
1,1-Dichloroethene-d2	0.683	0.699	0.010	2.4	50.0
2-Butanone-d5	0.027	0.027	0.010	0.7	50.0
Chloroform-d	0.541	0.549	0.010	1.5	50.0
1,2-Dichloroethane-d4	0.169	0.173	0.010	2.7	50.0
Benzene-d6	1.760	1.806	0.010	2.7	50.0
1,2-Dichloropropane-d6	0.499	0.462	0.010	-7.4	50.0
Toluene-d8	1.583	1.626	0.010	2.7	50.0
trans-1,3-Dichloropropene-d4	0.312	0.329	0.010	5.5	50.0
2-Hexanone-d5	0.033	0.032	0.010	-3.7	50.0
1,1,2,2-Tetrachloroethane-d2	0.151	0.156	0.010	3.0	50.0
1,2-Dichlorobenzene-d4	0.764	0.793	0.010	3.8	50.0

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

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

GC Column: DB-624 ID: 0.53 (mm) Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JH Date Analyzed: 04/05/2010

Lab File ID (Standard): JAQ005AV Time Analyzed: 2130

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	843821	9.06	1098680	5.67	336756	11.89
	UPPER LIMIT	1181349	9.39	1538152	6.01	471458	12.22
	LOWER LIMIT	506293	8.72	659208	5.34	202054	11.55
	EPA SAMPLE NO.						
01	VBLKJH	835204	9.06	1081873	5.68	335564	11.89
02	BAMW528722	840789	9.06	1110646	5.67	337947	11.89
03	BAMW15D28741	850857	9.06	1117073	5.68	343617	11.89
04	BAMW16S28742	868105	9.06	1134201	5.68	345489	11.89
05	BAMW16D28743	841941	9.06	1109240	5.68	340335	11.89
06	BAMW6S28723	856014	9.06	1132960	5.68	340023	11.89
07	BAPWS328747	819075	9.06	1095331	5.67	330571	11.89
08	BAQCTB28756	853873	9.06	1117132	5.67	340676	11.89
09	BAMW828726	785239	9.06	1051868	5.68	307325	11.89
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

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

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 136602

GC Column: DB-624 ID: 0.53 (mm) Init. Calib. Date(s): 04/05/2010 04/05/2010

EPA Sample No.(VSTD#####): VSTD005JK Date Analyzed: 04/06/2010

Lab File ID (Standard): JAQ005CV Time Analyzed: 1156

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

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	801919	9.06	1085852	5.67	314389	11.89
	UPPER LIMIT	1122687	9.39	1520193	6.01	440145	12.23
	LOWER LIMIT	481151	8.72	651511	5.34	188633	11.56
	EPA SAMPLE NO.						
01	VBLKJK	851234	9.06	1129708	5.68	334945	11.89
02	VHBLK01	787283	9.05	1084434	5.68	295621	11.89
03							
04							
05							
06							
07							
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15							
16							
17							
18							
19							
20							
21							
22							

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

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

TestAmerica Laboratories, Inc.

CASE NARRATIVE

Client: Argonne National Laboratory

Project: BARNES (200-1626)

Report Number: 200-1626-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are 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 9/21/2010. 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 blanks 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 and 1,2,3-trichlorobenzene were identified in the analysis of each method blank associated with the analytical work. The concentration of each compound in each analysis was below the established reporting limit, and each analysis did meet the technical acceptance criteria for a compliant method blank analysis. A trace concentration of

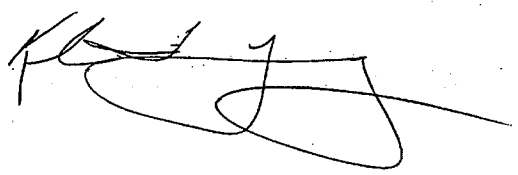
acetone was identified in the analysis of the storage blank associated with the sample set. The concentration of acetone in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Present in the method 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 each continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in each 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 in the Sample Preparation section of this submittal.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.



Kirk F. Young
Project Manager

MATRIX: Water	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: Test America		Shipping Info:
PROJECT/SITE: Barnes ICS		ANL Field Contact (Name & Temporary Phone): Dave Sargnier 630 408 7114
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
Sept 17, 2010	BAMW30-W-28763	2	2	2x 40 mL for VOC
Sept 17, 2010	BAMW7-W-28768	2	2	
Sept 18, 2010	BAMW155-W-28783	2	2	
Sept 18, 2010	BA [redacted] Centrich-W-28788	2	2	
Sept 18, 2010	BAQCTB-W-28801	2	2	2x 40 mL for VOC

Page 3 of 53

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	9/20/10	12:26					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
				9/21/10	10 10	

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)

Burlington Facility

Internal Chain of Custody Log (ICOC)

Project Information:

LOG-IN NUMBER: 200-16626 | Method: SOM01.2 Vol Trace

CLIENT: Argonne | LAB IDs: 200-16626-1 thru 200-16626-5

Samples associated with this Log-in were placed into storage on 09/21/10 (Date) 1455 (Time[2]) by: [signature] *Sample Custodian Signature*

Storage Location: VOA Refrigerator B, Shelf 8 *Specify storage location (refrigerator, freezer ID or lab location) for original sample containers*

Storage Condition: ✓ 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]
✓		1-5	9-21-10	1604	✓			[signature]	[signature]	VOA Prep
✓		1-5	9-21-10	1625			✓	[signature]	[signature]	VOA Fridge
✓		"	9/23/10	1615		✓		JH	JH	Analysis
✓		"	9/23/10	1630			✓	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 NUMBER: 200-16226 | Method: HB-SOM01.2 Vol Trace

CLIENT: Argonne | LAB IDs: 200-16226-6

Samples associated with this Log-in were placed into storage on 09/21/10 (Date) 1455 (Time[2]) by: [signature] *Sample Custodian Signature*

Storage Location: VOA Refrigerator B, Shelf 8 *Specify storage location (refrigerator, freezer ID or lab location) for original sample containers*

