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October 31, 2007

347192.CV.03

Mr. William Ryan
Work Assignment Manager (SR-6J)
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3507

Subject: Final Second Quarter Groundwater Report
Oconomowoc Electroplating Company, Inc. Site, Ashippun, Wisconsin
WA No. 003-LRLR-05M8, Contract No. EP-S5-06-01

Dear Mr. Ryan:

Enclosed please find for your review one CD containing the finalized 2007 Second Quarter Groundwater Report for the Oconomowoc Electroplating Company, Inc. Site. Also enclosed are two hardcopy versions of this report, as per your request. This report presents the results of the 2007 second quarter sampling event. Please contact me if you have any questions or concerns at 414-847-0437.

Sincerely,

CH2M HILL

Matt Boekenhauer

Matt Boekenhauer
Site Manager

Enclosures
c: Stephen Nathan, PO/USEPA, Region 5 (w/o enclosure)
Charles Foss, CO/USEPA, Region 5 (w/o enclosure)
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REGION 5 RAC2

REMEDIAL ACTION CONTRACT FOR

Remedial, Enforcement Oversight, and
Non-Time Critical Removal Activities at Sites of Release
or Threatened Release of Hazardous Substances in Region 5

2007 SECOND QUARTER GROUNDWATER REPORT
OECI Site

Oconomowoc, Wisconsin
WA No. 003-LRLR-05M8/Contract No. EP-S5-06-01
October 2007

PREPARED FOR

U.S. Environmental Protection Agency

PREPARED BY

CH2M HILL
Ecology and Environment, Inc.
Environmental Design International, Inc.
Teska Associates, Inc.

FOR OFFICIAL USE ONLY

2007 Second Quarter Groundwater Report – OECI Site

Work Assignment No. 003-LRLR-05M8 / Contract No. EP-S5-06-01

PREPARED FOR: William Ryan/USEPA
Work Assignment Manager (SR-6J)

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DATE: October 30, 2007

PROJECT NUMBER: 347192.CV.03

Introduction

The Oconomowoc Electroplating Company, Inc. (OECI) site is undergoing quarterly groundwater monitoring in accordance with the quality assurance project plan (QAPP) (CH2M HILL 2004), QAPP changes letter (CH2M HILL 2007a), and field sampling plan (FSP) (CH2M HILL 2006).

Quarterly groundwater sampling was conducted at the OECI site in early April 2007 at 26 monitoring wells, 10 private wells, and 1 onsite potable well. In addition, three surface water samples were collected, and water level measurements were obtained from the site monitoring wells. This report presents the results of the 2007 second quarter sampling event and includes tables and figures to present these data.

Site Setting

The 10-acre OECI site comprises the former 4-acre OECI facility located at 2573 Oak Street in Ashippun, Wisconsin, and an additional 6 acres of wet, low-lying area located southwest of the facility (Figures 1 and 2). This low-lying area is referred to in historical and recent project plans as a wetland area. Davy Creek flows through this wetland area. Contaminants of concern (COCs) at this site are primarily chlorinated volatile organic compounds (VOCs), including cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and vinyl chloride. Recently, methyl tertiary butyl ether (MTBE) has been detected in several site wells, but does not appear to be related to historical site activities.

The local geology beneath the site is comprised of Ordovician shale and dolomite bedrock overlain by Quaternary and Holocene unconsolidated deposits of sand, silt, and clay (Figure 3). Groundwater monitoring wells are installed at the site in the shallow and deep portions of the unconsolidated deposits, and within the upper bedrock. Nested wells are

installed in the unconsolidated deposits, with the shallow wells monitoring the upper "water table" portion of the aquifer (shallow unconsolidated aquifer) and deeper wells monitoring the lower portion of this aquifer (deep unconsolidated aquifer). Monitoring wells also are installed in the bedrock aquifer (Figure 3). Private wells at the site are located in the uppermost water-bearing portions of the underlying shale and dolomite bedrock. A more detailed description of the site's history and geology is in the 2007 *Annual Groundwater Report and Evaluation of Monitored Natural Attenuation* (CH2M HILL 2007b).

Field Activities

The purpose of each groundwater sampling event is to monitor groundwater contaminant concentrations and natural attenuation parameters in order to assess the effectiveness of natural attenuation at site. Parameters analyzed include alkalinity, ammonia (surface water only), chloride, dissolved gases (methane, ethane, and ethene), total and dissolved iron and manganese, nitrate, orthophosphate (surface water only), sulfate, sulfide, total organic carbon, and VOCs. Groundwater level measurements also were collected during this sampling event to assess groundwater flow directions in the shallow unconsolidated, deep unconsolidated, and bedrock aquifers.

Water Level Measurements

Groundwater levels in 34 site monitoring wells, with the exception of wells MW-14D and MW-16S, were measured on April 2, 2007. Monitoring well MW-14D could not be accessed due to recent road construction, which buried the well under several inches of gravel and clean fill. Attempts to located MW-14D with a metal detector and shovels were unsuccessful. Monitoring well MW-16S could not be accessed on April 2, 2007, due to high water levels in Davy Creek, but was able to be accessed and measured on April 6, 2007. All water levels were collected in accordance with FSP field operating procedure (FOP) 2—*Groundwater Level Measurements* (CH2M HILL 2006). The three staff gages along Davy Creek could not be accessed for measurement due to high water levels in the creek and wetland area. Table 1 contains a summary of the water levels collected.

Shallow Unconsolidated Aquifer

Groundwater levels in 16 shallow monitoring wells were used to generate a water table elevation map for the shallow unconsolidated aquifer (Figure 4). The apparent groundwater flow direction in this aquifer is primarily toward Davy Creek to the southwest. Vertical gradients between the shallow and deep unconsolidated aquifers are generally downward near the facility and upward at well nests located within the wetland area near Davy Creek. Vertical gradients between the shallow unconsolidated aquifer and bedrock vary across the site, with downward gradients at MW-3S and MW-4S, and upward gradients at MW-1S and MW-101B. Table 2 contains a summary of the calculated vertical gradients.

Deep Unconsolidated Aquifer

Groundwater levels in 10 deep monitoring wells were used to generate a potentiometric surface map for the deep unconsolidated aquifer (Figure 5). The apparent groundwater flow direction in the deep unconsolidated aquifer also is toward Davy Creek to the southwest. Vertical gradients between the deep unconsolidated aquifer and bedrock vary across the

site, with downward gradients at MW-15D and MW-105D, and an upward gradient at MW-12D.

Bedrock Aquifer

Groundwater levels in eight bedrock monitoring wells were used to generate a potentiometric surface map for the bedrock aquifer (Figure 6). The apparent groundwater flow direction in the bedrock is generally to the west and southwest. Bedrock groundwater elevations appear to be the highest near the facility. The residential subdivision west of the site includes a number of actively pumped private wells that may contribute to the horizontal gradient toward the west.

Sampling Activities and Results

Sampling and analysis was completed in accordance with the FSP (CH2M HILL 2006). All wells were purged and sampled as described in FOP No. 1—*Low Flow Groundwater Sampling Procedures* (CH2M HILL 2006). Groundwater field parameters were monitored with a multimeter during well purging. The wells were purged continuously until monitored field parameters stabilized within the limits specified in FOP No. 1—*Low Flow Groundwater Sampling Procedures* (CH2M HILL 2006). Samples were collected immediately following the stabilization of groundwater field parameters. Procedures for field filtering groundwater samples were followed according to FOP No. 5—*Field Filtering Samples* (CH2M HILL 2006). Samples were processed, packaged, and shipped to the laboratory on the day of collection. Between sampling locations, nondedicated sampling equipment was decontaminated following FOP No. 6—*Field Sampling Equipment Decontamination* (CH2M HILL 2006).

Private well locations were sampled as part of the second quarter compliance monitoring in accordance with FOP No. 10—*Private Residential Well Groundwater Sampling Procedures* (CH2M HILL 2006), with the exception of field parameter collection. Due to the variable nature of access points for private well sampling, and the various treatment sequences of these wells, field parameters cannot be used as an indication of proper purging prior to sample collection. Private well taps were opened for 10 to 15 minutes prior to sampling. Each sample was collected from a tap before any aesthetic water conditioning occurred.

Surface water locations were sampled for both regulatory compliance and natural attenuation parameters. Surface water samples were collected in accordance with FOP No. 9—*Surface Water Sampling Procedures* (CH2M HILL 2006). A sample was collected from each of Davy Creek's three staff gage locations, where an adequate volume of non-stagnant water was available.

Monitoring Well Results

Groundwater from 22 monitoring wells was collected and sampled for both natural attenuation and regulatory compliance parameters (VOCs). Groundwater was collected from four monitoring "sentinel" wells (MW-106S/D and MW-107S/D) and analyzed for regulatory compliance parameters only (VOCs). Table 3 contains a summary of the results from the groundwater collected at these monitoring wells. It should be noted that sentinel well MW-107D (screened in the deep unconsolidated aquifer), located on the south side of

Davy Creek, had an unconfirmed detection of cis-1,2-DCE (0.12 micrograms per liter [µg/L]). This is the first VOC detection at any sentinel well onsite.

Figures 7 through 12 present the distribution and magnitude of site COC concentrations within each aquifer unit, relative to Wisconsin Administrative Code NR 140 preventive action limits (PAL) and enforcement standards (ES). Groundwater PAL and ES exceedances of COCs in the shallow and deep unconsolidated aquifers are generally located beneath the facility (MW-5D, MW-103S, and MW-103D) or immediately downgradient to the southwest (MW-12S, MW-12D, MW-13S, MW-13D, MW-16S, MW-105S, MW-105D). Groundwater at crossgradient deep monitoring wells MW-15D and MW-102D also has been identified to contain ES or PAL exceedances (an ES exceedance for vinyl chloride at MW-15, and PAL exceedances of cis-1,2-DCE, TCE, and vinyl chloride at MW-102D). In the bedrock aquifer, groundwater at two monitoring well locations contains vinyl chloride concentrations that exceed the PAL (upgradient wells MW-1D and MW-3D). In the bedrock monitoring wells, no other COCs were identified that exceed the PAL or ES.

Based on the concentrations of analytical natural attenuation and field parameters collected (favorable oxidation-reduction potential conditions and elevated concentrations of sulfate, chloride, dissolved gases, and total/dissolved iron and manganese), natural attenuation continues occurring most favorably in the shallow and deep unconsolidated wells located in the wetland. A further assessment of the natural attenuation and VOC concentrations across the site will be provided in the next annual report, generated following completion of the four quarterly rounds of sampling conducted during 2007.

Private Well Results

Groundwater from 10 private wells and one onsite potable well was collected and sampled for regulatory compliance parameters (VOCs). Table 4 contains a summary of the results from the samples collected at these wells. Figures 11 and 12 show the distribution and magnitude of the detections of site COCs in bedrock. In the bedrock aquifer, vinyl chloride was detected at concentrations exceeding the PAL at three private wells (PW-07, PW-08, and PW-09). No other COCs were identified that exceed the PAL or ES in the bedrock private wells; however, low-level detections of 1,2-dichloroethane (1,2-DCA), cis-1,2-DCE, MTBE, trans-1,2-DCE, and TCE also were detected in several private wells at concentrations below the PAL.

Surface Water Results

Surface water from three locations along Davy Creek was collected and sampled for both natural attenuation (including ammonia and orthophosphate) and regulatory compliance parameters (VOCs). Table 4 contains a summary of the results from the samples collected at these locations. It should be noted that low concentrations of 1,1,1-TCE, 1,1-DCA, cis-1,2-DCE, TCE, and vinyl chloride were detected at the downstream sampling location SW-03 (near staff gage SG-3). The detections are consistent with those observed during the January 2007, first quarter sampling event at SW-03. As stated in the 2007 *Annual Groundwater Report and Evaluation of Monitored Natural Attenuation* (CH2M HILL 2007b), these contaminants are not expected to be the result of the site for two reasons: (1) these VOCs would not be expected to persist in a flowing surface water body and be detected 800 to 1,000 feet downgradient from the site, and (2) this suite of VOCs has not been

detected in the groundwater sentinel monitoring wells (MW-106S and MW-106D) upgradient from Davy Creek and staff gage location SW-03.

Data Management

U.S. Environmental Protection Agency (USEPA) software Forms II Lite 5.1 was used in the field to enter field sample data and create chain-of-custody forms. The USEPA copies of the chains-of-custody were used to enter sample information into the sample tracking spreadsheet. Upon receipt of the samples, the laboratory transmitted an electronic sample receipt to CH2M HILL, which was then compared to the chain-of-custody and entered into the sample tracking spreadsheet. On April 25, 2007, the laboratory provided CH2M HILL with an electronic data deliverable (EDD), one hard copy package, and a portable document format (.pdf) electronic file of the data package. All laboratory data were sent to USEPA for validation on April 25, 2007. Following USEPA data validation, a CH2M HILL project chemist reviewed the validation summaries, and the qualifiers were entered into the EQuIS database for use in this quarterly groundwater report. CH2M HILL's data usability memorandum for this April 2007 data is included in Appendix A.

Summary and Recommendations

The 2007 second quarter sampling event was conducted at the OECI site in April 2007. Twenty-six monitoring wells, ten private wells, one onsite potable well, and three surface water locations were sampled during this event. Groundwater elevations determined from water level measurements collected indicate that the apparent groundwater flow direction in the shallow and deep unconsolidated aquifers is toward Davy Creek to the southwest. Groundwater elevations in the bedrock aquifer indicate that the apparent groundwater flow direction is to the west and southwest, toward the residential subdivision where the bedrock aquifer is actively pumped by private wells.

Groundwater analytical results indicate that COCs are present across the site at concentrations exceeding the PAL and/or ES, and that natural attenuation conditions remain favorable. PAL and ES exceedances of COCs in the shallow and deep unconsolidated aquifers are located beneath the facility (MW-5D, MW-103S, and MW-103D), immediately downgradient to the southwest (MW-12S, MW-12D, MW-13S, MW-13D, MW-16S, MW-105S, MW-105D), or crossgradient to the west (MW-15D and MW-102D). In the bedrock aquifer, vinyl chloride was detected at concentrations exceeding the PAL at two monitoring wells (upgradient wells MW-1D and MW-3D) and three private wells (PW-07, PW-08, and PW-09). No other COCs were identified that exceed the PAL or ES in the bedrock private wells; however, low-level detections of 1,2-DCA, cis-1,2-DCE, MTBE, trans-1,2-DCE, and TCE also were detected in several private wells at concentrations below the PAL. The continued presence of chlorinated VOCs along with MTBE in several cross- and upgradient wells seems to indicate that the site is not the source for these contaminants.

Monitoring well MW-14D was inaccessible due to local road construction activities. Discussion regarding the future status of this well should be considered, as it is believed to still be a functional monitoring point if it can be uncovered. If the well is now damaged or

broken, proper well abandonment per Wisconsin Administrative Code NR 141 should be completed. Heavy equipment may be required to accomplish this task.

It is recommended that monitoring for both regulatory compliance and natural attenuation parameters at the same group of wells (both monitoring and private) continue at this time. The next quarterly monitoring event is scheduled for late June 2007.

References

CH2M HILL. 2004. *Quality Assurance Project Plan, Oconomowoc Electroplating, Oconomowoc, Wisconsin.* WA No. 236-RALR-05M8 Contract No. 68-W6-0025.

CH2M HILL. 2006. *Field Sampling Plan, Oconomowoc Electroplating, Oconomowoc, Wisconsin.* WA No. 003-LRLR-05MS Contract No. EP-SS-06-01, December.

CH2M HILL. 2007a. *Quality Assurance Project Plan Changes, Oconomowoc Electroplating, Ashippun, Wisconsin, Long Term Remedial Action.* WA No. 003-LRLR-05MS Contract No. EP-SS-06-01. January.

CH2M HILL. 2007b. *Annual Groundwater Report and Evaluation of Monitored Natural Attenuation.* WA No. 003-LRLR-05MS Contract No. EP-SS-06-01. May.