Storage Condition: ✓ 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]
✓		6	9-21-10	1604	✓			Thomas Jackson	Thomas Jackson	VOA Frig
✓		6	9-21-10	1625			✓	Thomas Jackson	Thomas Jackson	VOA Frig
✓		11	9/24/10	0710		✓		JA	JA	Analysis
✓		11	9/24/10	0715			✓	JA	JA	Storage

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

[2] Military Time

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJF	101	101	77	103	102	108	105
02	BAMW3D-W-28763	97	103	77	137	100	108	108
03	BAMW7-W-28768	101	104	78	138	104	109	107
04	BAMW155-W-28783	101	103	79	170 *	103	107	106
05	BAOENTRICH-W-28788	97	100	77	132	101	103	104
06	BAQCTB-W-28801	101	100	77	192 *	102	105	103
07	VBLKJG	97	98	76	98	100	103	104
08	VHBLK01	118	116	90	110	115	117	121

		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.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJF	93	102	105	102	104	108		0
02	BAMW3D-W-28763	95	103	101	125	109	108		0
03	BAMW7-W-28768	93	105	108	122	107	109		0
04	BAMW155-W-28783	95	105	105	159 *	110	111		2
05	BAOENTRICH-W-28788	92	101	99	118	104	108		0
06	BAQCTB-W-28801	92	102	100	184 *	107	109		2
07	VBLKJG	91	100	99	95	101	103		0
08	VHBLK01	105	119	117	110	115	120		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.
VBLKJF

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Lab File ID: JBMD04.D Lab Sample ID: MB 200-7052/4

Instrument ID: J.i

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 09/23/2010

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1622

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	BAMW3D-W-28763	200-1626-1	JBMD15.D	2138
02	BAMW7-W-28768	200-1626-2	JBMD16.D	2206
03	BAMW155-W-28783	200-1626-3	JBMD17.D	2234
04	BAOENTRICH-W-28788	200-1626-4	JBMD18.D	2302
05	BAQCTB-W-28801	200-1626-5	JBMD19.D	2330

COMMENTS: _____

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.
VBLKJG

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Lab File ID: JBME04.D Lab Sample ID: MB 200-7048/4

Instrument ID: J.i

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 09/24/2010

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 0737

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK01	200-1626-6	JBME05.D	0814

COMMENTS: _____

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

EPA SAMPLE NO.
BFBJB

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Lab File Id: JBM01.D BFB Injection Date: 09/21/2010

Instrument Id: J.i BFB Injection Time: 1417

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.2
75	30.0 - 80.0% of mass 95	51.0
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.6 (0.7)1
174	50.0 - 120% of mass 95	88.5
175	5.0 - 9.0% of mass 174	6.3 (7.1)1
176	95.0 - 101% of mass 174	88.5 (100)1
177	5.0 - 9.0% of mass 176	5.8 (6.6)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	VSTD0.5JB	IC 200-6837/2	JBM02.D	09/21/2010	1435
02	VSTD001JB	IC 200-6837/3	JBM03.D	09/21/2010	1503
03	VSTD005JB	ICIS 200-6837/4	JBM04.D	09/21/2010	1531
04	VSTD010JB	IC 200-6837/5	JBM05.D	09/21/2010	1559
05	VSTD020JB	IC 200-6837/8	JBM08.D	09/21/2010	1724

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

EPA SAMPLE NO.
BFBJF

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Lab File Id: JBMD01.D BFB Injection Date: 09/23/2010

Instrument Id: J.i BFB Injection Time: 1514

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 80.0% of mass 95	49.8
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 120% of mass 95	89.8
175	5.0 - 9.0% of mass 174	6.2 (6.9)1
176	95.0 - 101% of mass 174	89.4 (99.5)1
177	5.0 - 9.0% of mass 176	5.8 (6.5)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	VSTD005JF	CCVIS 200-7052/2	JBMD02.D	09/23/2010	1526
02	VBLKJF	MB 200-7052/4	JBMD04.D	09/23/2010	1622
03	BAMW3D-W-28763	200-1626-1	JBMD15.D	09/23/2010	2138
04	BAMW7-W-28768	200-1626-2	JBMD16.D	09/23/2010	2206
05	BAMW155-W-28783	200-1626-3	JBMD17.D	09/23/2010	2234
06	BAOENTRICH-W-28788	200-1626-4	JBMD18.D	09/23/2010	2302
07	BAQCTB-W-28801	200-1626-5	JBMD19.D	09/23/2010	2330
08	VSTD005FJ	CCVC 200-7052/25	JBMD25.D	09/24/2010	0218

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

EPA SAMPLE NO.
BFBJG

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Lab File Id: JBME01.D BFB Injection Date: 09/24/2010

Instrument Id: J.i BFB Injection Time: 0622

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 80.0% of mass 95	51.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.5 (0.6)1
174	50.0 - 120% of mass 95	85.4
175	5.0 - 9.0% of mass 174	6.6 (7.8)1
176	95.0 - 101% of mass 174	84.3 (98.8)1
177	5.0 - 9.0% of mass 176	5.6 (6.7)2

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JG	CCVIS 200-7048/2	JBME02.D	09/24/2010	0641
02	VBLKJG	MB 200-7048/4	JBME04.D	09/24/2010	0737
03	VHBLK01	200-1626-6	JBME05.D	09/24/2010	0814
04	VSTD005GJ	CCVC 200-7048/17	JBME17.D	09/24/2010	1354

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD#####): VSTD005JF Date Analyzed: 09/23/2010

Lab File ID (Standard): JBMD02.D Time Analyzed: 1526

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

		IS1 (CBZ) AREA	#	RT	#	IS2 (DFB) AREA	#	RT	#	IS3 (DCB) AREA	#	RT	#
	12 HOUR STD	581876		8.97		763681		5.59		261228		11.81	
	UPPER LIMIT	814626		9.30		1069153		5.92		365719		12.14	
	LOWER LIMIT	349126		8.64		458209		5.26		156737		11.48	
	EPA SAMPLE NO.												
01	VBLKJF	573613		8.97		757287		5.59		247010		11.80	
02	BAMW3D-W-28763	557255		8.97		749889		5.60		242195		11.80	
03	BAMW7-W-28768	572618		8.97		758359		5.59		241773		11.81	
04	BAMW155-W-28783	564682		8.97		742457		5.60		238258		11.81	
05	BAOENTRICH-W-28788	580095		8.97		764820		5.59		242870		11.81	
06	BAQCTB-W-28801	577924		8.97		756298		5.60		244965		11.81	

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

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

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

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD#####): VSTD005JG Date Analyzed: 09/24/2010

Lab File ID (Standard): JBME02.D Time Analyzed: 0641

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

		IS1 (CBZ) AREA	#	RT	#	IS2 (DFB) AREA	#	RT	#	IS3 (DCB) AREA	#	RT	#
	12 HOUR STD	588298		8.97		772826		5.59		266878		11.80	
	UPPER LIMIT	823617		9.30		1081956		5.92		373629		12.13	
	LOWER LIMIT	352979		8.64		463696		5.26		160127		11.47	
	EPA SAMPLE NO.												
01	VBLKJG	578406		8.97		761685		5.59		248197		11.81	
02	VHBLK01	472414		8.97		632704		5.59		198085		11.80	

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.
BAMW155-W-28783

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-3

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD17.D

Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. _____ Date Analyzed: 09/23/2010

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	2.1	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	1.7	
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

EPA SAMPLE NO.
BAMW155-W-28783

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-3
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD17.D
Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010
% Moisture: not dec. Date Analyzed: 09/23/2010
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	0.033	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.
BAMW155-W-28783

Lab Name: TESTAMERICA BURLINGTON | Contract: 8E-00302

Lab Code: STLV | Case No.: BARNES | Mod. Ref No.: | SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water | Lab Sample ID: 200-1626-3

Sample wt/vol: 25.0 (g/mL) mL | Lab File ID: JBMD17.D

Level: (TRACE or LOW/MED) TRACE | Date Received: 09/21/2010

% Moisture: not dec. | Date Analyzed: 09/23/2010

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	6.93	2.7	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.89	0.73	B J N
03	E9667961	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAMW3D-W-28763

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD15.D

Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. Date Analyzed: 09/23/2010

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	1.3	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.090	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.
BAMW3D-W-28763

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-1
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD15.D
Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010
% Moisture: not dec. Date Analyzed: 09/23/2010
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	0.077	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.076	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	1.3	
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.
BAMW3D-W-28763

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-1

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD15.D

Level: (TRACE or LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. Date Analyzed: 09/23/2010

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	1.68	0.79	B J
02		Unknown	6.93	2.7	B X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.89	1.4	B J N
04		Unknown siloxane derivative	10.72	1.2	B J
05	E9667961	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAMW7-W-28768

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD16.D

Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. Date Analyzed: 09/23/2010

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	2.3	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.16	J
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	0.21	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	1.9	
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

EPA SAMPLE NO.
BAMW7-W-28768

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD16.D

Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. Date Analyzed: 09/23/2010

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	0.067	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.052	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	1.4	
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.
BAMW7-W-28768

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-2

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD16.D

Level: (TRACE or LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. _____ Date Analyzed: 09/23/2010

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	6.93	2.7	B X J
02	E9667961	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAOENTRICH-W-2878

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD18.D

Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. Date Analyzed: 09/23/2010

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	3.6	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.72	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	2.8	
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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD18.D

Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. Date Analyzed: 09/23/2010

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.
BAOENTRICH-W-2878

Lab Name: TESTAMERICA BURLINGTON | Contract: 8E-00302

Lab Code: STLV | Case No.: BARNES | Mod. Ref No.: | SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water | Lab Sample ID: 200-1626-4

Sample wt/vol: 25.0 (g/mL) mL | Lab File ID: JBMD18.D

Level: (TRACE or LOW/MED) TRACE | Date Received: 09/21/2010

% Moisture: not dec. | Date Analyzed: 09/23/2010

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	6.93	2.7	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.89	0.55	B J N
03	E9667961	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

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

EPA SAMPLE NO.
BAQCTB-W-28801

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-5

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD19.D

Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010

% Moisture: not dec. Date Analyzed: 09/23/2010

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	6.2	B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	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

EPA SAMPLE NO.
BAQCTB-W-28801

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302
Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-5
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD19.D
Level: (TRACE/LOW/MED) TRACE Date Received: 09/21/2010
% Moisture: not dec. Date Analyzed: 09/23/2010
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	0.14	J
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.10	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	0.063	J
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	0.043	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	0.037	J
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.
BAQCTB-W-28801

Lab Name: TESTAMERICA BURLINGTON | Contract: 8E-00302

Lab Code: STLV | Case No.: BARNES | Mod. Ref No.: | SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water | Lab Sample ID: 200-1626-5

Sample wt/vol: 25.0 (g/mL) mL | Lab File ID: JBMD19.D

Level: (TRACE or LOW/MED) TRACE | Date Received: 09/21/2010

% Moisture: not dec. | Date Analyzed: 09/23/2010

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	6.93	2.7	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.89	0.58	B J N
03	E9667961	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date(s): 09/21/2010 09/21/2010

Heated Purge: (Y/N) N Calibration Time(s): 1435 1724

Purge Volume: 25.0 (mL)