Tables

TABLE 1
Groundwater Elevations--April 2007
2007 2nd Quarter Groundwater Report
OECI Site

Well ID	Top of Casing (TOC) Elevation (ft amsl)	Groundwater Depth (measured from TOC)	Groundwater Elevation April 2007 (ft amsl)	Well Screen Formation
MW-1S	853.42	5.83	847.59	Shallow Unconsolidated
MW-1D	853.14	4.51	848.63	Upper Bedrock
MW-2D	852.36	3.87	848.49	Upper Bedrock
MW-3S	853.39	4.39	849.00	Shallow Unconsolidated
MW-3D	853.51	5.97	847.54	Upper Bedrock
MW-4S	854.58	5.55	849.03	Shallow Unconsolidated
MW-4D	854.63	6.15	848.48	Upper Bedrock
MW-5	849.07	Broken	--	Shallow Unconsolidated
MW-5D	848.80	1.80	847.00	Deep Unconsolidated
MW-9S	851.57	4.18	847.39	Shallow Unconsolidated
MW-12S	849.17	3.29	845.88	Shallow Unconsolidated
MW-12D	848.31	1.31	847.00	Deep Unconsolidated
MW-12B	849.40	2.01	847.39	Upper Bedrock
MW-13S	850.91	4.21	846.70	Shallow Unconsolidated
MW-13D	850.02	3.03	846.99	Deep Unconsolidated
MW-14D	850.58	Buried-inaccessible	--	Deep Unconsolidated
MW-15S	854.68	7.04	847.64	Shallow Unconsolidated
MW-15D	855.30	7.93	847.37	Deep Unconsolidated
MW-15B	854.35	16.35	838.00	Upper Bedrock
MW-16S[a]	847.90	2.12	845.78	Shallow Unconsolidated
MW-101S	851.24	2.45	848.79	Shallow Unconsolidated
MW-101B	851.08	3.50	847.58	Upper Bedrock
MW-102S	853.65	5.87	847.78	Shallow Unconsolidated
MW-102D	853.70	6.33	847.37	Deep Unconsolidated
MW-103S	851.84	4.42	847.42	Shallow Unconsolidated
MW-103D	851.97	4.57	847.40	Deep Unconsolidated
MW-104S	850.56	3.34	847.22	Shallow Unconsolidated
MW-104D	850.57	3.28	847.29	Deep Unconsolidated
MW-105S	849.01	2.77	846.24	Shallow Unconsolidated
MW-105D	848.90	1.88	847.02	Deep Unconsolidated
MW-105B	848.90	2.09	846.81	Upper Bedrock
MW-106S	848.92	2.83	846.09	Shallow Unconsolidated
MW-106D	849.01	1.88	847.13	Deep Unconsolidated
MW-107S	848.66	2.26	846.40	Shallow Unconsolidated
MW-107D	848.64	1.70	846.94	Deep Unconsolidated

ft amsl = feet above mean sea level

[a]MW-16S depth to groundwater collected April 6, 2007; all other groundwater depths collected April 2, 2007.

TABLE 2
Vertical Gradient Summary - April 2007
2007 2nd Quarter Groundwater Report
OECI Site

Well Nest	Screen Midpoint Shallow	Screen Midpoint Deep	Screen Midpoint Bedrock	GW Elev. Shallow - April 2007	GW Elev. Deep - April 2007	Unconsolidated (Shallow to Deep) Vertical Gradient (ft/ft)	GW Elev. Unconsolidated - April 2007	GW Elev. Bedrock - April 2007	Unconsolidated to Bedrock Vertical Gradient (ft/ft)
1	842.62		806.04				847.59	848.63	-0.0284
3	844.59		810.51				849.00	847.54	0.0428
4	844.78		809.73				849.03	848.48	0.0157
5	841.07	825.30				NA			
12	841.17	827.81	810.90	845.88	847.00	-0.084	847.00	847.39	-0.023
13	842.91	823.52		846.70	846.99	-0.015			
15	843.18	818.30	799.35	847.64	847.37	0.011	847.37	838.00	0.494
101	843.24		804.58				848.79	847.58	-0.002
102	842.65	807.20		847.78	847.37	0.012			
103	842.84	830.47		847.42	847.40	0.002			
104	840.56	825.07		847.22	847.29	-0.005			
105	841.01	824.40	807.40	846.24	847.02	-0.047	847.02	846.81	0.012
106	838.92	797.51		846.09	847.13	-0.025			
107	835.62	818.24		846.40	846.94	-0.031			

Note; Negative values for vertical gradients indicate upward movement. Positive values indicate downward movement.
NA = Not Available
All elevations in feet above mean sea level

TABLE 3
Monitoring Well Field and Analytical Results—April 2007
2007 2nd Quarter Groundwater Report
OECI Site

Constituent	Units	WAC NR 140 PAL	WAC NR 140 ES	MW-1S	MW-1D	MW-3D	MW-4S	MW-4D	MW-5D	MW-12B	MW-12S	MW-12D	MW-13S	MW-13D
Field Parameters														
Dissolved Oxygen (DO)	mg/L			0.80	0.72	5.21	1.00	1.61	2.31	0.79	2.32	3.46	1.27	0.40
Oxidation Reduction Potential (ORP)	millivolts			23.6	-107.2	-71.9	79.5	-76.8	-71.0	-107.9	19.8	-62.7	115.6	-56.4
pH	pH units			6.93	7.28	7.39	6.09	7.22	7.11	7.57	7.61	7.53	5.95	7.03
Specific Conductivity	mmhos/cm			0.981	0.636	1.022	1.406	1.09	1.16	1.071	1.333	1.324	0.891	0.994
Temperature	deg c			7.73	9.93	10.92	7.38	10.82	6.73	7.88	6.53	7.47	5.82	8.20
Depth to water	feet			5.83	4.51	5.91	5.55	6.15	1.80	2.01	3.29	1.31	4.21	3.03
Natural Attenuation Parameters														
Alkalinity, total (as CaCO3)	mg/L	N/A	N/A	390	350	350	660	340	400	350	450	410	330	370
Chloride (as Cl)	mg/L	125	250	70	7.9	110	31	**130**	**140**	**150**	**180**	**180**	82	110
Ethane	µg/L	N/A	N/A	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	1.6 U	0.4 U	0.4 U	0.4 U
Ethene	µg/L	N/A	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U
Iron, total	µg/L	150	300	**330 J**	**1,500 J**	**844 J**	**285 J**	**4,850**	**3,170 J**	**508 J**	60.5 J+	**1,030 J**	82.4 J	**1,260 J**
Iron, dissolved	µg/L	150	300	142 J	**523 J**	**875 J**	112 J	**1,120**	**1,970**	**506 J**	15.3 J	**926 J**	10 R	**588 J**
Manganese, total	µg/L	25	50	**135**	**80**	15	**166**	**204**	**60.1**	**26.9**	**103**	**28.4**	6.2 J	**25.9**
Manganese, dissolved	µg/L	25	50	**122**	**80.2**	12	**142**	**70.2**	**61.9**	**30.3**	**113**	**32.3**	4.7 J	**28.4**
Methane	µg/L	N/A	N/A	4.2	920	55	1.2 U	20	38	80	9.8	27 J	0.57 U	12
Nitrogen, nitrate (as N)	mg/L	2	10	0.33	0.06 U	0.38	1.6	1.2	0.06 U	0.4	0.06 U	0.06 U	**3.6**	0.06 U
Sulfate (as SO4)	mg/L	125	250	55	0.8 U	40	120	44	50	35	56	78	40	65
Sulfide	mg/L	N/A	N/A	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Total Organic Carbon	mg/L	N/A	N/A	1.3 J	0.92 J	0.91 J	8.9 J	1.5 J	1.5 J	0.93 J	3.9 J	3.4 J	1.4 J	1.8 J
VOCs														
1,1,1-Trichloroethane	µg/L	40	200	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	2 U	0.04 UJ	**86**	3.3	0.43 U	0.04 U
1,1,2,2-Tetrachloroethane	µg/L	0.02	0.2	0.018 U	0.018 U	0.018 U	0.018 U	0.018 UJ	**0.9 U**	0.018 U	**0.36 U**	**0.09 U**	0.018 U	0.018 U
1,1,2-Trichloroethane	µg/L	0.5	5	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	**2 U**	0.04 U	**0.8 U**	0.2 U	0.04 U	0.04 U
1,1-Dichloroethane	µg/L	85	850	0.06 U	0.06 U	0.06 U	0.06 U	0.06 UJ	12	0.06 U	54	16	0.11 J	0.06 U
1,1-Dichloroethene	µg/L	0.7	7	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	**2 U**	0.04 U	**15**	0.49 J	0.04 U	0.04 U
1,2,3-Trichlorobenzene	µg/L	N/A	N/A	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	4 U	0.08 U	1.6 U	0.4 U	0.08 U	0.08 U
1,2,4-Trichlorobenzene	µg/L	14	70	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	5 U	0.1 U	2 U	0.5 U	0.1 U	0.1 U
1,2-Dibromo-3-chloropropane	µg/L	0.02	0.2	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**2 U**	**0.04 U**	**0.8 U**	**0.2 U**	**0.04 U**	**0.04 U**
1,2-Dibromoethane	µg/L	0.5	5	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	**1.5 U**	0.03 U	**0.6 U**	0.15 U	0.03 U	0.03 U
1,2-Dichlorobenzene	µg/L	60	600	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	2 U	0.04 U	0.8 U	0.2 U	0.04 U	0.04 U
1,2-Dichloroethane	µg/L	0.5	5	0.03 U	0.03 U	0.03 U	0.03 U	0.03 UJ	**1.5 U**	0.03 U	**0.6 U**	0.15 U	0.03 U	0.03 U
1,2-Dichloropropane	µg/L	0.5	5	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	**2.5 U**	0.05 U	**1 U**	0.25 U	0.05 U	0.05 U
1,3-Dichlorobenzene	µg/L	125	1,250	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
1,4-Dichlorobenzene	µg/L	15	75	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	3 U	0.06 U	1.2 U	0.3 U	0.06 U	0.06 U
2-Butanone	µg/L	N/A	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	25 U	0.5 U	10 U	2.5 U	0.5 U	0.5 U
2-Hexanone	µg/L	N/A	N/A	0.8 U	0.8 U	0.8 U	0.8 U	0.8 UJ	40 U	0.8 UJ	16 UJ	4 U	0.8 UJ	0.8 UJ
4-Methyl-2-pentanone	µg/L	N/A	N/A	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ	20 U	0.4 UJ	8 UJ	2 U	0.4 UJ	0.4 UJ
Acetone	µg/L	200	1,000	1.3 U	1.3 U	1.3 U	1.3 U	1.3 UJ	65 U	1.3 UJ	26 UJ	6.5 UJ	1.3 UJ	1.3 UJ
VOCs Continued														
Benzene	µg/L	0.5	5	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	**2 U**	0.04 U	**0.8 U**	0.2 U	0.04 U	0.04 U
Bromochloromethane	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
Bromodichloromethane	µg/L	0.06	0.6	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	**2.2 J**	0.04 U	**0.8 U**	**0.2 U**	0.04 U	0.04 U
Bromoform	µg/L	0.44	4.4	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	**2 U**	0.04 U	**0.8 U**	0.2 U	0.04 U	0.04 U
Bromomethane	µg/L	1	10	0.06 UJ	0.06 UJ	0.06 U	0.06 UJ	0.06 UJ	**3 UJ**	0.06 U	**1.2 U**	0.3 U	0.06 U	0.06 U
Carbon disulfide	µg/L	200	1,000	0.1 U	0.1 U	0.1 U	0.1 U	0.1 UJ	5 U	0.1 U	2 U	0.5 U	0.1 U	0.1 U
Carbon tetrachloride	µg/L	0.5	5	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	**2 U**	0.04 U	**0.8 U**	0.2 U	0.04 U	0.04 U
Chlorobenzene	µg/L	N/A	N/A	0.06 U	0.06 U	0.06 U	0.06 U	0.06 UJ	3 U	0.06 U	1.2 U	0.3 U	0.06 U	0.06 U
Chloroethane	µg/L	80	400	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
Chloroform	µg/L	0.6	6	0.04 U	0.04 U	0.04 U	0.04 U	0.04 UJ	**2 U**	0.04 U	**0.8 U**	0.2 U	0.04 U	0.04 U
Chloromethane	µg/L	0.3	3	0.1 U	0.15 U	0.05 U	0.05 U	0.099 UJ	**2.5 U**	0.05 U	**1 U**	0.25 U	0.05 U	0.14 U
cis-1,2-Dichloroethene	µg/L	7	70	0.32	0.03 U	0.084 J	0.03 U	0.03 UJ	**90**	0.03 U	**34**	5.7	0.49	0.75
cis-1,3-Dichloropropene	µg/L	0.02	0.2	0.017 U	0.017 U	0.017 U	0.017 U	0.017 UJ	**0.85 U**	0.017 U	**0.34 U**	**0.085 U**	0.017 U	0.017 U
Dibromochloromethane	µg/L	6	60	0.029 U	0.029 U	0.029 U	0.029 U	0.029 UJ	1.5 U	0.029 U	0.58 U	0.15 U	0.029 U	0.029 U
Dichlorodifluoromethane	µg/L	200	1,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
Ethylbenzene	µg/L	140	700	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
Isopropylbenzene	µg/L	N/A	N/A	0.05 U	0.067 J	0.05 U	0.05 U	0.05 UJ	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
m,p,-Xylene (sum of isomers)	µg/L	1,000	10,000	0.09 U	0.09 U	0.09 U	0.09 U	0.09 UJ	4.5 U	0.09 U	1.8 U	0.45 U	0.09 U	0.09 U
Methyl tert-butyl ether	µg/L	12	60	0.17	0.05 U	0.16	0.05 U	2 J	2.5 U	0.05 U	1 U	0.33 J	0.05 U	0.53
Methylene chloride	µg/L	0.5	5	0.15 R	0.15 R	0.15 UJ	0.15 R	0.15 R	**25 J**	0.15 R	**3 R**	**0.75 R**	0.15 R	0.15 R
o-Xylene	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
Styrene	µg/L	10	100	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	2.5 U	0.05 U	1 U	0.25 UJ	0.05 U	0.05 U
Tetrachloroethene	µg/L	0.5	5	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	**2.5 U**	0.05 U	**1 U**	0.25 U	0.057 J	0.05 U
Toluene	µg/L	200	1,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	2.5 U	0.05 U	1 U	0.25 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	µg/L	20	100	0.06 U	0.06 U	0.06 U	0.06 U	0.06 UJ	6.2 J	0.06 U	18	1	0.06 U	0.06 U
trans-1,3-Dichloropropene	µg/L	0.02	0.2	0.019 U	0.019 U	0.019 U	0.019 U	0.019 UJ	**0.95 U**	0.019 U	**0.38 U**	**0.095 U**	0.019 U	0.019 U
Trichloroethene	µg/L	0.5	5	0.16 J	0.05 U	0.05 U	0.05 U	0.05 UJ	**180**	0.05 U	**110**	**2.1**	**1.4**	0.05 U
Vinyl chloride	µg/L	0.02	0.2	0.018 U	**0.06 J**	**0.023 J**	0.018 U	0.018 UJ	**1.4 J**	0.018 U	**1.3**	**0.5**	0.018 U	**0.043 J**

J indicates that the value was between the method detection limit and the limit of quantitation and, therefore, is estimated.
U indicates that the constituent was not detected above the method detection limit.
UJ indicates that the constituent was not detected above the estimated method detection limit.
UB indicates that the constiuent is considered to be below the detection limit listed due to blank contamination.
Bolded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Preventive Action Limit (PAL).
Shaded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Enforcement Standard (ES).