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

LAB FILE ID: RRF0.5 = JBM02.D RRF1.0 = JBM03.D

RRF5.0 = JBM04.D RRF10 = JBM05.D RRF20 = JBM08.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Dichlorodifluoromethane	0.475	0.484	0.451	0.459	0.442	0.462	3.7
Chloromethane	0.426	0.401	0.361	0.348	0.328	0.373	10.8
Vinyl chloride	0.389	0.404	0.370	0.371	0.352	0.377	5.3
Bromomethane	0.228	0.221	0.198	0.200	0.203	0.210	6.5
Chloroethane	0.166	0.150	0.225	0.233	0.213	0.198	18.7
Trichlorofluoromethane	0.581	0.610	0.583	0.592	0.563	0.586	2.9
1,1-Dichloroethene	0.289	0.290	0.279	0.287	0.280	0.285	1.8
1,1,2-Trichloro-1,2,2-trifluoroethane	0.327	0.337	0.315	0.325	0.326	0.326	2.3
Acetone	0.016	0.016	0.011	0.011	0.011	0.013	21.7
Carbon disulfide	0.861	0.829	0.753	0.773	0.750	0.793	6.2
Methyl acetate	0.033	0.044	0.035	0.035	0.035	0.037	12.0
Methylene Chloride	0.211	0.211	0.215	0.217	0.209	0.213	1.6
trans-1,2-Dichloroethene	0.305	0.311	0.297	0.305	0.297	0.303	2.0
Methyl tert-butyl ether	0.311	0.336	0.321	0.333	0.323	0.325	3.1
1,1-Dichloroethane	0.480	0.528	0.487	0.502	0.481	0.496	4.0
cis-1,2-Dichloroethene	0.286	0.295	0.286	0.291	0.283	0.288	1.7
2-Butanone	0.018	0.020	0.019	0.019	0.019	0.019	4.1
Bromochloromethane	0.084	0.091	0.086	0.085	0.084	0.086	3.4
Chloroform	0.474	0.506	0.467	0.481	0.468	0.479	3.4
1,1,1-Trichloroethane	0.662	0.692	0.668	0.689	0.643	0.671	3.0
Cyclohexane	0.654	0.674	0.663	0.679	0.636	0.661	2.6
Carbon tetrachloride	0.589	0.622	0.610	0.629	0.599	0.610	2.7
Benzene	1.492	1.607	1.562	1.599	1.514	1.555	3.3
1,2-Dichloroethane	0.192	0.196	0.190	0.201	0.192	0.194	2.2
Trichloroethene	0.423	0.428	0.417	0.428	0.399	0.419	2.9
Methylcyclohexane	0.517	0.551	0.536	0.539	0.515	0.532	2.9

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.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Instrument ID: J.i Calibration Date(s): 09/21/2010 09/21/2010

Heated Purge: (Y/N) N Calibration Time(s): 1435 1724

Purge Volume: 25.0 (mL)

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

LAB FILE ID: RRF0.5 = JBM02.D RRF1.0 = JBM03.D

RRF5.0 = JBM04.D RRF10 = JBM05.D RRF20 = JBM08.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
1,2-Dichloropropane	0.262	0.296	0.287	0.301	0.282	0.286	5.2
Bromodichloromethane	0.314	0.351	0.353	0.353	0.344	0.343	4.8
cis-1,3-Dichloropropene	0.394	0.406	0.418	0.433	0.420	0.414	3.5
4-Methyl-2-pentanone	0.056	0.064	0.063	0.066	0.062	0.062	6.4
Toluene	1.605	1.697	1.663	1.702	1.646	1.663	2.4
trans-1,3-Dichloropropene	0.256	0.287	0.295	0.306	0.297	0.288	6.7
1,1,2-Trichloroethane	0.117	0.148	0.145	0.145	0.133	0.138	9.3
Tetrachloroethene	0.368	0.381	0.378	0.384	0.365	0.375	2.2
2-Hexanone	0.051	0.048	0.043	0.044	0.041	0.045	9.7
Dibromochloromethane	0.153	0.178	0.183	0.183	0.186	0.177	7.7
1,2-Dibromoethane	0.120	0.128	0.132	0.135	0.124	0.128	4.6
Chlorobenzene	0.963	1.022	0.976	1.005	0.964	0.986	2.7
Ethylbenzene	1.835	1.939	1.953	2.017	1.966	1.942	3.4
o-Xylene	0.623	0.659	0.679	0.700	0.676	0.667	4.4
m,p-Xylene	0.704	0.742	0.750	0.782	0.752	0.746	3.8
Styrene	0.843	0.908	0.965	1.030	1.002	0.950	7.9
Bromoform	0.174	0.161	0.181	0.165	0.181	0.172	5.3
Isopropylbenzene	1.847	1.942	1.997	2.070	2.014	1.974	4.3
1,1,2,2-Tetrachloroethane	0.114	0.124	0.126	0.126	0.120	0.122	4.3
1,3-Dichlorobenzene	1.498	1.516	1.496	1.507	1.482	1.500	0.9
1,4-Dichlorobenzene	1.507	1.528	1.457	1.468	1.422	1.476	2.8
1,2-Dichlorobenzene	1.040	1.100	1.099	1.114	1.078	1.086	2.7
1,2-Dibromo-3-Chloropropane	0.035	0.036	0.036	0.036	0.034	0.035	3.0
1,2,4-Trichlorobenzene	0.674	0.720	0.684	0.712	0.684	0.695	2.8
1,2,3-Trichlorobenzene	0.429	0.455	0.432	0.456	0.426	0.440	3.4

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date(s): 09/21/2010 09/21/2010

Heated Purge: (Y/N) N Calibration Time(s): 1435 1724

Purge Volume: 25.0 (mL)