TABLE 3

Monitoring Well Field and Analytical Results---April 2007

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OECI Site

Constituent	Units	WAC NR 140 PAL	WAC NR 140 ES	MW-15B	MW-15S	MW-15D	MW-16S	MW-101B	MW-102D	MW-103S	MW-103D	MW-105B	MW-105S	MW-105D
Field Parameters														
Dissolved Oxygen (DO)	mg/L			2.59	7.16	0.56	5.23	1.13	2.63	1.34	1.32	0.67	1.1	1.68
Oxidation Reduction Potential (ORP)	millivolts			-21.3	82.5	64.4	-46.5	35.4	330.0	820.0	101.5	-74.7	-39.3	-38.8
pH	pH units			7.12	7.53	7.04	6.58	7.12	7.57	6.72	7.02	7.22	6.94	7.01
Specific Conductivity	mmhos/cm			0.835	0.592	1.360	3.722	1.022	1.453	1.378	1.318	0.999	1.626	1.379
Temperature	deg c			7.75	7.06	9.96	6.55	10.32	9.98	6.73	11.03	5.92	5.9	7.44
Depth to water	feet			16.35	7.04	7.93	2.12	3.50	6.33	4.42	4.57	2.09	2.77	1.88
Natural Attenuation Parameters														
Alkalinity, total (as CaCO3)	mg/L	N/A	N/A	380	250	360	830	360	450	500	410	360	430	420
Chloride (as Cl)	mg/L	125	250	27	46	**210**	**270**	110	**190**	120	**150**	**130**	**250**	**180**
Ethane	µg/L	N/A	N/A	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	1.3 J	0.4 U
Ethene	µg/L	N/A	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Iron, total	µg/L	150	300	**251 J**	39 UJ	39 UJ	**8,300 J**	67 J	**7,430 J**	58.5 J	39 UJ	**362 J**	**7,260**	**1,340 J**
Iron, dissolved	µg/L	150	300	**218 J**	10 UJ	10 UJ	**8,320 J**	10 UJ	**1,280 J**	31.4 J	10 R	**345 J**	**1,100**	**1,450**
Manganese, total	µg/L	25	50	**811**	3.2 J	**312**	**74.2**	**96.7**	**64**	**332**	**267**	**1,030**	**194**	**58.1**
Manganese, dissolved	µg/L	25	50	**864**	0.64 J+	**314**	**77.4**	**92.3**	**45.5**	**360**	**284**	**1,040**	**194**	**64.8**
Methane	µg/L	N/A	N/A	610	0.25 U	2.9	38	58	9.5	29	20	370	260	58
Nitrogen, nitrate (as N)	mg/L	2	10	0.06 U	1.2	1.7	0.06 U	0.06 U	0.06 U	0.75	0.06 U	0.3	0.06 U	0.06 U
Sulfate (as SO4)	mg/L	125	250	70	15	46	**1,400**	52	110	88	39	17	53	72
Sulfide	mg/L	N/A	N/A	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Total Organic Carbon	mg/L	N/A	N/A	1.3 J	1.7 J	2.1 J	4 J	1.2 J	2.4 J	7 J	3.1 J	1.7 J	3.5 J	4.7 J
VOCs														
1,1,1-Trichloroethane	µg/L	40	200	0.04 U	0.072 J	0.04 U	8 U	0.04 U	0.04 UJ	**98**	**210**	0.04 U	2.2 J	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.02	0.2	0.018 U	0.018 U	0.018 U	**3.6 U**	0.018 U	0.018 U	**0.36 U**	**1.8 U**	0.018 U	**0.45 U**	**0.09 U**
1,1,2-Trichloroethane	µg/L	0.5	5	0.04 U	0.04 U	0.04 U	**8 U**	0.04 U	0.04 U	**0.8 U**	**4 U**	0.04 U	**1 U**	0.2 U
1,1-Dichloroethane	µg/L	85	850	0.06 U	0.06 U	0.063 J	12 U	0.06 U	0.06 U	5.2	14 J	0.06 U	65	6.7
1,1-Dichloroethene	µg/L	0.7	7	0.04 U	0.04 U	0.13 J	**8 U**	0.04 U	0.085 J	**2 J**	**15**	0.04 U	**15**	**1.4**
1,2,3-Trichlorobenzene	µg/L	N/A	N/A	0.08 U	0.08 U	0.08 U	16 U	0.08 U	0.08 U	1.6 U	8 U	0.08 U	2 U	0.4 U
1,2,4-Trichlorobenzene	µg/L	14	70	0.1 U	0.1 U	0.1 U	**20 U**	0.1 U	0.1 U	2 U	10 U	0.1 U	2.5 U	0.5 U
1,2-Dibromo-3-chloropropane	µg/L	0.02	0.2	**0.04 U**	**0.04 U**	**0.04 U**	**8 U**	**0.04 U**	**0.04 U**	**0.8 U**	**4 U**	**0.04 U**	**1 U**	**0.2 U**
1,2-Dibromoethane	µg/L	0.5	5	0.03 U	0.03 U	0.03 U	**6 U**	0.03 U	0.03 U	**0.6 U**	**3 U**	0.03 U	**0.75 U**	0.15 U
1,2-Dichlorobenzene	µg/L	60	600	0.04 U	0.04 U	0.04 U	8 U	0.04 U	0.04 U	0.8 U	4 U	0.04 U	1 U	0.2 U
1,2-Dichloroethane	µg/L	0.5	5	0.03 U	0.03 U	0.03 U	**6 U**	0.03 U	0.3	**0.6 U**	**3 U**	0.03 U	**0.75 U**	0.15 U
1,2-Dichloropropane	µg/L	0.5	5	0.05 U	0.05 U	0.05 U	**10 U**	0.05 U	0.05 U	**1 U**	**5 U**	0.05 U	**1.3 U**	0.25 U
1,3-Dichlorobenzene	µg/L	125	1,250	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
1,4-Dichlorobenzene	µg/L	15	75	0.06 U	0.06 U	0.06 U	12 U	0.06 U	0.06 U	1.2 U	6 U	0.06 U	1.5 U	0.3 U
2-Butanone	µg/L	N/A	N/A	0.5 U	0.5 U	0.5 U	100 U	0.5 U	0.5 U	10 U	50 U	0.5 U	13 U	2.5 U
2-Hexanone	µg/L	N/A	N/A	0.8 U	0.8 U	0.8 U	160 UJ	0.8 U	0.8 UJ	16 U	80 U	0.8 U	20 U	4 U
4-Methyl-2-pentanone	µg/L	N/A	N/A	0.4 U	0.4 U	0.4 U	80 UJ	0.4 U	0.4 UJ	8 U	40 U	0.4 U	10 U	2 U
Acetone	µg/L	200	1,000	1.3 U	1.3 U	1.3 U	**260 UJ**	1.3 U	1.3 UJ	26 UJ	130 UJ	1.3 U	33 U	6.5 U
VOCs Continued														
Benzene	µg/L	0.5	5	0.04 U	0.04 U	0.04 U	**8 U**	0.04 U	0.04 U	**0.8 U**	**4 U**	0.04 U	**1 U**	0.2 U
Bromochloromethane	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
Bromodichloromethane	µg/L	0.06	0.6	0.04 U	0.04 U	0.04 U	**8 U**	0.04 U	0.04 U	**0.8 U**	**4.5 J**	0.04 U	**1 U**	**0.2 U**
Bromoform	µg/L	0.44	4.4	0.04 U	0.04 U	0.04 U	**8 U**	0.04 U	0.04 U	**0.8 U**	**4 U**	0.04 U	**1 U**	0.2 U
Bromomethane	µg/L	1	10	0.06 U	0.06 U	0.06 U	**12 U**	0.06 U	0.06 U	**1.2 U**	**6 U**	0.06 U	**1.5 UJ**	0.3 U
Carbon disulfide	µg/L	200	1,000	0.1 U	0.1 U	0.1 U	20 U	0.49	0.1 U	2 U	10 U	0.1 U	2.5 U	0.5 U
Carbon tetrachloride	µg/L	0.5	5	0.04 U	0.04 U	0.04 U	**8 U**	0.04 U	0.04 U	**0.8 U**	**4 U**	0.04 U	**1 U**	0.2 U
Chlorobenzene	µg/L	N/A	N/A	0.06 U	0.06 U	3	12 U	0.06 U	0.06 U	2.4 J	6 U	0.06 U	1.5 U	0.3 U
Chloroethane	µg/L	80	400	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
Chloroform	µg/L	0.6	6	0.04 U	0.04 U	0.04 U	**8 U**	0.04 U	0.04 U	**0.8 U**	**4 U**	0.04 U	**1 U**	0.2 U
Chloromethane	µg/L	0.3	3	0.05 U	0.05 U	0.05 U	**10 U**	0.05 U	0.05 U	**1 U**	**5 U**	0.05 U	**1.3 U**	0.25 U
cis-1,2-Dichloroethene	µg/L	7	70	0.03 U	0.03 U	2.6	**1,200**	0.5	**19**	**21**	**64**	0.066 J	**310**	**26**
cis-1,3-Dichloropropene	µg/L	0.02	0.2	0.017 U	0.017 U	0.017 U	**3.4 U**	0.017 U	0.017 U	**0.34 U**	**1.7 U**	0.017 U	**0.43 U**	**0.085 U**
Dibromochloromethane	µg/L	6	60	0.029 U	0.029 U	0.029 U	5.8 U	0.029 U	0.029 U	0.58 U	2.9 U	0.029 U	0.73 U	0.15 U
Dichlorodifluoromethane	µg/L	200	1,000	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
Ethylbenzene	µg/L	140	700	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
Isopropylbenzene	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
m,p,-Xylene (sum of isomers)	µg/L	1,000	10,000	0.09 U	0.09 U	0.09 U	18 U	0.09 U	0.09 U	1.8 U	9 U	0.09 U	2.3 U	0.45 U
Methyl tert-butyl ether	µg/L	12	60	0.05 U	0.05 U	0.11 J	10 U	0.31	0.99	1 U	5 U	0.05 U	1.3 U	0.25 U
Methylene chloride	µg/L	0.5	5	0.15 UJ	0.15 UJ	0.15 UJ	**30 R**	0.15 UJ	0.15 R	**3 R**	**15 R**	0.15 UJ	**21 J**	**0.75 UJ**
o-Xylene	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
Styrene	µg/L	10	100	0.05 U	0.05 U	0.05 U	**10 U**	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
Tetrachloroethene	µg/L	0.5	5	0.05 U	0.05 U	0.05 U	**10 U**	0.05 U	0.05 U	**1.7 J**	**5 U**	0.05 U	**1.3 U**	0.25 U
Toluene	µg/L	200	1,000	0.05 U	0.05 U	0.05 U	10 U	0.05 U	0.05 U	1 U	5 U	0.05 U	1.3 U	0.25 U
trans-1,2-Dichloroethene	µg/L	20	100	0.06 U	0.06 U	0.21	**20 J**	0.06 U	1.3	1.2 U	6 U	0.06 U	4 J	0.8 J
trans-1,3-Dichloropropene	µg/L	0.02	0.2	0.019 U	0.019 U	0.019 U	**3.8 U**	0.019 U	0.019 U	**0.38 U**	**1.9 U**	0.019 U	**0.48 U**	**0.095 U**
Trichloroethene	µg/L	0.5	5	0.05 U	0.05 U	**30**	**10 U**	0.4	**0.96**	**120**	**1,000**	0.05 U	**570**	**33**
Vinyl chloride	µg/L	0.02	0.2	0.018 U	0.018 U	0.018 U	**30**	0.018 U	**0.1**	**0.49 J**	**1.8 U**	0.018 U	**8.8**	**0.65**

J indicates that the value was between the method detection limit and the limit of quantitation and, therefore, is estimated.

U indicates that the constituent was not detected above the method detection limit.

UJ indicates that the constituent was not detected above the estimated method detection limit.

UB indicates that the constiuent is considered to be below the detection limit listed due to blank contamination.

Bolded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Preventive Action Limit (PAL).

Shaded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Enforcement Standard (ES).

TABLE 3

Monitoring Well Field and Analytical Results—April 2007

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OECI Site

Constituent	Units	WAC NR 140 PAL	WAC NR 140 ES	MW-106S	MW-106D	MW-107S	MW-107D
Field Parameters							
Dissolved Oxygen (DO)	mg/L			1.27	1.28	1.27	NR
Oxidation Reduction Potential (ORP)	millivolts			-69.8	-57.4	-67.4	-50.3
pH	pH units			7.34	7.17	6.24	7.14
Specific Conductivity	mmhos/cm			0.886	1.166	0.725	1.225
Temperature	deg c			7.24	7.70	4.81	6.51
Depth to water	feet			2.83	1.88	2.26	1.70
Natural Attenuation Parameters							
Alkalinity, total (as CaCO3)	mg/L	N/A	N/A				
Chloride (as Cl)	mg/L	125	250				
Ethane	µg/L	N/A	N/A				
Ethene	µg/L	N/A	N/A				
Iron, total	µg/L	150	300				
Iron, dissolved	µg/L	150	300				
Manganese, total	µg/L	25	50				
Manganese, dissolved	µg/L	25	50				
Methane	µg/L	N/A	N/A				
Nitrogen, nitrate (as N)	mg/L	2	10				
Sulfate (as SO4)	mg/L	125	250				
Sulfide	mg/L	N/A	N/A				
Total Organic Carbon	mg/L	N/A	N/A				
VOCs							
1,1,1-Trichloroethane	µg/L	40	200	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ
1,1,2,2-Tetrachloroethane	µg/L	0.02	0.2	0.018 UJ	0.018 U	0.018 UJ	0.018 U
1,1,2-Trichloroethane	µg/L	0.5	5	0.04 UJ	0.04 U	0.04 UJ	0.04 U
1,1-Dichloroethane	µg/L	85	850	0.06 UJ	0.06 U	0.06 UJ	0.06 U
1,1-Dichloroethene	µg/L	0.7	7	0.04 UJ	0.04 U	0.04 UJ	0.04 U
1,2,3-Trichlorobenzene	µg/L	N/A	N/A	0.08 U	0.08 U	0.08 U	0.08 U
1,2,4-Trichlorobenzene	µg/L	14	70	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dibromo-3-chloropropane	µg/L	0.02	0.2	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**
1,2-Dibromoethane	µg/L	0.5	5	0.03 U	0.03 U	0.03 U	0.03 U
1,2-Dichlorobenzene	µg/L	60	600	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	µg/L	0.5	5	0.03 UJ	0.03 U	0.03 UJ	0.03 U
1,2-Dichloropropane	µg/L	0.5	5	0.05 UJ	0.05 U	0.05 UJ	0.05 U
1,3-Dichlorobenzene	µg/L	125	1,250	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene	µg/L	15	75	0.06 U	0.06 U	0.06 U	0.06 U
2-Butanone	µg/L	N/A	N/A	0.5 UJ	0.5 U	0.5 UJ	0.5 U
2-Hexanone	µg/L	N/A	N/A	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ
4-Methyl-2-pentanone	µg/L	N/A	N/A	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
Acetone	µg/L	200	1,000	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ
VOCs Continued							
Benzene	µg/L	0.5	5	0.04 UJ	0.04 U	0.04 UJ	0.04 U
Bromochloromethane	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane	µg/L	0.06	0.6	0.04 UJ	0.04 U	0.04 UJ	0.04 U
Bromoform	µg/L	0.44	4.4	0.04 UJ	0.04 U	0.04 UJ	0.04 U
Bromomethane	µg/L	1	10	0.06 UJ	0.06 U	0.06 UJ	0.06 U
Carbon disulfide	µg/L	200	1,000	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U
Carbon tetrachloride	µg/L	0.5	5	0.04 UJ	0.04 U	0.04 UJ	0.04 U
Chlorobenzene	µg/L	N/A	N/A	0.06 UJ	0.06 U	0.06 UJ	0.06 U
Chloroethane	µg/L	80	400	0.05 UJ	0.05 U	0.05 UJ	0.05 U
Chloroform	µg/L	0.6	6	0.04 UJ	0.04 U	0.04 UJ	0.04 U
Chloromethane	µg/L	0.3	3	0.05 UJ	0.05 U	0.05 UJ	0.05 U
cis-1,2-Dichloroethene	µg/L	7	70	0.03 UJ	0.03 U	0.03 UJ	0.12
cis-1,3-Dichloropropene	µg/L	0.02	0.2	0.017 UJ	0.017 U	0.017 UJ	0.017 U
Dibromochloromethane	µg/L	6	60	0.029 UJ	0.029 U	0.029 UJ	0.029 U
Dichlorodifluoromethane	µg/L	200	1,000	0.05 U	0.05 U	0.05 U	0.05 U
Ethylbenzene	µg/L	140	700	0.05 UJ	0.05 U	0.05 UJ	0.05 U
Isopropylbenzene	µg/L	N/A	N/A	0.05 UJ	0.05 U	0.05 UJ	0.05 U
m,p,-Xylene (sum of isomers)	µg/L	1,000	10,000	0.09 UJ	0.09 U	0.09 UJ	0.09 U
Methyl tert-butyl ether	µg/L	12	60	0.05 UJ	0.05 U	0.05 UJ	0.05 U
Methylene chloride	µg/L	0.5	5	0.15 R	0.15 R	0.15 R	0.15 R
o-Xylene	µg/L	N/A	N/A	0.05 UJ	0.05 U	0.05 UJ	0.05 U
Styrene	µg/L	10	100	0.05 UJ	0.05 R	0.05 UJ	0.05 U
Tetrachloroethene	µg/L	0.5	5	0.05 UJ	0.05 U	0.05 UJ	0.05 U
Toluene	µg/L	200	1,000	0.05 UJ	0.05 U	0.05 UJ	0.05 U
trans-1,2-Dichloroethene	µg/L	20	100	0.06 UJ	0.06 U	0.06 UJ	0.06 U
trans-1,3-Dichloropropene	µg/L	0.02	0.2	0.019 UJ	0.019 U	0.019 UJ	0.019 U
Trichloroethene	µg/L	0.5	5	0.05 UJ	0.05 U	0.05 UJ	0.05 U
Vinyl chloride	µg/L	0.02	0.2	0.018 UJ	0.018 U	0.018 UJ	0.018 U

J indicates that the value was between the method detection limit and the limit of quantitation and, therefore, is estimated.

U indicates that the constituent was not detected above the method detection limit.

UJ indicates that the constituent was not detected above the estimated method detection limit.

UB indicates that the constiuent is considered to be below the detection limit listed due to blank contamination.

Bolded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Preventive Action Limit (PAL).

Shaded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Enforcement Standard (ES).