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

LAB FILE ID: RRF0.5 = JBM02.D RRF1.0 = JBM03.D

RRF5.0 = JBM04.D RRF10 = JBM05.D RRF20 = JBM08.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	$\overline{RRF}$	%RSD
Vinyl Chloride-d3	0.329	0.374	0.324	0.332	0.313	0.335	6.9
Chloroethane-d5	0.269	0.297	0.274	0.273	0.259	0.274	5.2
1,1-Dichloroethene-d2	0.534	0.546	0.524	0.531	0.512	0.530	2.3
2-Butanone-d5	0.017	0.022	0.020	0.020	0.020	0.020	7.8
Chloroform-d	0.474	0.497	0.471	0.485	0.471	0.480	2.4
1,2-Dichloroethane-d4	0.158	0.155	0.152	0.153	0.148	0.153	2.5
Benzene-d6	1.364	1.461	1.408	1.443	1.373	1.410	3.0
1,2-Dichloropropane-d6	0.373	0.397	0.385	0.337	0.366	0.372	6.1
Toluene-d8	1.321	1.416	1.382	1.436	1.374	1.386	3.2
trans-1,3-Dichloropropene-d4	0.241	0.251	0.259	0.273	0.260	0.257	4.7
2-Hexanone-d5	0.022	0.025	0.024	0.026	0.024	0.024	7.1
1,1,2,2-Tetrachloroethane-d2	0.100	0.119	0.121	0.123	0.117	0.116	8.0
1,2-Dichlorobenzene-d4	0.706	0.698	0.678	0.691	0.676	0.690	1.8

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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/23/2010 Time: 1526

Lab File Id: JBMD02.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005JF Init. Calib. Time(s): 1435 1724

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	0.462	0.479	0.010	3.7	40.0
Chloromethane	0.373	0.374	0.010	0.3	40.0
Vinyl chloride	0.377	0.390	0.010	3.5	30.0
Bromomethane	0.210	0.224	0.100	6.8	30.0
Chloroethane	0.198	0.218	0.010	10.3	40.0
Trichlorofluoromethane	0.586	0.603	0.010	3.0	40.0
1,1-Dichloroethene	0.285	0.290	0.100	1.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.326	0.329	0.010	1.0	40.0
Acetone	0.013	0.012	0.010	-8.1	40.0
Carbon disulfide	0.793	0.791	0.010	-0.3	40.0
Methyl acetate	0.037	0.037	0.010	1.0	40.0
Methylene Chloride	0.213	0.220	0.010	3.3	40.0
trans-1,2-Dichloroethene	0.303	0.301	0.010	-0.5	40.0
Methyl tert-butyl ether	0.325	0.317	0.010	-2.3	40.0
1,1-Dichloroethane	0.496	0.512	0.200	3.2	30.0
cis-1,2-Dichloroethene	0.288	0.296	0.010	2.5	40.0
2-Butanone	0.019	0.019	0.010	-1.0	40.0
Bromochloromethane	0.086	0.086	0.050	0.1	30.0
Chloroform	0.479	0.481	0.200	0.4	30.0
1,1,1-Trichloroethane	0.671	0.686	0.100	2.3	30.0
Cyclohexane	0.661	0.679	0.010	2.7	40.0
Carbon tetrachloride	0.610	0.621	0.100	1.9	30.0
Benzene	1.555	1.585	0.400	2.0	30.0
1,2-Dichloroethane	0.194	0.195	0.100	0.4	30.0
Trichloroethene	0.419	0.427	0.300	2.0	30.0
Methylcyclohexane	0.532	0.545	0.010	2.6	40.0

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

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/23/2010 Time: 1526

Lab File Id: JBMD02.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005JF Init. Calib. Time(s): 1435 1724

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	0.286	0.301	0.010	5.3	40.0
Bromodichloromethane	0.343	0.353	0.200	2.9	30.0
cis-1,3-Dichloropropene	0.414	0.414	0.200	-0.1	30.0
4-Methyl-2-pentanone	0.062	0.062	0.010	-1.1	40.0
Toluene	1.663	1.693	0.400	1.8	30.0
trans-1,3-Dichloropropene	0.288	0.293	0.100	1.4	30.0
1,1,2-Trichloroethane	0.138	0.140	0.100	1.5	30.0
Tetrachloroethene	0.375	0.379	0.100	1.0	30.0
2-Hexanone	0.045	0.040	0.010	-11.2	40.0
Dibromochloromethane	0.177	0.185	0.100	4.6	30.0
1,2-Dibromoethane	0.128	0.127	0.010	-0.4	40.0
Chlorobenzene	0.986	1.001	0.500	1.6	30.0
Ethylbenzene	1.942	1.974	0.100	1.7	30.0
o-Xylene	0.667	0.686	0.300	2.8	30.0
m,p-Xylene	0.746	0.767	0.300	2.8	30.0
Styrene	0.950	1.000	0.300	5.3	30.0
Bromoform	0.172	0.174	0.050	1.3	30.0
Isopropylbenzene	1.974	2.020	0.010	2.3	40.0
1,1,2,2-Tetrachloroethane	0.122	0.121	0.100	-1.3	30.0
1,3-Dichlorobenzene	1.500	1.547	0.400	3.1	30.0
1,4-Dichlorobenzene	1.476	1.475	0.400	-0.1	30.0
1,2-Dichlorobenzene	1.086	1.141	0.400	5.0	30.0
1,2-Dibromo-3-Chloropropane	0.035	0.035	0.010	-2.0	40.0
1,2,4-Trichlorobenzene	0.695	0.701	0.200	1.0	30.0
1,2,3-Trichlorobenzene	0.440	0.452	0.200	2.8	30.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/23/2010 Time: 1526

Lab File Id: JBMD02.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005JF Init. Calib. Time(s): 1435 1724

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	0.335	0.345	0.010	3.1	30.0
Chloroethane-d5	0.274	0.283	0.010	3.3	40.0
1,1-Dichloroethene-d2	0.530	0.524	0.010	-1.1	30.0
2-Butanone-d5	0.020	0.019	0.010	-2.4	40.0
Chloroform-d	0.480	0.494	0.010	3.0	30.0
1,2-Dichloroethane-d4	0.153	0.154	0.010	0.5	30.0
Benzene-d6	1.410	1.446	0.010	2.6	30.0
1,2-Dichloropropane-d6	0.372	0.390	0.010	4.9	40.0
Toluene-d8	1.386	1.401	0.010	1.1	30.0
trans-1,3-Dichloropropene-d4	0.257	0.255	0.010	-0.6	30.0
2-Hexanone-d5	0.024	0.024	0.010	-1.3	40.0
1,1,2,2-Tetrachloroethane-d2	0.116	0.121	0.010	4.4	30.0
1,2-Dichlorobenzene-d4	0.690	0.703	0.010	1.9	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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 0218