TABLE 4
Private Well Analytical Results—April 2007
2007 2nd Quarter Groundwater Report
OECI Site

Constituent	Units	WAC NR 140 PAL	WAC NR 140 ES	PW-01	PW-02	PW-03	PW-04	PW-05	PW-07	PW-08	PW-09	PW-10	PW-11	DW-01
VOCs														
1,1,1-Trichloroethane	µg/L	40	200	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
1,1,2,2-Tetrachloroethane	µg/L	0.02	0.2	0.018 U	0.018 U	0.018 UJ	0.018 UJ	0.018 U	0.018 UJ	0.018 UJ	0.018 UJ	0.018 U	0.018 U	0.018 U
1,1,2-Trichloroethane	µg/L	0.5	5	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
1,1-Dichloroethane	µg/L	85	850	0.06 U	0.06 U	0.06 UJ	0.06 UJ	0.06 U	0.06 UJ	0.06 UJ	0.06 UJ	0.06 U	0.06 U	0.06 U
1,1-Dichloroethene	µg/L	0.7	7	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
1,2,3-Trichlorobenzene	µg/L	N/A	N/A	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,2,4-Trichlorobenzene	µg/L	14	70	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,2-Dibromo-3-chloropropane	µg/L	0.02	0.2	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**	**0.04 U**
1,2-Dibromoethane	µg/L	0.5	5	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,2-Dichlorobenzene	µg/L	60	600	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	µg/L	0.5	5	0.079 J	0.03 U	0.041 J	0.03 UJ	0.03 U	0.03 UJ	0.03 UJ	0.053 J	0.03 U	0.03 U	0.03 U
1,2-Dichloropropane	µg/L	0.5	5	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene	µg/L	125	1,250	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene	µg/L	15	75	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
2-Butanone	µg/L	N/A	N/A	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
2-Hexanone	µg/L	N/A	N/A	0.8 U	0.8 U	0.8 UJ	0.8 UJ	0.8 U	0.96 UJ	0.8 UJ	0.8 UJ	0.8 U	0.8 U	0.8 UJ
4-Methyl-2-pentanone	µg/L	N/A	N/A	0.4 U	0.4 U	0.4 UJ	0.4 UJ	0.4 U	0.4 UJ	0.4 UJ	0.4 UJ	0.4 U	0.4 U	0.4 UJ
Acetone	µg/L	200	1,000	14 J	1.7 J	1.3 UJ	1.3 UJ	1.3 U	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ	1.3 U	1.3 UJ
Benzene	µg/L	0.5	5	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
Bromochloromethane	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane	µg/L	0.06	0.6	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
Bromoform	µg/L	0.44	4.4	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
Bromomethane	µg/L	1	10	0.06 U	0.06 U	0.06 UJ	0.06 UJ	0.06 U	0.06 UJ	0.06 UJ	0.06 UJ	0.06 U	0.06 UJ	0.06 U
Carbon disulfide	µg/L	200	1,000	0.1 U	0.13 J	0.1 UJ	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.1 U
Carbon tetrachloride	µg/L	0.5	5	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
Chlorobenzene	µg/L	N/A	N/A	0.06 U	0.06 U	0.06 UJ	0.06 UJ	0.06 U	0.06 UJ	0.06 UJ	0.06 UJ	0.06 U	0.06 U	0.06 U
Chloroethane	µg/L	80	400	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
Chloroform	µg/L	0.6	6	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 UJ	0.04 UJ	0.13 UJ	0.04 U	0.04 U	0.04 U
Chloromethane	µg/L	0.3	3	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.067 UJ	0.05 UJ	0.11 U	0.13 U	0.05 U
cis-1,2-Dichloroethene	µg/L	7	70	0.03 U	0.03 U	0.62 J	0.93 J	0.43	3.9 J	1.3 J	5.2 J	0.03 U	0.55	0.03 U
cis-1,3-Dichloropropene	µg/L	0.02	0.2	0.017 U	0.017 U	0.017 UJ	0.017 UJ	0.017 U	0.017 UJ	0.017 UJ	0.017 UJ	0.017 U	0.017 U	0.017 U
Dibromochloromethane	µg/L	6	60	0.029 U	0.029 U	0.029 UJ	0.029 UJ	0.029 U	0.029 UJ	0.029 UJ	0.029 UJ	0.029 U	0.029 U	0.029 U
Dichlorodifluoromethane	µg/L	200	1,000	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Ethylbenzene	µg/L	140	700	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
Isopropylbenzene	µg/L	N/A	N/A	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
m,p,-Xylene (sum of isomers)	µg/L	1,000	10,000	0.09 U	0.11 J	0.09 UJ	0.09 UJ	0.09 U	0.09 UJ	0.09 UJ	0.09 UJ	0.09 U	0.09 U	0.09 U
Methyl tert-butyl ether	µg/L	12	60	0.05 U	0.05 U	0.64 J	0.58 J	0.66	0.85 J	0.71 J	0.86 J	0.21	0.82	0.05 U
Methylene chloride	µg/L	0.5	5	**3.5 J**	0.15 R	0.15 R	0.15 R	0.15 UJ	0.15 R	0.15 UJ	0.15 R	0.15 R	0.15 R	0.15 R
o-Xylene	µg/L	N/A	N/A	0.05 U	0.069 J	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
Styrene	µg/L	10	100	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
VOCs Continued														
Tetrachloroethene	µg/L	0.5	5	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
Toluene	µg/L	200	1,000	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	µg/L	20	100	0.06 U	0.06 U	0.069 J	0.07 J	0.06 U	0.29 J	0.082 J	0.43 J	0.06 U	0.06 U	0.06 U
trans-1,3-Dichloropropene	µg/L	0.02	0.2	0.019 U	0.019 U	0.019 UJ	0.019 UJ	0.019 U	0.019 UJ	0.019 UJ	0.019 UJ	0.019 U	0.019 U	0.019 U
Trichloroethene	µg/L	0.5	5	0.05 U	0.05 U	0.49 J	0.05 UJ	0.081 J	0.054 J	0.11 J	0.1 J	0.05 U	0.05 U	0.05 U
Vinyl chloride	µg/L	0.02	0.2	0.018 U	0.018 U	0.018 UJ	0.018 UJ	0.018 U	**0.05 J**	**0.056 J**	**0.036 J**	0.018 U	0.018 U	0.018 U

J indicates that the value was between the method detection limit and the limit of quantitation and, therefore, is estimated.
U indicates that the constituent was not detected above the method detection limit.
UJ indicates that the constituent was not detected above the estimated method detection limit.
UB indicates that the constiuent is considered to be below the detection limit listed due to blank contamination.
Bolded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Preventive Action Limit (PAL).
Shaded values indicate attainment or exceedance of the Wisconsin Administrative Code (WAC) NR 140 Enforcement Standard (ES).

TABLE 5
Private Well Analytical Results—April 2007
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OECI Site

Constituent	Units	SW-01	SW-02	SW-03
Natural Attenuation Parameters				
Alkalinity, total (as CaCO3)	mg/L	200	230	200
Chloride (as Cl)	mg/L	51	20	28
Ethane	µg/L	0.4 U	0.4 U	0.4 U
Ethene	µg/L	0.5 U	0.5 U	0.5 U
Iron, total	µg/L	363 J	137 J	251 J
Iron, dissolved	µg/L	89.1 J	100 J	73.4 J
Manganese, total	µg/L	7.2 J	7.4 J	8.4 J
Manganese, dissolved	µg/L	5.6 J	6.6 J	7.2 J
Methane	µg/L	6.8	1.7 U	1.4 U
Nitrogen, ammonia (as N)	mg/L	0.021 U	0.021 U	0.021 U
Nitrogen, nitrate (as N)	mg/L	0.58	1.5	0.51
Phosphorus, total	mg/L	14 U	14 U	14 U
Sulfate (as SO4)	mg/L	18	22	18
Sulfide	mg/L	1 UJ	1 UJ	1 UJ
Total Organic Carbon	mg/L	12	15	12
VOCs				
1,1,1-Trichloroethane	µg/L	0.04 U	0.04 U	0.25
1,1,2,2-Tetrachloroethane	µg/L	0.018 U	0.018 U	0.018 U
1,1,2-Trichloroethane	µg/L	0.04 U	0.04 U	0.04 U
1,1-Dichloroethane	µg/L	0.06 U	0.06 U	0.067 J
1,1-Dichloroethene	µg/L	0.04 U	0.04 U	0.04 U
1,2,3-Trichlorobenzene	µg/L	0.08 U	0.08 U	0.08 U
1,2,4-Trichlorobenzene	µg/L	0.1 U	0.1 U	0.1 U
1,2-Dibromo-3-chloropropane	µg/L	0.04 U	0.04 U	0.04 U
1,2-Dibromoethane	µg/L	0.03 U	0.03 U	0.03 U
1,2-Dichlorobenzene	µg/L	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	µg/L	0.03 U	0.03 U	0.03 U
1,2-Dichloropropane	µg/L	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene	µg/L	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene	µg/L	0.06 U	0.06 U	0.06 U
2-Butanone	µg/L	0.5 U	0.5 U	0.5 U
2-Hexanone	µg/L	0.8 U	0.8 UJ	0.8 U
4-Methyl-2-pentanone	µg/L	0.4 U	0.4 UJ	0.4 U
Acetone	µg/L	1.3 U	1.3 UJ	1.9 J
Benzene	µg/L	0.04 U	0.04 U	0.04 U
Bromochloromethane	µg/L	0.05 U	0.05 U	0.05 U
Bromodichloromethane	µg/L	0.04 U	0.04 U	0.04 U
Bromoform	µg/L	0.04 U	0.04 U	0.04 U
Bromomethane	µg/L	0.06 U	0.06 U	0.06 U
Carbon disulfide	µg/L	0.1 U	0.1 U	0.1 U
Carbon tetrachloride	µg/L	0.04 U	0.04 U	0.04 U
Chlorobenzene	µg/L	0.06 U	0.06 U	0.06 U
Chloroethane	µg/L	0.05 U	0.05 U	0.05 U
Chloroform	µg/L	0.04 U	0.04 U	0.04 U
Chloromethane	µg/L	0.11 U	0.05 U	0.05 U
cis-1,2-Dichloroethene	µg/L	0.03 U	0.03 U	0.3
cis-1,3-Dichloropropene	µg/L	0.017 U	0.017 U	0.017 U
Dibromochloromethane	µg/L	0.029 U	0.029 U	0.029 U
Dichlorodifluoromethane	µg/L	0.05 U	0.05 U	0.05 U
Ethylbenzene	µg/L	0.05 U	0.05 U	0.05 U
Isopropylbenzene	µg/L	0.05 U	0.05 U	0.05 U
m,p,-Xylene (sum of isomers)	µg/L	0.09 U	0.09 U	0.09 U
Methyl tert-butyl ether	µg/L	0.05 U	0.05 U	0.05 U
Methylene chloride	µg/L	0.15 UJ	0.15 R	0.15 UJ
o-Xylene	µg/L	0.05 U	0.05 U	0.05 U
Styrene	µg/L	0.05 U	0.05 U	0.05 U
Tetrachloroethene	µg/L	0.05 U	0.05 U	0.05 U
VOCs Continued				
Toluene	µg/L	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	µg/L	0.06 U	0.06 U	0.06 U
trans-1,3-Dichloropropene	µg/L	0.019 U	0.019 U	0.019 U
Trichloroethene	µg/L	0.05 U	0.05 U	0.84
Vinyl chloride	µg/L	0.018 U	0.018 U	0.031 J

J indicates that the value was between the method detection limit and the limit of quantitation and, therefore, is estimated.
U indicates that the constituent was not detected above the method detection limit.
UJ indicates that the constituent was not detected above the estimated method detection limit.
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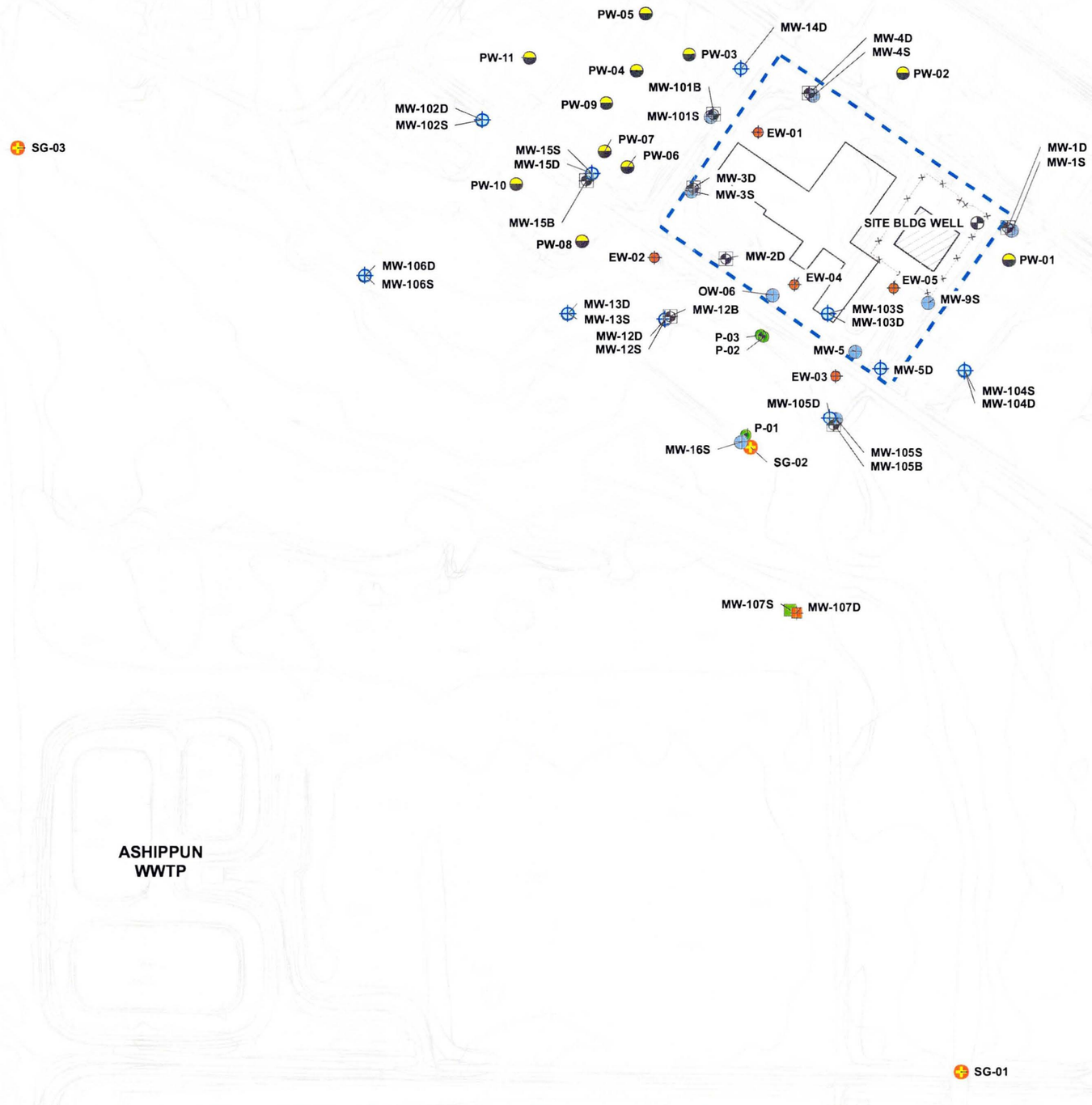
Figures



NOTES

1. BASE MAP DEVELOPED FROM INFORMATION PROVIDED BY RMT, INC. ON 10/26/04
2. BASE MAP DEVELOPED FROM AERIAL PHOTOGRAPHS DATED 3/26/1999 PREPARED BY AEROMETRICS, INC., SHEBOYGAN, WISCONSIN.
3. VERTICAL DATUM (ELEVATION) IS REFERENCED TO USGS MEAN SEA LEVEL DATUM, 1929 ADJUSTMENT. TOPOGRAPHIC CONTOUR INTERVAL: 2 FEET.
4. THE HORIZONTAL DATUM IS BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD) 1927 - WISCONSIN SOUTH.
5. MONITORING WELL LOCATIONS AND ELEVATIONS ARE BASED ON A SURVEY PERFORMED BY SPATIAL DATA SURVEYS ON DECEMBER 2001, JANUARY 2002, JUNE 2002, AND APRIL 2003.
6. SITE BENCHMARKS ESTABLISHED BASED ON SURVEY FROM BENCHMARK MONUMENT LOCATED ON THE SOUTHWEST CORNER OF THE INTERSECTION OF MAPLETON ROAD AND MILL ROAD. NE 1/4 OF NE 1/4 OF SECTION 8, TOWNSHIP 8 NORTH, RANGE 17 EAST.
7. THE PRIVATE OR SUPPLY WELLS SHOWN ON THIS MAP REPRESENT A PORTION OF THE PRIVATE WELLS SERVING THE RESIDENTS OR BUSINESSES IN THE TOWN OF ASHIPPUN, AND REPRESENT A PORTION OF THESE WELLS THAT LIKELY EXIST WITHIN THE CONFINED AREA OF THIS MAP.

LEGEND

SITE INSTRUMENTATION

- BEDROCK MONITORING WELL
- DEEP UNCONSOLIDATED MONITORING WELL
- SHALLOW UNCONSOLIDATED MONITORING WELL
- DRIVE POINT WELL
- EXTRACTION WELL
- SITE BUILDING WELL (DW-01)
- RESIDENTIAL WELL
- DEEP UNCONSOLIDATED SENTINEL WELL
- SHALLOW UNCONSOLIDATED SENTINEL WELL
- STAFF GAUGE
- CURRENT SITE BUILDING
- FORMER OECI SITE BUILDING
- FORMER OECI SITE BOUNDARY
- FENCED AREA
- ELEVATION CONTOUR (FT ABOVE MEAN SEA LEVEL) CONTOUR INTERVAL = 2FT

N

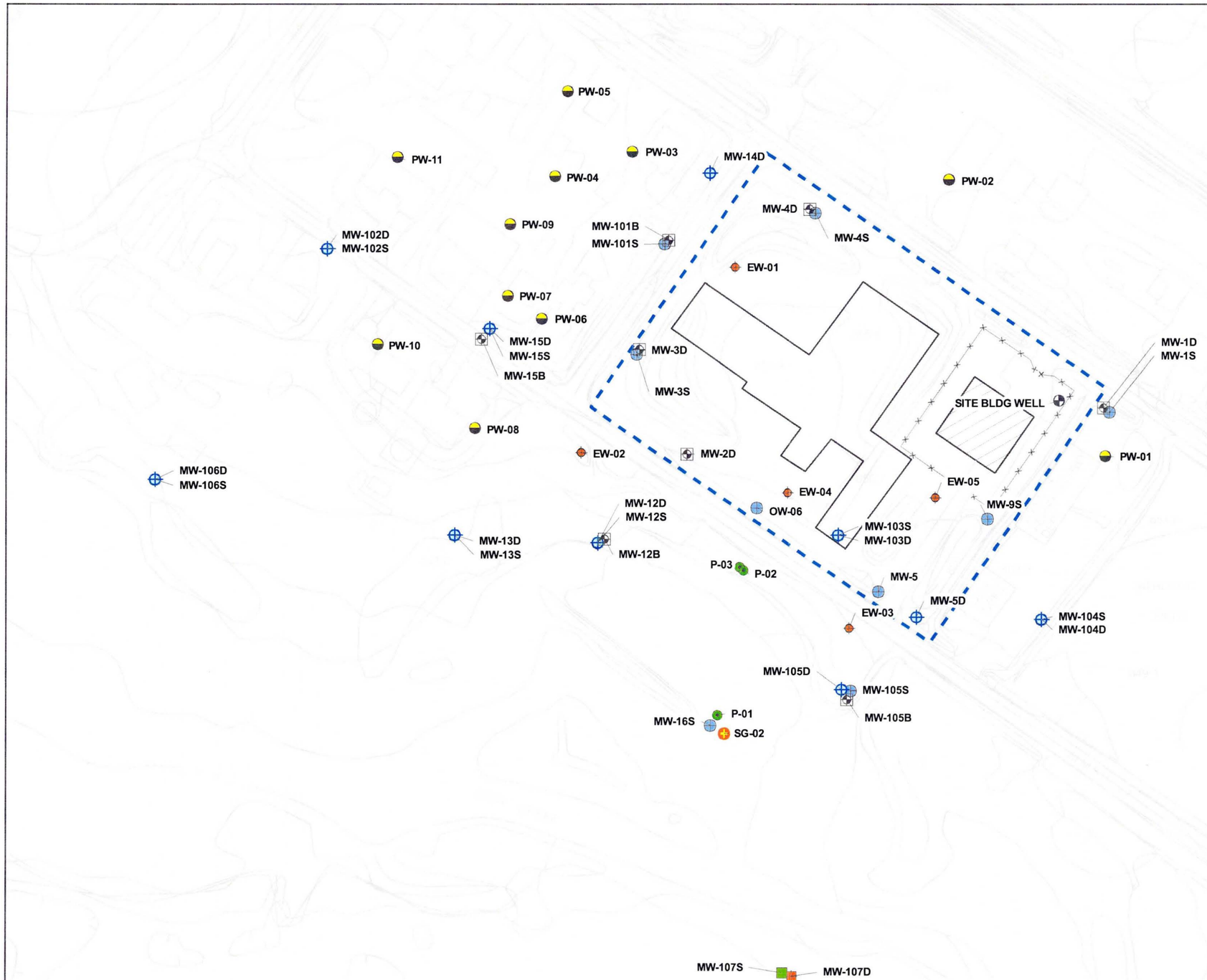
0 100 200

Feet

FIGURE 1
Site Monitoring Locations
2007 2nd Quarter Groundwater Report
OECI Site

ES052007001CVO-OECI_Site_MonitoringLocations_Fig01_2ndQR_v04

CH2MHILL



NOTES

1. BASE MAP DEVELOPED FROM INFORMATION PROVIDED BY RMT, INC. ON 10/26/04
2. BASE MAP DEVELOPED FROM AERIAL PHOTOGRAPHS DATED 3/26/1999 PREPARED BY AEROMETRICS, INC., SHEBOYGAN, WISCONSIN.
3. VERTICAL DATUM (ELEVATION) IS REFERENCED TO USGS MEAN SEA LEVEL DATUM, 1929 ADJUSTMENT. TOPOGRAPHIC CONTOUR INTERVAL: 2 FEET.
4. THE HORIZONTAL DATUM IS BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD) 1927 - WISCONSIN SOUTH.
5. MONITORING WELL LOCATIONS AND ELEVATIONS ARE BASED ON A SURVEY PERFORMED BY SPATIAL DATA SURVEYS ON DECEMBER 2001, JANUARY 2002, JUNE 2002, AND APRIL 2003.
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LEGEND

SITE INSTRUMENTATION

- BEDROCK MONITORING WELL
- DEEP UNCONSOLIDATED MONITORING WELL
- SHALLOW UNCONSOLIDATED MONITORING WELL
- DRIVE POINT WELL
- EXTRACTION WELL
- SITE BUILDING WELL (DW-01)
- RESIDENTIAL WELL
- DEEP UNCONSOLIDATED SENTINEL WELL
- SHALLOW UNCONSOLIDATED SENTINEL WELL
- STAFF GAUGE
- CURRENT SITE BUILDING
- FORMER OECI SITE BUILDING
- FORMER OECI SITE BOUNDARY
- FENCED AREA
- ELEVATION CONTOUR (FT ABOVE MEAN SEA LEVEL) CONTOUR INTERVAL = 2FT

N

0 60 120

Feet

FIGURE 2
Site Monitoring Well Locations
2007 2nd Quarter Groundwater Report
OECI Site

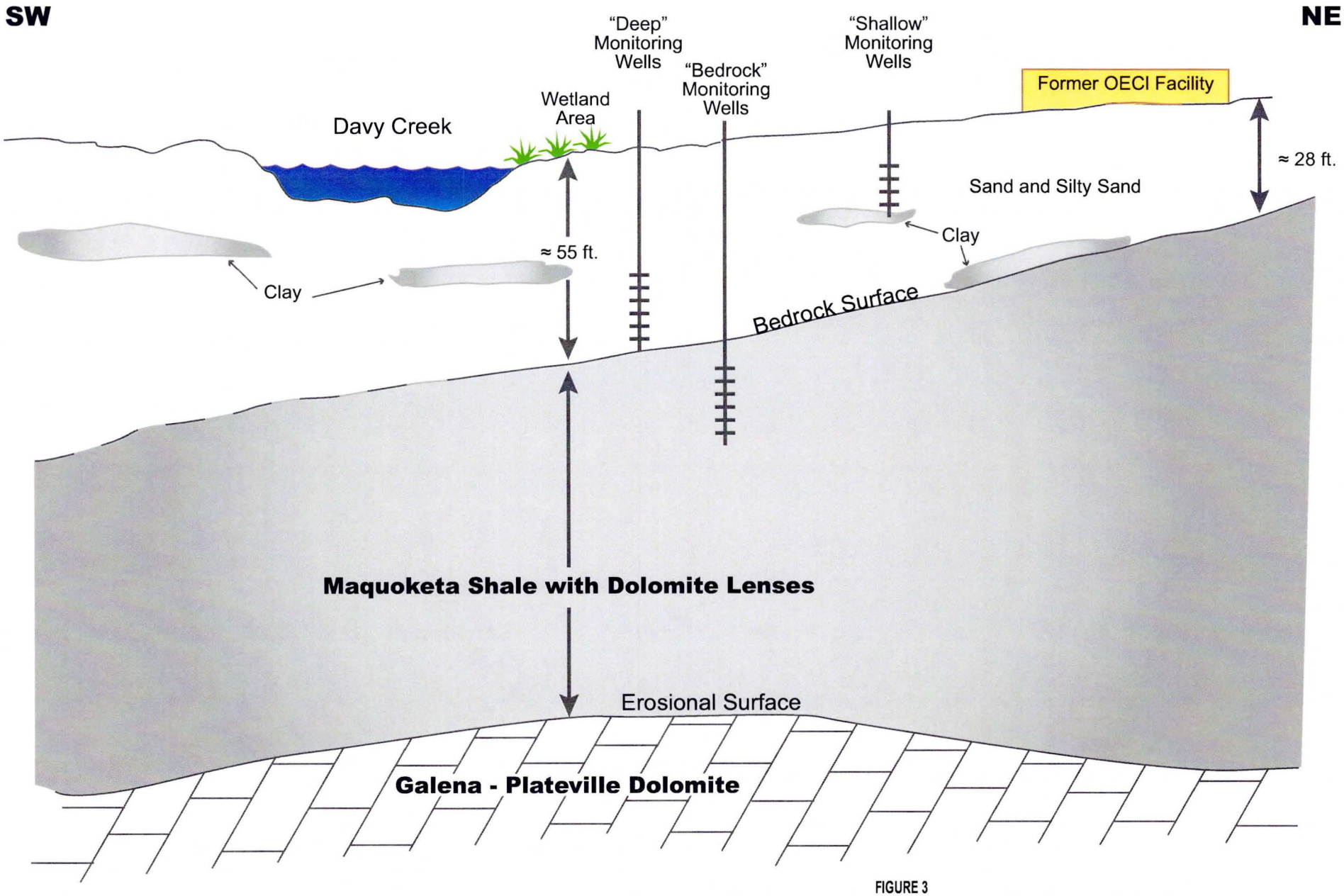

FIGURE 3
Conceptual Depiction of Site Aquifer Units and Well Placement
2007 2nd Quarter Groundwater Report
OECI Site

- NOT TO SCALE -

NOTES

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2. BASE MAP DEVELOPED FROM AERIAL PHOTOGRAPHS DATED 3/26/1999 PREPARED BY AEROMETRICS, INC., SHEBOYGAN, WISCONSIN.

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MW-4S
849.03

MW-101S
848.79

MW-102S
847.78

MW-15S
847.64

MW-3S
849.00

MW-1S
847.59

MW-106S
846.09

MW-13S
846.70

MW-12S
845.88

MW-103S
847.42

MW-9S
847.39

MW-5
Not Measured

MW-104S
847.22

MW-105S
846.24

MW-16S
845.78

MW-107S
846.40

LEGEND

- Fence
- OECI Treatment Plant
- Approximate Site Boundary
- Existing 2' Topographic Contour
- Estimated Groundwater Contour (0.2 foot contour interval; dashed where inferred)

Site Instrumentation

- Shallow Unconsolidated Monitoring Well
- Shallow Unconsolidated Sentinel Well

0 60 120
Feet

N

FIGURE 4
Shallow Unconsolidated Groundwater Elevations - April 2007
2007 2nd Quarter Groundwater Report
OECI Site

File Path: E:\GIS\OEIC\MapFiles\OEIC_SITE_INSTRUMENTATION.mxd. Date: 02 26, 2007. User: MPETERSH

CH2MHILL

NOTES

1. BASE MAP DEVELOPED FROM INFORMATION PROVIDED BY RMT, INC. ON 10/26/04.

2. BASE MAP DEVELOPED FROM AERIAL PHOTOGRAPHS DATED 3/26/1999 PREPARED BY AEROMETRICS, INC., SHEBOYGAN, WISCONSIN.

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4. VERTICAL DATUM (ELEVATION) IS REFERENCED TO USGS MEAN SEA LEVEL DATUM, 1929 ADJUSTMENT. TOPOGRAPHIC CONTOUR INTERVAL: 2 FEET.

5. MONITORING WELL LOCATIONS AND ELEVATIONS ARE BASED ON A SURVEYS PERFORMED BY SPATIAL DATA SURVEYS ON DECEMBER 2001, JANUARY 2002, JUNE 2002 AND APRIL 2003.

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7. THE PRIVATE OR SUPPLY WELLS SHOWN ON THIS MAP REPRESENT A PORTION OF THE PRIVATE WELLS SERVING THE RESIDENTS OR BUSINESSES IN THE TOWN OF ASHIPPUN, AND REPRESENT A PORTION OF THESE WELLS THAT LIKELY EXIST WITHIN THE CONFINED AREA OF THIS MAP.

MW-14D
Not Measured

MW-102D
847.37

MW-15D
847.37

MW-106D
847.13

MW-12D
847.00

MW-13D
846.99

MW-103D
847.40

MW-5D
847.00

MW-104D
847.29

MW-105D
847.02

MW-107D
846.94

847.4
847.3
847.2
847.1
847

LEGEND

- Fence
- OECI Treatment Plant
- Approximate Site Boundary
- Existing 2' Topographic Contour
- Estimated Groundwater Contour (0.1 foot contour interval; dashed where inferred)

Site Instrumentation

- Deep Unconsolidated Monitoring Well
- Deep Unconsolidated Sentinel Well

N

0 60 120
Feet

File Path: E:\GIS\OEIC\MapFiles\OEIC_SITE_INSTRUMENTATION.mxd. Date: 02 26, 2007. User: MPETERSH

FIGURE 5
Deep Unconsolidated Groundwater Elevations - April 2007
2007 2nd Quarter Groundwater Report
OECI Site

CH2MHILL

NOTES

1. BASE MAP DEVELOPED FROM INFORMATION PROVIDED BY RMT, INC. ON 10/26/04.

2. BASE MAP DEVELOPED FROM AERIAL PHOTOGRAPHS DATED 3/26/1999 PREPARED BY AEROMETRICS, INC., SHEBOYGAN, WISCONSIN.

3. THE HORIZONTAL DATUM IS BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD) 1927- WISCONSIN SOUTH.

4. VERTICAL DATUM (ELEVATION) IS REFERENCED TO USGS MEAN SEA LEVEL DATUM, 1929 ADJUSTMENT. TOPOGRAPHIC CONTOUR INTERVAL: 2 FEET.

5. MONITORING WELL LOCATIONS AND ELEVATIONS ARE BASED ON A SURVEYS PERFORMED BY SPATIAL DATA SURVEYS ON DECEMBER 2001, JANUARY 2002, JUNE 2002 AND APRIL 2003.

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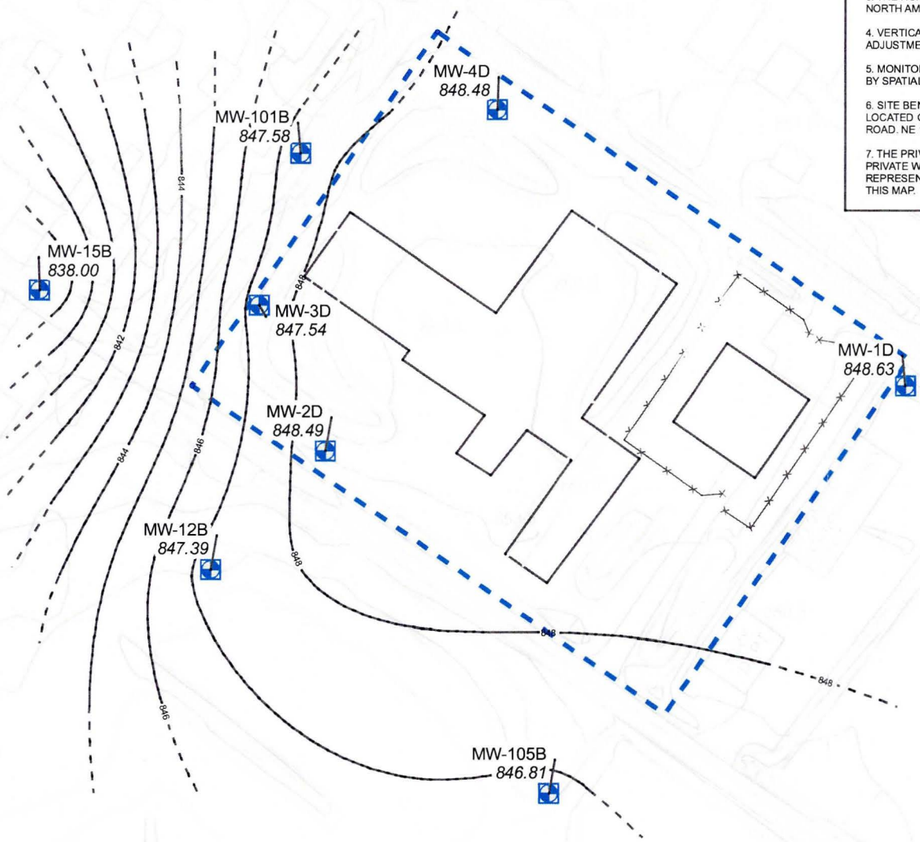

LEGEND

- Fence
- OECI Treatment Plant
- Approximate Site Boundary
- Existing 2' Topographic Contour
- Estimated Bedrock Contour (1 foot contour interval, dashed where inferred)

Site Instrumentation

- Bedrock Well

N

0 60 120
Feet

FIGURE 6
Bedrock Groundwater Elevations - April 2007
2007 2nd Quarter Groundwater Report
OECI Site

CH2MHILL

File Path: E:\GIS\OEIC\MapFiles\OEIC_SITE_INSTRUMENTATION.mxd. Date: 02 26, 2007. User: MPETERSH