Lab File Id: JBMD25.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005FJ Init. Calib. Time(s): 1435 1724

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	0.462	0.455	0.010	-1.6	50.0
Chloromethane	0.373	0.370	0.010	-0.7	50.0
Vinyl chloride	0.377	0.379	0.010	0.5	50.0
Bromomethane	0.210	0.206	0.010	-1.8	50.0
Chloroethane	0.198	0.217	0.010	10.1	50.0
Trichlorofluoromethane	0.586	0.601	0.010	2.5	50.0
1,1-Dichloroethene	0.285	0.293	0.010	2.9	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.326	0.317	0.010	-2.7	50.0
Acetone	0.013	0.012	0.010	-7.0	50.0
Carbon disulfide	0.793	0.783	0.010	-1.3	50.0
Methyl acetate	0.037	0.031	0.010	-15.5	50.0
Methylene Chloride	0.213	0.217	0.010	2.1	50.0
trans-1,2-Dichloroethene	0.303	0.310	0.010	2.4	50.0
Methyl tert-butyl ether	0.325	0.336	0.010	3.3	50.0
1,1-Dichloroethane	0.496	0.517	0.010	4.3	50.0
cis-1,2-Dichloroethene	0.288	0.293	0.010	1.6	50.0
2-Butanone	0.019	0.020	0.010	4.8	50.0
Bromochloromethane	0.086	0.087	0.010	1.2	50.0
Chloroform	0.479	0.489	0.010	2.0	50.0
1,1,1-Trichloroethane	0.671	0.671	0.010	0.0	50.0
Cyclohexane	0.661	0.671	0.010	1.5	50.0
Carbon tetrachloride	0.610	0.618	0.010	1.3	50.0
Benzene	1.555	1.600	0.010	2.9	50.0
1,2-Dichloroethane	0.194	0.199	0.010	2.5	50.0
Trichloroethene	0.419	0.425	0.010	1.4	50.0
Methylcyclohexane	0.532	0.529	0.010	-0.5	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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 0218

Lab File Id: JBMD25.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005FJ Init. Calib. Time(s): 1435 1724

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	0.286	0.300	0.010	4.9	50.0
Bromodichloromethane	0.343	0.362	0.010	5.6	50.0
cis-1,3-Dichloropropene	0.414	0.417	0.010	0.6	50.0
4-Methyl-2-pentanone	0.062	0.065	0.010	3.9	50.0
Toluene	1.663	1.683	0.010	1.2	50.0
trans-1,3-Dichloropropene	0.288	0.300	0.010	4.1	50.0
1,1,2-Trichloroethane	0.138	0.143	0.010	3.9	50.0
Tetrachloroethene	0.375	0.374	0.010	-0.4	50.0
2-Hexanone	0.045	0.041	0.010	-9.1	50.0
Dibromochloromethane	0.177	0.196	0.010	11.2	50.0
1,2-Dibromoethane	0.128	0.131	0.010	2.6	50.0
Chlorobenzene	0.986	0.987	0.010	0.1	50.0
Ethylbenzene	1.942	1.959	0.010	0.9	50.0
o-Xylene	0.667	0.677	0.010	1.5	50.0
m,p-Xylene	0.746	0.766	0.010	2.7	50.0
Styrene	0.950	0.978	0.010	3.0	50.0
Bromoform	0.172	0.191	0.010	10.8	50.0
Isopropylbenzene	1.974	1.960	0.010	-0.7	50.0
1,1,2,2-Tetrachloroethane	0.122	0.129	0.010	5.3	50.0
1,3-Dichlorobenzene	1.500	1.510	0.010	0.7	50.0
1,4-Dichlorobenzene	1.476	1.464	0.010	-0.8	50.0
1,2-Dichlorobenzene	1.086	1.127	0.010	3.7	50.0
1,2-Dibromo-3-Chloropropane	0.035	0.037	0.010	3.9	50.0
1,2,4-Trichlorobenzene	0.695	0.646	0.010	-7.0	50.0
1,2,3-Trichlorobenzene	0.440	0.408	0.010	-7.1	50.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 0218

Lab File Id: JBMD25.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005FJ Init. Calib. Time(s): 1435 1724

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	0.335	0.340	0.010	1.7	50.0
Chloroethane-d5	0.274	0.276	0.010	0.7	50.0
1,1-Dichloroethene-d2	0.530	0.532	0.010	0.4	50.0
2-Butanone-d5	0.020	0.021	0.010	8.2	50.0
Chloroform-d	0.480	0.508	0.010	5.9	50.0
1,2-Dichloroethane-d4	0.153	0.158	0.010	3.3	50.0
Benzene-d6	1.410	1.453	0.010	3.1	50.0
1,2-Dichloropropane-d6	0.372	0.395	0.010	6.1	50.0
Toluene-d8	1.386	1.406	0.010	1.4	50.0
trans-1,3-Dichloropropene-d4	0.257	0.260	0.010	1.2	50.0
2-Hexanone-d5	0.024	0.025	0.010	4.5	50.0
1,1,2,2-Tetrachloroethane-d2	0.116	0.124	0.010	7.2	50.0
1,2-Dichlorobenzene-d4	0.690	0.716	0.010	3.8	50.0

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

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 0641

Lab File Id: JBME02.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005JG Init. Calib. Time(s): 1435 1724