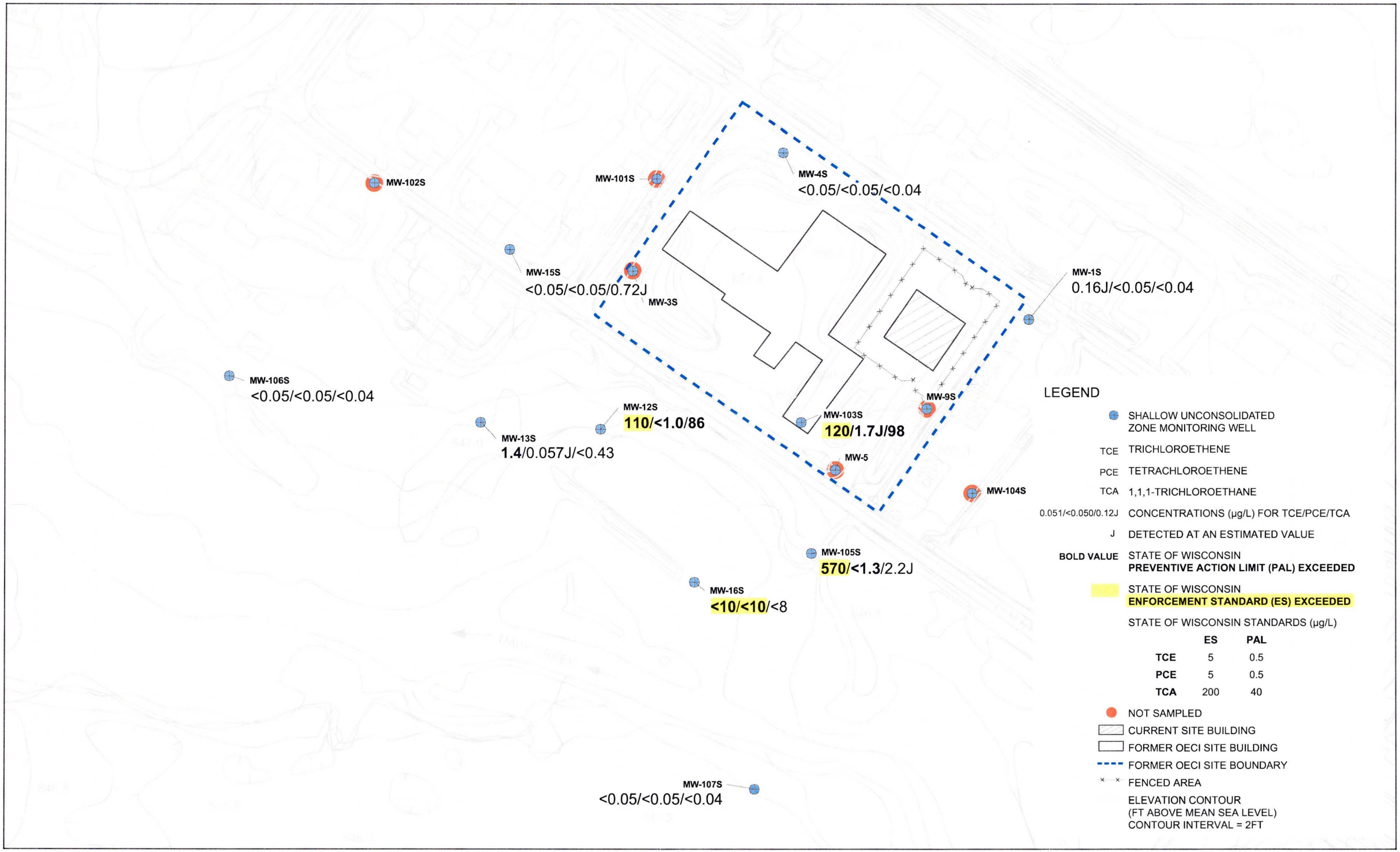

FIGURE 7
Groundwater TCE, PCE and TCA Concentrations in Shallow Unconsolidated Wells – April 2007
2007 2nd Quarter Groundwater Report
OECI Site

ES052007001CVO-OECI_TCE_PCE_TCA_Shallow_Fig07_2ndQR_v05

CH2MHILL

Appendix A

Data Validation Memorandums

Data Usability Evaluation
Oconomowoc Electroplating Company, Inc. Site, Ashippun, Wisconsin
WA No. 003-LRLR-05M8, Contract No. EP-S5-06-01

PREPARED FOR: U.S. Environmental Protection Agency

PREPARED BY: Adrienne Unger/CH2M HILL

DATE: July 20, 2007

This memorandum presents the data usability evaluation of the groundwater samples collected during the field investigation conducted at the Oconomowoc Electroplating Company, Inc. site in Ashippun, Wisconsin during April 2007. CH2M HILL performed the sampling. CT Laboratories, Inc. of Baraboo, Wisconsin performed the analyses.

Sixty-two groundwater and surface water samples were collected, including quality control (QC) samples, and analyzed for one or more of the following U.S. Environmental Protection Agency (USEPA)-approved methods:

- Volatile organic compounds (VOCs) by USEPA SW-846 Method 8260
- Alkalinity by USEPA 310.2
- Ammonia by USEPA 350.1
- Chloride by USEPA SW-846 Method 9056
- Methane, ethane, ethene by RSK 175
- Nitrate by USEPA SW-846 Method 9056
- Orthophosphate by USEPA SW-846 Method 9056
- Sulfate by USEPA SW-846 Method 9056
- Sulfide by USEPA 376.1
- Total organic carbon by USEPA SW-846 Method 9060
- Total metals by USEPA SW-846 Method 6010B
- Dissolved metals by USEPA SW-846 Method 6010B

As part of the quality assurance (QA) process outlined in the field sampling plan (CH2M HILL 2006), QC samples were collected in the field to complement the assessment of overall data quality and usability. These QC samples collected were field duplicates, aliquots for laboratory matrix spike/matrix spike duplicates, a field blank, and an equipment blank. VOC trip blanks also were used as a means of QC; these samples were supplied by the laboratory.

The dataset was reviewed by the USEPA Environmental Service Assistance Team (ESAT) contractor, TechLaw, (Attachment 1) to assess the accuracy and precision of the method and the matrix using criteria established in the National Functional Guidelines (NFG) for data review. Completeness of the dataset was then derived. USEPA validators added data

qualifiers when the QC statistics indicated a possible bias to specific compounds or analytes associated with a particular method and sample batch.

Standard data qualifiers were used as a means of classifying the data as to their conformance to QC requirements. The applied data qualifiers are defined as follows:

[U] The sample target was analyzed for but not detected above the level of the associated limit of detection or quantitation.

[J] The associated value is an estimated quantity. This qualifier was appended when the data indicated the presence of a specific target analyte but was below the stated reporting (or quantitation) limit, and/or when QC statistics alluded to an analytical bias.

[UJ] The component was analyzed for but not detected at a level equal to or greater than the level of detection (LOD) or quantification (often the reporting limit [RL]). This flag was used when QC measurements indicated a possible low bias in the analytical data.

[R] Rejected. The data were of insufficient quality to be deemed acceptable as reported or otherwise qualified.

Groundwater Samples

CH2M HILL conducted a review of the validation performed by USEPA for the groundwater samples in sample delivery group (SDG) 59529. Table 1 lists the sample identifications (IDs) and SDGs that were reviewed (100 percent of all samples collected).

TABLE 1
Sample Summary by Laboratory ID and Sample Delivery Group
Oconomowoc Electroplating

Sample ID	SDG	Sample ID	SDG	Sample ID	SDG
07CE25-01	OEP-MW-103D	07CE25-38	OEP-MW-105B	07CE25-74	OEP-MW-102DFR
07CE25-02	OEP-MW-103D(F)	07CE25-39	OEP-MW-105B(F)	07CE25-75	OEP-MW-102DFR
07CE25-03	OEP-MW-103S	07CE25-40	OEP-MW-105S	07CE25-76	OEP-MW-102DFR
07CE25-04	OEP-MW-103S(F)	07CE25-41	OEP-MW-105S(F)	07CE25-77	OEP-MW-102DFR(F)
07CE25-05	OEP-PW-01	07CE25-42	OEP-MW-105SFR	07CE25-78	OEP-MW-106D
07CE25-06	OEP-PW-02	07CE25-43	OEP-MW-105SFR(F)	07CE25-79	OEP-MW-106S
07CE25-07	OEP-PW-04	07CE25-44	OEP-MW-5D	07CE25-80	OEP-MW-12B
07CE25-08	OEP-PW-07	07CE25-45	OEP-MW-5D(F)	07CE25-81	OEP-MW-12B
07CE25-09	OEP-PW-09	07CE25-46	OEP-MW-105D	07CE25-82	OEP-MW-12B
07CE25-10	OEP-MW-RT01	07CE25-47	OEP-MW-105D(F)	07CE25-83	OEP-MW-12B
07CE25-11	OEP-MW-1D	07CE25-48	OEP-EB	07CE25-84	OEP-MW-12B
07CE25-12	OEP-MW-1D(F)	07CE25-49	OEP-EB(F)	07CE25-85	OEP-MW-12B
07CE25-13	OEP-SW-1S	07CE25-50	OEP-PW-03	07CE25-86	OEP-MW-12B(F)
07CE25-14	OEP-SW-1S(F)	07CE25-51	OEP-PW-08	07CE25-87	OEP-PW-05
07CE25-15	OEP-MW-4D	07CE25-52	OEP-PW-08FR	07CE25-88	OEP-DW-01
07CE25-16	OEP-MW-4D(F)	07CE25-53	OEP-FB	07CE25-89	OEP-MW-12S
07CE25-17	OEP-MW-4S	07CE25-54	OEP-FB(F)	07CE25-90	OEP-MW-12S
07CE25-18	OEP-MW-4S(F)	07CE25-55	OEP-MW-15B	07CE25-91	OEP-MW-12S
07CE25-19	OEP-MW-RT02	07CE25-56	OEP-MW-15B(F)	07CE25-92	OEP-MW-12S
07CE25-20	OEP-MW-RT03	07CE25-57	OEP-MW-15D	07CE25-93	OEP-MW-12S
07CE25-21	OEP-MW-RT04	07CE25-58	OEP-MW-15D(F)	07CE25-94	OEP-MW-12S
07CE25-22	OEP-MW-RT05	07CE25-59	OEP-MW-15S	07CE25-95	OEP-MW-12S(F)
07CE25-23	OEP-MW-RT06	07CE25-60	OEP-MW-15S(F)	07CE25-97	OEP-MW-13D
07CE25-24	OEP-MW-101B	07CE25-61	OEP-MW-RT07	07CE25-98	OEP-MW-13D(F)
07CE25-25	OEP-MW-101B(F)	07CE25-62	OEP-MW-12D	07CE25-99	OEP-MW-13S
07CE25-26	OEP-MW-3D	07CE25-62	OEP-MW-12D	07CE26-01	OEP-MW-13S(F)
07CE25-27	OEP-MW-3D(F)	07CE25-63	OEP-MW-12D(F)	07CE26-02	OEP-MW-13SFR
07CE25-28	OEP-SW-01	07CE25-64	OEP-MW-102D	07CE26-03	OEP-MW-13SFR(F)
07CE25-29	OEP-SW-01(F)	07CE25-65	OEP-MW-102D	07CE26-04	OEP-MW-16S

TABLE 1
Sample Summary by Laboratory ID and Sample Delivery Group
Oconomowoc Electroplating

Sample ID	SDG	Sample ID	SDG	Sample ID	SDG
07CE25-30	OEP-SW-03	07CE25-66	OEP-MW-102D	07CE26-05	OEP-MW-16S(F)
07CE25-31	OEP-SW-03(F)	07CE25-67	OEP-MW-102D	07CE26-06	OEP-SW-02
07CE25-32	OEP-SW-03FR	07CE25-68	OEP-MW-102D	07CE26-07	OEP-SW-02(F)
07CE25-33	OEP-SW-03FR(F)	07CE25-69	OEP-MW-102D	07CE26-08	OEP-MW-RT09
07CE25-34	OEP-PW-10	07CE25-70	OEP-MW-102D(F)	07CE26-09	OEP-MW-107D
07CE25-35	OEP-PW-11	07CE25-71	OEP-MW-102DFR	07CE26-10	OEP-MW-107S
07CE25-36	OEP-PW-10FR	07CE25-72	OEP-MW-102DFR	OEP-MW-RT08	OEP-MW-RT08
07CE25-37	OEP-PW-11FR	07CE25-73	OEP-MW-102DFR	--	--

The USEPA validation case narratives and worksheets indicate which of these sample results were biased due to applicable QC statistics or other NFG requirements. The qualifications are described in Attachment 1. Some results were rejected; those are summarized as follows.

- Instrument values for iron are negative where the absolute values are greater than the LOD/RL for dissolved samples 07CE25-02, 07CE26-01 and -03; the results for those samples are unusable "R".
- Zero percent recovery of methylene chloride was detected for LCS-464889 and the relative percent difference (RPD) was 200 percent.
- The percent recovery of methylene chloride in LCSD-466227 was below 20 percent, and the RPD was above 30 percent. Nondetected results were qualified as unusable "R".
- The MS/MSD recovery for styrene was below 20 percent, and the RPD was greater than 30 percent for sample 07CE25-78. This nondetected sample result was qualified as unusable "R".

The dataset completeness is 98.7 percent usable and may be used in the project decision-making process with qualification. In addition, approximately 10 percent of the data underwent a comparative review to evaluate the accuracy between the database and the USEPA validation reports. No discrepancies were noted.

Conclusions

The USEPA validation reports were verified to comply with the applicable NFG for data review. This verification confirmed that the validation performed by USEPA was complete for the entire dataset analyzed by CT Laboratories. Qualified data, if not rejected, are considered usuable for the project decision-making process. The project data quality objectives (DQOs) established a completeness goal for the project at 90 percent. The percent completeness for these groundwater data is 98.7 percent (1.3 percent of the data were

rejected) and met the established DQOs set forth in the quality assurance project plan (CH2M HILL 2004).

Data summary tables of the results have been provided as a table in the *2007 Second Quarter Groundwater Report – OECI Site*. An electronic file of these data also will be submitted as part of this deliverable.

Reference Cited

CH2M HILL. 2004. *Quality Assurance Project Plan, Oconomowoc Electroplating, Oconomowoc, Wisconsin*. WA No. 236-RALR-05M8 Contract No. 68-W6-0025. October.

CH2M HILL. 2006. *Field Sampling Plan, Oconomowoc Electroplating, Oconomowoc, Wisconsin*. WA No. 003-LRLR-05MS Contract No. EP-SS-06-01. October.

Attachment 1

Validation Narratives

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5/09/07

SUBJECT: **Review of Data**
Received for review on 4/2607

FROM: **Stephen L. Ostrodka, Chief (SRT-4J)**
Superfund Field Services Section

TO: **Data User:** CH2M Hill

We have reviewed the data for the following case:

SITE NAME: Oconomowoc Electroplating (WI)

CASE NUMBER: 07CE25 **SDG NUMBER:** 59529-INO

Number and Type of Samples: 39 water samples

Sample Numbers: 07CE25-01, -03, -11, -13, -15, -17, -24, -26, -28, -30, -32, -38, -40, -42, -44, -46, -48, -53, -55, -57, -59, -62, -64, -66, -69, -71, -73, -76,-80, -82, -85, -89, -91, -94, -97, -99, 07CE26-02, -04, -06

Laboratory: CT Laboratories **Hrs. for Review:** _____

Following are our findings:

CC: Howard Pham
Region 5 TOPO
Mail Code: SRT-4J

Narrative

The laboratory's portion of this case contains 31 water sample points which were identified by 39 sample IDs and 40 laboratory IDs (see attached table). The samples were collected between April 2 and 6, 2007. They were analyzed for alkalinity, total organic carbon (TOC), sulfide, ammonia, nitrate, sulfate, chloride, and ortho-phosphate. Not all analytes were analyzed for all samples. Some of the coolers had temperatures outside the acceptance criteria of 4°C ± 2 °C. Affected samples were 07CE25-01, -03, -28, -30, -32. No results are qualified for this discrepancy. All sample results are reported to the MDL. The samples were analyzed using SW846 9056 (anions), 9060 (total organic carbon), EPA 310.2 (alkalinity), 350.1 (ammonia), and 376.1 (sulfide) analysis procedures.

Evidential Audit: All reporting forms provided are CLP-like documents. All documents provided are copies. No location is noted for the originals. No DC-1 or DC-2 forms or sample tags were provided.

No MDL summaries were provided. It is unknown when MDLs were performed. MDL (LOD) values recorded on the results Form 1 were used for evaluation of the data. MDL and RL values on Form 1s are equal.

Alkalinity: The laboratory reporting limit is 9.0 mg/L. The SAS requires the RL to be 5.0 mg/L. The SAS requires that the lowest calibration point be run at 5.0 mg/L. The lowest point performed was 25 mg/L. All sample results were above 25 mg/L except 07CE25-048 and -53, which are non-detects. These results are estimated "UJ" due to the laboratories inability to meet the SAS required RL. All other alkalinity results are acceptable.

Ammonia: No defects were found. All ammonia results are acceptable

Chloride: No defects were found. All chloride results are acceptable.

Nitrate: No defects were found. All nitrate results are acceptable.

Sulfate: No defects were found. All sulfate results are acceptable.

Ortho-phosphate: No defects were found. All ortho-phosphate results are acceptable.

Sulfide: The SAS requires a low standard be run to confirm the reporting limit. This was not performed. All results are estimated "J" for detects and "UJ" for non-detects for failing to verify the reporting limit.