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	0.462	0.513	0.010	11.0	40.0
Chloromethane	0.373	0.382	0.010	2.4	40.0
Vinyl chloride	0.377	0.420	0.010	11.4	30.0
Bromomethane	0.210	0.245	0.100	16.9	30.0
Chloroethane	0.198	0.240	0.010	21.5	40.0
Trichlorofluoromethane	0.586	0.636	0.010	8.5	40.0
1,1-Dichloroethene	0.285	0.304	0.100	6.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.326	0.351	0.010	7.7	40.0
Acetone	0.013	0.012	0.010	-6.8	40.0
Carbon disulfide	0.793	0.859	0.010	8.2	40.0
Methyl acetate	0.037	0.037	0.010	1.1	40.0
Methylene Chloride	0.213	0.232	0.010	8.9	40.0
trans-1,2-Dichloroethene	0.303	0.329	0.010	8.7	40.0
Methyl tert-butyl ether	0.325	0.316	0.010	-2.9	40.0
1,1-Dichloroethane	0.496	0.535	0.200	8.0	30.0
cis-1,2-Dichloroethene	0.288	0.311	0.010	7.8	40.0
2-Butanone	0.019	0.019	0.010	-2.6	40.0
Bromochloromethane	0.086	0.092	0.050	6.4	30.0
Chloroform	0.479	0.504	0.200	5.3	30.0
1,1,1-Trichloroethane	0.671	0.711	0.100	6.1	30.0
Cyclohexane	0.661	0.716	0.010	8.3	40.0
Carbon tetrachloride	0.610	0.655	0.100	7.3	30.0
Benzene	1.555	1.658	0.400	6.6	30.0
1,2-Dichloroethane	0.194	0.201	0.100	3.3	30.0
Trichloroethene	0.419	0.437	0.300	4.4	30.0
Methylcyclohexane	0.532	0.577	0.010	8.5	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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 0641

Lab File Id: JBME02.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005JG Init. Calib. Time(s): 1435 1724

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	0.286	0.315	0.010	10.2	40.0
Bromodichloromethane	0.343	0.374	0.200	9.0	30.0
cis-1,3-Dichloropropene	0.414	0.438	0.200	5.8	30.0
4-Methyl-2-pentanone	0.062	0.061	0.010	-1.5	40.0
Toluene	1.663	1.785	0.400	7.3	30.0
trans-1,3-Dichloropropene	0.288	0.304	0.100	5.4	30.0
1,1,2-Trichloroethane	0.138	0.142	0.100	3.1	30.0
Tetrachloroethene	0.375	0.403	0.100	7.5	30.0
2-Hexanone	0.045	0.039	0.010	-13.6	40.0
Dibromochloromethane	0.177	0.189	0.100	6.9	30.0
1,2-Dibromoethane	0.128	0.127	0.010	-0.4	40.0
Chlorobenzene	0.986	1.026	0.500	4.1	30.0
Ethylbenzene	1.942	2.100	0.100	8.1	30.0
o-Xylene	0.667	0.718	0.300	7.6	30.0
m,p-Xylene	0.746	0.805	0.300	8.0	30.0
Styrene	0.950	1.020	0.300	7.4	30.0
Bromoform	0.172	0.186	0.050	8.1	30.0
Isopropylbenzene	1.974	2.129	0.010	7.8	40.0
1,1,2,2-Tetrachloroethane	0.122	0.123	0.100	0.5	30.0
1,3-Dichlorobenzene	1.500	1.592	0.400	6.1	30.0
1,4-Dichlorobenzene	1.476	1.533	0.400	3.9	30.0
1,2-Dichlorobenzene	1.086	1.170	0.400	7.7	30.0
1,2-Dibromo-3-Chloropropane	0.035	0.034	0.010	-2.8	40.0
1,2,4-Trichlorobenzene	0.695	0.711	0.200	2.3	30.0
1,2,3-Trichlorobenzene	0.440	0.454	0.200	3.3	30.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 0641

Lab File Id: JBME02.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005JG Init. Calib. Time(s): 1435 1724

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	0.335	0.372	0.010	11.1	30.0
Chloroethane-d5	0.274	0.296	0.010	8.1	40.0
1,1-Dichloroethene-d2	0.530	0.564	0.010	6.5	30.0
2-Butanone-d5	0.020	0.019	0.010	-1.8	40.0
Chloroform-d	0.480	0.524	0.010	9.1	30.0
1,2-Dichloroethane-d4	0.153	0.161	0.010	4.7	30.0
Benzene-d6	1.410	1.512	0.010	7.2	30.0
1,2-Dichloropropane-d6	0.372	0.353	0.010	-5.0	40.0
Toluene-d8	1.386	1.473	0.010	6.3	30.0
trans-1,3-Dichloropropene-d4	0.257	0.271	0.010	5.5	30.0
2-Hexanone-d5	0.024	0.023	0.010	-4.1	40.0
1,1,2,2-Tetrachloroethane-d2	0.116	0.119	0.010	2.5	30.0
1,2-Dichlorobenzene-d4	0.690	0.728	0.010	5.5	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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 1354

Lab File Id: JBME17.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005GJ Init. Calib. Time(s): 1435 1724

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	0.462	0.456	0.010	-1.3	50.0
Chloromethane	0.373	0.376	0.010	0.9	50.0
Vinyl chloride	0.377	0.374	0.010	-0.9	50.0
Bromomethane	0.210	0.209	0.010	-0.6	50.0
Chloroethane	0.198	0.215	0.010	9.0	50.0
Trichlorofluoromethane	0.586	0.607	0.010	3.7	50.0
1,1-Dichloroethene	0.285	0.286	0.010	0.4	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.326	0.328	0.010	0.6	50.0
Acetone	0.013	0.012	0.010	-6.6	50.0
Carbon disulfide	0.793	0.777	0.010	-2.1	50.0
Methyl acetate	0.037	0.036	0.010	-2.2	50.0
Methylene Chloride	0.213	0.220	0.010	3.5	50.0
trans-1,2-Dichloroethene	0.303	0.314	0.010	3.8	50.0
Methyl tert-butyl ether	0.325	0.339	0.010	4.2	50.0
1,1-Dichloroethane	0.496	0.520	0.010	4.8	50.0
cis-1,2-Dichloroethene	0.288	0.300	0.010	4.0	50.0
2-Butanone	0.019	0.019	0.010	0.1	50.0
Bromochloromethane	0.086	0.090	0.010	4.5	50.0
Chloroform	0.479	0.498	0.010	3.8	50.0
1,1,1-Trichloroethane	0.671	0.668	0.010	-0.4	50.0
Cyclohexane	0.661	0.664	0.010	0.5	50.0
Carbon tetrachloride	0.610	0.611	0.010	0.1	50.0
Benzene	1.555	1.575	0.010	1.3	50.0
1,2-Dichloroethane	0.194	0.197	0.010	1.4	50.0
Trichloroethene	0.419	0.427	0.010	1.8	50.0
Methylcyclohexane	0.532	0.533	0.010	0.3	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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 1354