TOC: The SAS requires a low standard be run to confirm the reporting limit. This was not performed. All results below the lowest calibration standard of 10 mg/L (all results except 07CE25-28, -30, and -61) are estimated "J" for detects and "UJ" for non-detects. TOC results for

07CE25-28, -30, and -61 are greater than 10 mg/L and are acceptable.

Other comments: Samples 07CE25-30/-32, -40/42, -64/71, -66/73, -69/76 and 07CE25-99/07CE26-02 were identified as field duplicates. Duplicates were evaluated according to the same criteria as laboratory duplicates. All showed good correlation. Sample 07CE25-48 was identified as an equipment blank. Sample 07CE25-53 was identified as a field blank. No contamination was found in any of the field blanks.

Reviewed by: Paul Little
Date: 5/09/2007

Lab ID	Sample ID	Sample Point	Sample Date	Sample Time
462795	07CE25-01	OEP-MW-103D	4/2/2007	16:10
462797	07CE25-03	OEP-MW-103S	4/2/2007	15:18
463175	07CE25-11	OEP-MW-1D	4/3/2007	11:15
463177	07CE25-13	OEP-MW-1S	4/3/2007	12:30
463180	07CE25-15	OEP-MW-4D	4/3/2007	12:00
463182	07CE25-17	OEP-MW-4S	4/3/2007	10:45
463186	07CE25-24	OEP-MW-101B	4/3/2007	15:00
463188	07CE25-26	OEP-MW-3D	4/3/2007	14:55
463191	07CE25-28	OEP-SW-01	4/3/2007	15:40
463193	07CE25-30	OEP-SW-03	4/3/2007	16:05
463195	07CE25-32	OEP-SW-03FR	4/3/2007	16:05
463629	07CE25-38	OEP-MW-105B	4/4/2007	10:15
463631	07CE25-40	OEP-MW-105S	4/4/2007	10:10
463633	07CE25-42	OEP-MW-15SFR	4/4/2007	10:10
463641	07CE25-44	OEP-MW-5D	4/4/2007	11:35
463643	07CE25-46	OEP-MW-105D	4/4/2007	11:30
463645	07CE25-48	OEP-EB-01	4/4/2007	12:05
463627	07CE25-53	OEP-FB-01	4/4/2007	11:55
463635	07CE25-55	OEP-MW-15B	4/4/2007	14:50
463637	07CE25-57	OEP-MW-15D	4/4/2007	14:55
463639	07CE25-59	OEP-MW-15S	4/4/2007	15:50
463640	"	"	4/4/2007	15:50
463884	07CE25-62	OEP-MW12D	4/5/2007	11:10
463889	07CE25-64	OEP-MW-102D	4/5/2007	14:30
463891	07CE25-66	"	4/5/2007	14:30
463893	07CE25-69	"	4/5/2007	14:30
463895	07CE25-71	OEP-MW-102DFR	4/5/2007	14:30
463896	07CE25-73	"	4/5/2007	14:30
463898	07CE25-76	"	4/5/2007	14:30
463900	07CE25-80	OEP-MW-12B	4/5/2007	10:55
463901	07CE25-82	"	4/5/2007	10:55
463903	07CE25-85	"	4/5/2007	10:55
463928	07CE25-89	OEP-MW-12S	4/5/2007	15:40
463929	07CE25-91	"	4/5/2007	15:40
463931	07CE25-94	"	4/5/2007	15:40
464253	07CE25-97	OEP-MW-13D	4/6/2007	10:35
464255	07CE25-99	OEP-MW-13S	4/6/2007	10:45
464257	07CE26-02	OEP-MW-13SFR	4/6/2007	10:45
464259	07CE26-04	OEP-MW-16S	4/6/2007	12:45
464261	07CE26-06	OEP-SW-02	4/6/2007	13:00

Reviewed by: Paul Little
Date: 5/09/2007

ILM05.3 Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Reviewed by: Paul Little
Date: 5/09/2007

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5/3/07

SUBJECT: **Review of Data**
Received for review on 4/26/07

FROM: **Stephen L. Ostrodka, Chief (SRT-4J)**
Superfund Field Services Section

TO: **Data User:** CH2M Hill

We have reviewed the data for the following case:

SITE NAME: Oconomowoc Electroplating (WI)

CASE NUMBER: 07CE25 **SDG NUMBER:** 59529-MET

Number and Type of Samples: 62 waters (31 total/31 dissolved)

Sample Numbers: 07CE25-01 thru -04, -11 thru -18, -24 thru -33, -38 thru -49, -53 thru -60, -62, -63, -68, -70, -75, -77, -84, -86, -93, -95, -97 thru -99, 07CE26-01 thru -07

Laboratory: CT Laboratories **Hrs. for Review:** _____

Following are our findings:

CC: Howard Pham
Region 5 TOPO
Mail Code: SRT-4J

Narrative

The laboratory's portion of this case contains 62 water samples (31 dissolved, 31 total, see attached table) which were collected between April 2 and 6, 2007 and received at the laboratory between April 3 and 7, 2007. They were analyzed for iron and manganese. All sample results are reported to the MDL. The samples were analyzed using SW846 6010B (ICP-AES) analysis procedures.

Evidential Audit: All provided ICP reporting forms are CLP-like documents. All documents provided are copies. No location is noted for the originals. No DC-1 or DC-2 forms, or sample tags were provided. CLP equivalent forms for ICSA/ABs were not provided. Levels recorded on the Forms for the RL check sample ("CRDL" sample) were not at the SAS required levels.

No analytical date was provided on the MDL summary form or the linearity form. MDL and linearity values recorded on the forms provided were used for evaluation of the data.
The values provided for MDLs on the calibration blanks forms (29.2 for Fe, 5.7 for Mn) were different from the Level of Detection (LOD) listed on the Form 1s (39 total Fe, 10 dissolved Fe, 0.5 total Mn, 0.4 dissolved Mn). Dissolved LOD/RL values are used for evaluation of the blank data.

The Duplicate Forms included are for the LCS/LCSD. Duplicate forms are also included for the MS/MSD. The laboratory performed post digestion spikes on serial dilution failures and reported results unqualified. This does not make the data reportable. Samples affected by failed serial dilutions are qualified due to possible matrix interferences.

No times are included on the Analysis Run Logs for the calibration. Four run logs were included with the case; each represents part of the same analytical run.

Several errors were found on reporting forms by this reviewer. They were corrected.

ICP-AES: Section 8(d) of the SAS requires that the RL must be shown to have been met before any samples are analyzed; since the "CRDL" sample was not analyzed at the SAS required RL (the sample contains 1000 ug/L Fe and 10 ug/L Mn; the SAS requires 30 ug/L Fe and 6 ug/L Mn), this requirement was not met. All Fe results less than 1000 ug/L and Mn results less than 10 ug/L are estimated "J" for detects and "UJ" for non-detects due to the failure of the laboratory to meet the SAS required reporting limit.

For Fe, the SAS required reporting limit for total Fe (30 ug/L) was not met by the laboratory. All non-detect total Fe results (07CE25-01, -53, -57 and -59) are estimated "UJ." Additionally, all Fe results (total and dissolved) greater than the MDL but less than 1000 ug/L are estimated for the laboratory failing to meeting the SAS requirement of showing they were able to meet the SAS required reporting limit (see above). Total Fe results for 07CE25-03, -13, -17, -24, -26, -28, -30, -32, -38, -55, -84, -93, -99, 07CE26-02, -06, and dissolved Fe results for 07CE25-04, -12, -14, -18, -27, -29, -31, -33, -39, -56, -86, -95, -98, 07CE26-07 are estimated "J" due to the laboratory not demonstrating that they could meet the SAS required reporting limit. Also, the instrument values

are negative where the absolute values are greater than the LOD/RL for dissolved samples 07CE25-02, 07CE26-01 and -03; the results for those samples are unusable "R." Also, one of the CCBs was greater than the MDL; samples 07CE25-93 and 07CE26-02 are estimated "J+" due to possible contamination. Finally, the RPD for the serial dilution performed on dissolve sample 07CE25-63 was greater than 10% indicating possible physical or chemical interference; the results for samples 07CE25-63, -70, -77, -86, -95, -98, 07CE26-01, -03, -05 and -07 are estimated "J" due to possible physical or chemical interference.

For Mn, Mn was detected in one of the CCBs. Results for dissolved samples 07CE25-49 and -60 are estimated "J+" due to possible contamination. Also, total Mn results for 07CE25-28, -30, -32, -59, -99, 07CE26-02 and -06 and dissolved results for 07CE25-29, -31, -33, -60, -49, 07CE26-01, -03 and -07 are estimated "J" because the reported results are between the LOD/RL and the SAS required RL.

Other comments: Samples 07CE25-30/-32, -31/-33, -40/-42, -41/-43, -68/-75, -70/-77, -99/07CE26-01, 07CE26-01/-03 were identified as field duplicates. Duplicates were evaluated according to the same criteria as laboratory duplicates. All showed good correlation except 07CE25-23/-25 (both elements); no sample results were qualified for field duplicate failure.

Samples 07CE25-48 and -49 were identified as equipment blanks. Contamination was present in the total Fe equipment blank at a level higher than all other Fe results indicating possible field or laboratory contamination. Contamination was not present in the dissolved Fe sample. Contamination was present in both the dissolved and total field blanks; results for total samples 07CE25-11, -24, -26, -28, -30, -32, -44, -46, -59, -62, -68, -75, -84, -93, -97, -99, 07CE26-02, -04, -06 and results dissolved samples 07CE25-29, -33, -60, 07CE26-01, -03 and -07 are affected by the possible contamination and are estimated "J" if they were not previously estimated.

Samples 07CE25-53 and -54 were identified as field blanks. No contamination was found in any of the field blanks.

Reviewed by: Stephen Connet
Date: 5/3/2007

Lab ID	Sample ID	Lab ID	Sample ID	Sample Point	Sample Date	Sample Time
	(Total)		(Dissolved)			
462795	07CE25-01	462796	07CE25-02	OEP-MW-103D	4/2/2007	16:10
462797	07CE25-03	462798	07CE25-04	OEP-MW-103S	4/2/2007	15:18
463175	07CE25-11	463176	07CE25-12	OEP-MW-1D	4/3/2007	11:15
463177	07CE25-13	463178	07CE25-14	OEP-MW-1S	4/3/2007	12:30
463180	07CE25-15	463181	07CE25-16	OEP-MW-4D	4/3/2007	12:00
463182	07CE25-17	463183	07CE25-18	OEP-MW-4S	4/3/2007	10:45
463186	07CE25-24	463187	07CE25-25	OEP-MW-101B	4/3/2007	15:00
463188	07CE25-26	463189	07CE25-27	OEP-MW-3D	4/3/2007	14:55
463191	07CE25-28	463192	07CE25-29	OEP-SW-01	4/3/2007	15:40
463193	07CE25-30	463194	07CE25-31	OEP-SW-03	4/3/2007	16:05
463195	07CE25-32	463196	07CE25-33	OEP-SW-03FR	4/3/2007	16:05
463629	07CE25-38	463630	07CE25-39	OEP-MW-105B	4/4/2007	10:15
463631	07CE25-40	463632	07CE25-41	OEP-MW-105S	4/4/2007	10:10
463633	07CE25-42	463634	07CE25-43	OEP-MW-15SFR	4/4/2007	10:10
463641	07CE25-44	463642	07CE25-45	OEP-MW-5D	4/4/2007	11:35
463643	07CE25-46	463644	07CE25-47	OEP-MW-105D	4/4/2007	11:30
463645	07CE25-48	463646	07CE25-49	OEP-EB-01	4/4/2007	12:05
463627	07CE25-53	463628	07CE25-54	OEP-FB-01	4/4/2007	11:55
463635	07CE25-55	463636	07CE25-56	OEP-MW-15B	4/4/2007	14:50
463637	07CE25-57	463638	07CE25-58	OEP-MW-15D	4/4/2007	14:55
463639	07CE25-59	463640	07CE25-60	OEP-MW-15S	4/4/2007	15:50
463884	07CE25-62	463885	07CE25-63	OEP-MW12D	4/5/2007	11:10
463892	07CE25-68	463894	07CE25-70	OEP-MW-102D	4/5/2007	14:30
463897	07CE25-75	463899	07CE25-77	OEP-MW-102DFR	4/5/2007	14:30
463902	07CE25-84	463904	07CE25-86	OEP-MW-12B	4/5/2007	10:55
463930	07CE25-93	463932	07CE25-95	OEP-MW-12S	4/5/2007	15:40
464253	07CE25-97	464254	07CE25-98	OEP-MW-13D	4/6/2007	10:35
464255	07CE25-99	464256	07CE26-01	OEP-MW-13S	4/6/2007	10:45
464257	07CE26-02	464258	07CE26-03	OEP-MW-13SFR	4/6/2007	10:45
464259	07CE26-04	464260	07CE26-05	OEP-MW-16S	4/6/2007	12:45
464261	07CE26-06	464262	07CE26-07	OEP-SW-02	4/6/2007	13:00

Reviewed by: Stephen Connet
Date: 5/3/2007

ILM05.3 Data Qualifier Sheet

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Reviewed by: Stephen Connet
Date: 5/3/2007

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
SUPERFUND DIVISION

DATE:

SUBJECT: Review of Data
Received for Review on: April 26, 2007

FROM: Stephen L. Ostrodka, Chief (SRT-4J)
Superfund Field Services Section

TO: Data User: Ch2m Hill

We have reviewed the data for the following case:

SITE Name: Oconomowoc Electroplating (WI)

SAS Project: 07CE25 SDG Number: 59529-ORG

Number and Type of Samples: 62 Water samples (58 VOCs / 31 MEE)

Sample Numbers: 07CE25; -01, -03, -05, -06, -07, -08, -09, -10, -11, -13, -15, -17, -19, -20, -21, -22, -23, -24, -26, -28, -30, -32, -34, -35, -36, -37, -38, -40, -42, -44, -46, -48, -50, -51, -52, -53, -55, -57, -59, -61, -62, -65, -67, -72, -74, -78, -79, -81, -83, -87, -88, -90, -92, -97, -99, 07CE26; -02, -04, -06, -08, -09, -10, OEP-MW-RT08

Laboratory: CT Laboratories Hrs for Review:

Following are our findings:

CC: Howard Pham
Region 5 TPO
Mail Code: SRT-4J

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Sixty two (62) preserved water samples listed in the following table were collected April 02 - 06, 2007. The laboratory received the samples April 03 - 09, 2007 intact and in good condition. Twenty three (23) samples arrived with cooler temperatures below the criteria range of 2 – 6 °C and are identified in the following table. All samples were analyzed April 10 – 14, 2007. Fifty eight (58) samples were analyzed using the SW-846 Method 8260B for the volatile list of organic analytes identified in the SAS contract for estimated dates of collection from January 2007 through March 2009. All pH values were less than 2 for the VOA samples. Thirty one (31) samples were analyzed using Method RSK 175 for Methane, Ethane and Ethene as identified in the SAS contract for estimated dates of collection from January 2007 through March 2011.