Lab File Id: JBME17.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005GJ Init. Calib. Time(s): 1435 1724

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	0.286	0.301	0.010	5.2	50.0
Bromodichloromethane	0.343	0.357	0.010	4.0	50.0
cis-1,3-Dichloropropene	0.414	0.432	0.010	4.2	50.0
4-Methyl-2-pentanone	0.062	0.064	0.010	2.9	50.0
Toluene	1.663	1.670	0.010	0.4	50.0
trans-1,3-Dichloropropene	0.288	0.306	0.010	6.2	50.0
1,1,2-Trichloroethane	0.138	0.140	0.010	2.1	50.0
Tetrachloroethene	0.375	0.368	0.010	-1.9	50.0
2-Hexanone	0.045	0.042	0.010	-8.2	50.0
Dibromochloromethane	0.177	0.185	0.010	4.8	50.0
1,2-Dibromoethane	0.128	0.132	0.010	3.4	50.0
Chlorobenzene	0.986	0.993	0.010	0.7	50.0
Ethylbenzene	1.942	1.951	0.010	0.5	50.0
o-Xylene	0.667	0.685	0.010	2.7	50.0
m,p-Xylene	0.746	0.755	0.010	1.2	50.0
Styrene	0.950	0.967	0.010	1.8	50.0
Bromoform	0.172	0.187	0.010	8.6	50.0
Isopropylbenzene	1.974	1.966	0.010	-0.4	50.0
1,1,2,2-Tetrachloroethane	0.122	0.127	0.010	4.1	50.0
1,3-Dichlorobenzene	1.500	1.515	0.010	1.0	50.0
1,4-Dichlorobenzene	1.476	1.491	0.010	1.0	50.0
1,2-Dichlorobenzene	1.086	1.137	0.010	4.6	50.0
1,2-Dibromo-3-Chloropropane	0.035	0.034	0.010	-3.6	50.0
1,2,4-Trichlorobenzene	0.695	0.687	0.010	-1.1	50.0
1,2,3-Trichlorobenzene	0.440	0.448	0.010	1.9	50.0

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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Instrument ID: J.i Calibration Date: 09/24/2010 Time: 1354

Lab File Id: JBME17.D Init. Calib. Date(s): 09/21/2010 09/21/2010

EPA Sample No.(VSTD####): VSTD005GJ Init. Calib. Time(s): 1435 1724

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	0.335	0.339	0.010	1.4	50.0
Chloroethane-d5	0.274	0.280	0.010	2.1	50.0
1,1-Dichloroethene-d2	0.530	0.534	0.010	0.8	50.0
2-Butanone-d5	0.020	0.021	0.010	7.4	50.0
Chloroform-d	0.480	0.504	0.010	5.0	50.0
1,2-Dichloroethane-d4	0.153	0.160	0.010	4.3	50.0
Benzene-d6	1.410	1.437	0.010	1.9	50.0
1,2-Dichloropropane-d6	0.372	0.389	0.010	4.6	50.0
Toluene-d8	1.386	1.384	0.010	-0.1	50.0
trans-1,3-Dichloropropene-d4	0.257	0.261	0.010	1.5	50.0
2-Hexanone-d5	0.024	0.025	0.010	4.5	50.0
1,1,2,2-Tetrachloroethane-d2	0.116	0.123	0.010	6.2	50.0
1,2-Dichlorobenzene-d4	0.690	0.715	0.010	3.7	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.
VBLKJF

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-7052/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD04.D

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

% Moisture: not dec. Date Analyzed: 09/23/2010

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	3.0	J
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	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.
VBLKJF

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-7052/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD04.D

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

% Moisture: not dec. Date Analyzed: 09/23/2010

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	0.066	J

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

EPA SAMPLE NO.
VBLKJF

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: _____ SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-7052/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBMD04.D

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

% Moisture: not dec. _____ Date Analyzed: 09/23/2010

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	1.68	0.66	J
02		Unknown	6.93	2.8	X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.88	1.9	J N
04		Unknown siloxane derivative	10.72	2.3	J
05	E9667961	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

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

EPA SAMPLE NO.
VBLKJG

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-7048/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBME04.D

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

% Moisture: not dec. Date Analyzed: 09/24/2010

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
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	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

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-7048/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBME04.D

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

% Moisture: not dec. Date Analyzed: 09/24/2010

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	0.084	J

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

EPA SAMPLE NO.
VBLKJG

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302

Lab Code: STLV Case No.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-7048/4

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBME04.D

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

% Moisture: not dec. Date Analyzed: 09/24/2010

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	6.93	2.6	X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.88	1.1	J N
03		Unknown siloxane derivative	10.72	1.2	J
04	E9667961	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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-6

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBME05.D

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

% Moisture: not dec. Date Analyzed: 09/24/2010

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	2.5	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	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.: BARNES Mod. Ref No.: SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-1626-6

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBME05.D

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

% Moisture: not dec. Date Analyzed: 09/24/2010

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.: BARNES | Mod. Ref No.: | SDG No.: 200-1626

Matrix: (SOIL/SED/WATER) Water | Lab Sample ID: 200-1626-6

Sample wt/vol: 25.0 (g/mL) mL | Lab File ID: JBME05.D

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

% Moisture: not dec. | Date Analyzed: 09/24/2010

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	6.93	3.0	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.88	1.4	B J N
03		Unknown siloxane derivative	10.72	1.6	B J
04	E9667961	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

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