EPA ID	CTI Lab ID	Sample location	Date sampled	MEE Analyses	VOC Analyses	Cooler Temp, °C
07CE25-01	462795	OEP-MW-103D	04/02/07	4/11&4/11	4/10 & 4/12	**1.1**
07CE25-03	462797	OEP-MW-103S	04/02/07	4/11&4/11	4/10	**1.1**
07CE25-05	463139	OEP-PW-01	04/02/07		4/10	**1.9**
07CE25-06	463142	OEP-PW-02	04/02/07		4/10	**1.9**
07CE25-07	463143	OEP-PW-04	04/02/07		4/10	**1.9**
07CE25-08	463144	OEP-PW-07	04/02/07		4/10	**1.9**
07CE25-09	463145	OEP-PW-09	04/02/07		4/10	**1.9**
07CE25-10	462799	OEP-MW-RT01	04/02/07		4/14	**1.1**
07CE25-11	463175	OEP-MW-1D	04/03/07	4/11	4/11	2.6
07CE25-13	463177	OEP-MW-1S	04/03/07	4/11	4/11	2.6
07CE25-15	463180	OEP-MW-4D	04/03/07	4/11&4/11	4/11	3.0
07CE25-17	463182	OEP-MW-4S	04/03/07	4/11	4/11	3.0
07CE25-19	463179	OEP-MW-RT02	04/03/07		4/10	2.6
07CE25-20	463184	OEP-MW-RT03	04/03/07		4/14	3.0
07CE25-21	463185	OEP-MW-RT04	04/03/07		4/12	3.4
07CE25-22	463190	OEP-MW-RT05	04/03/07		4/11	**0.4**
07CE25-23	463146	OEP- MW-RT06	04/03/07		4/10	**1.9**
07CE25-24	463186	OEP-MW-101B	04/03/07	4/11&4/11	4/11	3.4
07CE25-26	463188	OEP-MW-3D	04/03/07	4/11&4/11	4/11	3.4
07CE25-28	463191	OEP-SW-01	04/03/07	4/11	4/11	**0.4**
07CE25-30	463193	OEP-SW-03	04/03/07	4/11	4/11	**0.4**
07CE25-32	463195	OEP-SW-03FR	04/03/07	4/11	4/11	**0.4**
07CE25-34	463147	OEP-PW-10	04/03/07		4/10	**1.9**
07CE25-35	463148	OEP-PW-11	04/03/07		4/11	**1.9**
07CE25-36	463149	OEP-PW-10FR	04/03/07		4/11	**1.9**
07CE25-37	463150	OEP-PW-11FR	04/03/07		4/14	**1.9**
07CE25-38	463629	OEP-MW-105B	04/04/07	4/11&4/11	4/11	2.0
07CE25-40	463631	OEP-MW-105S	04/04/07	4/11&4/11	4/11&4/12	2.0
07CE25-42	463633	OEP-MW-105SFR	04/04/07	4/11&4/11	4/11	2.0
07CE25-44	463641	OEP-MW-5D	04/04/07	4/11&4/11	4/11	2.0
07CE25-46	463643	OEP-MW-105D	04/04/07	4/11&4/11	4/12	2.0

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

EPA ID	CTI Lab ID	Sample location	Date sampled	MEE Analyses	VOC Analyses	Cooler Temp, °C
07CE25-48	463645	OEP-EB	04/04/07	4/11	4/12	2.0
07CE25-50	463869	OEP-PW-03	04/04/07		4/12	**1.6**
07CE25-51	463879	OEP-PW-08	04/04/07		4/12	**1.6**
07CE25-52	463880	OEP-PW-08FR	04/04/07		4/12	**1.6**
07CE25-53	463627	OEP-FB	04/04/07	4/11	4/11	2.0
07CE25-55	463635	OEP-MW-15B	04/04/07	4/11	4/11	2.0
07CE25-57	463637	OEP-MW-15D	04/04/07	4/11	4/11&4/12	2.0
07CE25-59	463639	OEP-MW-15S	04/04/07	4/11	4/12	2.0
07CE25-61	463647	OEP-MW-RT07	04/04/07		4/13	2.9
07CE25-62	464264	OEP-MW-12D	04/05/07	4/11&4/11	4/10	2.9
07CE25-65	464269	OEP-MW-102D	04/05/07	4/11		2.9
07CE25-67	464270	OEP-MW-102D	04/05/07		4/12&4/13	2.9
07CE25-72	464271	OPE-MW-102DFR	04/05/07	4/11		2.9
07CE25-74	464272	OEP-MW-102DFR	04/05/07		4/12&4/13	2.9
07CE25-78	464273	OEP-MW-106D	04/05/07		4/13	2.9
07CE25-79	464274	OEP-MW-106S	04/05/07		4/13	2.9
07CE25-81	464275	OEP-MW-12B	04/05/07	4/11&4/11		2.9
07CE25-83	464278	OEP-MW-12B	04/05/07		4/13	2.9
07CE25-87	463881	OEP-PW-05	04/05/07		4/12	**1.6**
07CE25-88	463882	OEP-DW-01	04/05/07		4/12	**1.6**
07CE25-90	464279	OEP-MW-12S	04/05/07	4/11&4/11		2.9
07CE25-92	464280	OEP-MW-12S	04/05/07		4/12	2.9
07CE25-97	464253	OEP-MW-13D	04/06/07	4/11	4/12	2.9
07CE25-99	464255	OEP-MW-13S	04/06/07	4/11	4/12	2.9
07CE26-02	464257	OEP-MW-13SFR	04/06/07	4/11	4/12	2.9
07CE26-04	464259	OEP-MW-16S	04/06/07	4/11,4/11,4/11	4/12	2.9
07CE26-06	464261	OEP-SW-02	04/03/07	4/11	4/12	2.9
07CE26-08	464283	OEP-MW-RT09	04/06/07		4/12	2.9
07CE26-09	464286	OEP-MW-107D	04/06/07		4/13	2.9
07CE26-10	464287	OEP-MW-107S	04/06/07		4/13	2.9
OEP-MW-RT08	463883	OEP-MW-RT08	04/05/07		4/12	**1.6**

The laboratory reported the results of 46 volatile analytes. Only the following 37 volatile analytes were requested in the SAS contract and only these analytes will be discussed in the following validation report.

Acetone	Benzene	Bromodichloromethane
Bromoform	Bromomethane	2-Butanone (MEK)
Carbon disulfide	Carbon tetrachloride	Chlorobenzene
Chloroethane	Chloroform	Chloromethane
Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane
1,1-Dichloroethene	Cis-1,2-Dichloroethene	Trans-1,2-Dichloroethene
1,2-Dichloropropane	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene
Ethylbenzene	2-Hexanone	Isopropylbenzene
4-Methyl-2-pentanone (MIBK)	Methyl tert-butyl ether	Methylene chloride
Styrene	1,1,2,2-Tetrachloroethane	Tetrachloroethene

Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane
Trichloroethene	Vinyl chloride	m & p-Xylene
o-Xylene		

MB-464909, MB-465196 and MB-465703 are the method blanks for the SW-846 Method 8260B analyses. MB-465150 and MB-465155 are the method blanks for Method RSK 175 analyses.

Samples 07CE25-57, 07CE25-62 and 07CE25-78 were used as the matrix spike/matrix spike duplicates for the SW-846 Method 8260B analyses. Samples 07CE25-57 and 07CE25-62 were used as the matrix spike/matrix spike duplicates for Method RSK 175 analyses.

Samples LCS-464889/LCSD-465324, LCS-465195/LCSD-465391 and LCS-465702/ LCSD-466227 are the laboratory control sample and laboratory control sample duplicate pairs for the SW-846 Method 8260B analyses. Samples LCS-465149/LCSD-465192 and LCS-465154/LCSD-465158 are the laboratory control sample and laboratory control sample duplicate pairs for Method RSK 175 analyses.

Sample 07CE25-48 is identified as an Equipment Blank. Sample 07CE25-53 is identified as a Field Blank.

Samples 07CE25-30/07CE25-32, 07CE25-34/07CE25-36, 07CE25-35/07CE25-37, 07CE25-40/07CE25-42, 07CE25-51/07CE25-52, 07CE25-67/07CE25-74, 07CE25-99/07CE26-02 are field duplicate pairs for the SW-846 Method 8260B analyses. Samples 07CE25-30/07CE25-32, 07CE25-40/07CE25-42, 07CE25-65/07CE25-72 and 07CE25-99/07CE26-02 are field duplicate pairs for the RSK 175 analyses.

The VOA and MEE analyses were performed within the technical holding time of 14 days after sample collection; therefore, the results are acceptable.

1. HOLDING TIME

Sixty two (62) preserved water samples were collected April 02 - 06, 2007. The laboratory received the samples April 03 - 09, 2007 intact and in good condition. Twenty three (23) samples arrived with cooler temperatures below the criteria range of 2 – 6 °C. All samples were analyzed April 10 – 14, 2007. Fifty eight (58) samples were analyzed using the SW-846 Method 8260B for the volatile list of organic analytes identified in the SAS contract for estimated dates of collection from January 2007 through March 2009. All pH values were less than 2 for samples analyzed using the SW-846 Method 8260B. Thirty one (31) samples were analyzed using Method RSK 175 for Methane, Ethane and Ethene as identified in the SAS contract for estimated dates of collection from January 2007 through March 2011.

The VOA and MEE analyses were performed within the technical holding time of 14 days after sample collection; therefore, the results are acceptable.

2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

VOC: All GC/MS tuning for SW-846 Method 8260B complied with the mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

MEE: All GC/FID calibration complied with the amount and area for the MEE (Methane-Ethane-Ethene) standards. All samples were analyzed within the twelve (12) hour periods for instrument performance checks; therefore, the results are acceptable.

3. CALIBRATION

VOC: A 7-point calibration curve (0.2, 0.4, 1.0, 2.0, 4.0, 6.0 and 8.0 µg/L) was performed on April 10, 2007. No minimum RRF values were identified in the SAS contract. The average RRFs for Acetone, 2-Butanone and 2-Hexanone were less than 0.05 but greater than the minimum RRF of 0.01 currently used in SOW SOM01.1. All %RSDs were less than 15% or correlation coefficients (r^2) were greater than 0.99. Acetone and Methylene Chloride were evaluated using their correlation coefficients.

. The average RRF for surrogate 1,2-Dichloroethane-d_4 was less than 0.05 and less than the minimum RRF of 0.05 currently used in SOW SOM01.1. Sample results are not qualified based on the RRF values or %RSD of the surrogates alone.

Continuing Calibrations were conducted at the start of every analytical sequence. All analytes are evaluated for %Ds less than 20%. No minimum RRF values were identified in the SAS contract. The continuing RFs for Acetone, 2-Butanone, 4-Methyl-2-pentanone and 2-Hexanone were less than 0.05 but greater than the minimum RFs of 0.01 currently used in SOW SOM01.1. All %Ds for the surrogates

(1,2-Dichloroethane-d_4, Bromofluorobenzene, Dibromofluoromethane and Toluene-d_8) were greater than 20%. Sample results are not qualified based on the %Ds of the surrogates alone.

The following samples are associated with a continuing calibration where one or more analytes has a %D greater than 20%.

Detected compounds should be qualified "J".

Methylene chloride
07CE25-05, 07CE25-22, 07CE25-40, 07CE25-42, 07CE25-44

Acetone
07CE25-05, 07CE25-06, 07CE25-61

Non-detected results for the following analytes should be qualified "UJ". Non-detected results for Methylene chloride in some samples is qualified "R" due to poor recoveries in the associated LCS sample.

Bromomethane
07CE25-11, 07CE25-13, 07CE25-15, 07CE25-17, 07CE25-35, 07CE25-36, 07CE25-40, 07CE25-42, 07CE25-44, 07CE25-62MS, 07CE25-62MSD, LCSD-465324

Methylene chloride
07CE25-01, 07CE25-03, 07CE25-06, 07CE25-07, 07CE25-08, 07CE25-09, 07CE25-10, 07CE25-19, 07CE25-20, 07CE25-21, 07CE25-23, 07CE25-24, 07CE25-26, 07CE25-28, 07CE25-30, 07CE25-32, 07CE25-34, 07CE25-37, 07CE25-38, 07CE25-46, 07CE25-48, 07CE25-50, 07CE25-51, 07CE25-52, 07CE25-53, 07CE25-55, 07CE25-57, 07CE25-57MS, 07CE25-57MSD, 07CE25-59, 07CE25-61, 07CE25-62, 07CE25-67, 07CE25-74, 07CE25-78, 07CE25-78MS, 07CE25-78MSD, 07CE25-79, 07CE25-83, 07CE25-87, 07CE25-88, 07CE25-92, 07CE25-97, 07CE25-99, 07CE26-02, 07CE26-04, 07CE26-06, 07CE26-08, 07CE26-09, 07CE26-10, LCS-464889, LCS-465195, LCS-165702, LCSD-465391, LCSD-465324, LCSD-466227, MB-464909, MB-465196, MB-465703, OEP-MW-RT08

Acetone
07CE25-01, 07CE25-03, 07CE25-07, 07CE25-08, 07CE25-09, 07CE25-10, 07CE25-19, 07CE25-20, 07CE25-23, 07CE25-34, 07CE25-37, 07CE25-62, 07CE25-67, 07CE25-74, 07CE25-78, 07CE25-78MS, 07CE25-78MSD, 07CE25-79, 07CE25-83, 07CE26-09, 07CE26-10, LCS-464889, LCSD-466227, MB-464909

1,1,1-Trichloroethane
07CE25-61, 07CE25-67, 07CE25-74, 07CE25-78, 07CE25-79, 07CE25-83, 07CE26-09, 07CE26-10

MEE: An Initial 7-pt calibration curve (2, 5, 10, 20, 50, 100 and 200 ppmV) of the Volatile standards was performed on May 9, 2005. The linearity of Methane, Ethane and Ethene were acceptable with the correlation coefficients (r^2) greater than 0.99.

The %Ds for all continuing calibrations were $\leq$ 20%. No qualifications are required for this criterion.

4. BLANKS

VOC: MB-464909 (4/10/07), MB-465196 (4/11/07) and MB-465703 (4/12/07) are the method blanks for the SW-846 Method 8260B analyses. MB-464909 and MB-465196 contained no target analytes. Method blank MB-465703 contained 1,1,1-Trichloroethane at 0.101 µg/L. 1,1,1-Trichloroethane is not a common laboratory contaminant.

The concentrations of 1,1,1-Trichloroethane were less than five times (5X) the associated method blank (MB-465703) concentration in the following samples. The analyte was qualified "U" as resulting from blank contamination. The Volatile Method Blank Summaries list the samples associated with each method blank.

1,1,1-Trichloroethane
07CE25-99, 07CE26-02

Sample 07CE25-48 is the equipment blank. The equipment blank 07CE25-48 contained Chloromethane at 0.18 µg/L. Chloromethane is not a common laboratory contaminant. The equipment blank contamination applies to all samples in this SDG.

Samples that reported analyte concentrations less than five times (5X) the equipment blank concentration should be qualified "U" as resulting from blank contamination. Non-detected results in sample 07CE25-15 and 07CE25-51 are qualified "UJ" due to poor surrogate recoveries.

Chloromethane
07CE25-11, 07CE25-13, 07CE25-15, 07CE25-19, 07CE25-28, 07CE25-34, 07CE25-35, 07CE25-36, 07CE25-37, 07CE25-46, 07CE25-51, 07CE25-97, 07CE26-02

Sample 07CE25-53 is the field blank. The field blank contained Chloroform above the SAS reporting limit (1.9 µg/L). Chloroform is not a common laboratory contaminant. The field blank contamination applies to all samples in this SDG.

Samples that reported analyte concentrations less than five times (5X) the field blank concentration should be qualified "U" as resulting from blank contamination. Non-detected result in sample 07CE25-09 is qualified "UJ" due to poor surrogate recovery.

Chloroform
07CE25-09, 07CE26-08

MEE: MB-465150 and MB-465155 are the method blanks for Method RSK 175 analyses.

None of the Method Blanks had any contaminants; therefore, the results are acceptable. The Volatile Method Blank Summaries list the samples associated with each method blank.

Sample 07CE25-48 is the equipment blank. The equipment blank contained Methane at 0.53 ug/L. Samples that reported Methane concentrations less than five times (5X) the equipment blank concentration should be qualified "U" as resulting from blank contamination.

Methane
07CE25-17, 07CE25-30, 07CE25-32, 07CE25-99, 07CE26-02, 07CE26-06

5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

VOC: 1,2-Dichloroethane-d_4, Bromofluorobenzene, Dibromofluoromethane and Toluene-d_8 were used as surrogates for the VOA samples. The percent recoveries of Toluene-d_8 for samples 07CE25-07, 07CE25-08, 07CE25-09, 07CE25-15, 07CE25-50, 07CE25-51, 07CE25-52, 07CE25-79 and 07CE26-10 were below the QC limits of 75-135%. The positive results for the above VOA samples are qualified as estimated "J" and non-detected results as "UJ". Methylene chloride for samples 07CE25-07, 07CE25-08, 07CE25-09, 07CE25-15, 07CE25-50, 07CE25-79 and 07CE26-10 are qualified "R" due to low recoveries of Methylene chloride in the associated LCS/LCSD.

MEE: Not applicable to this analysis.

6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

VOC: Samples 07CE25-57, 07CE25-62 and 07CE25-78 were used as the matrix spike/matrix spike duplicates for the SW-846 Method 8260B analyses.

For the 07CE25-57MS and 07CE25-57MSD pair, the percent recoveries for all compounds, except Acetone, were within the QC limits (60 – 130%) for samples 07CE25-57MS and 07CE25-57MSD. All RPDs were less than 30%. The percent recoveries for Acetone were above the upper limit in sample 07CE25-57MS. Acetone was not detected in the unspiked sample 07CE25-57; therefore, no action is required.

For the 07CE25-62MS and 07CE25-62MSD pair, the percent recovery of Methylene chloride was above the upper limit in sample 07CE25-62MSD. The percent recoveries of Styrene in 07CE25-62MS and 07CE25-62MSD were below the QC limit. The RPD for Methylene chloride for 07CE25-62MS and 07CE25-62MSD was above the QC limit of 30%. Methylene chloride and Styrene were not detected in the unspiked sample 07CE25-62. The non-detected result for Styrene should be qualified as estimated "UJ". The Non-detected result for Methylene chloride in the unspiked sample 07CE25-62, should be ultimately qualified as unusable "R" due to very low LCS recoveries.

For the 07CE25-78MS and 07CE25-78MSD pair, the percent recoveries of Acetone in 07CE25-78MS and 07CE25-78MSD were above the QC limit. The percent recovery for Carbon disulfide in 07CE25-78MS was below the QC limit. The percent recoveries of Methylene chloride and Styrene in 07CE25-78MS and 07CE25-78MSD were below 20%. The RPD for Styrene was above 30%. Methylene chloride, Acetone, Carbon disulfide and Styrene were not detected in the unspiked sample 07CE25-78. The non-detected result for Acetone is not affected by high spike recovery but is qualified as "UJ" because of RPD for Acetone in the associated LCS/LCSD was above the QC limit. The non-detected result for Carbon disulfide should be qualified as "UJ". The non-detected results for Methylene chloride and Styrene should be qualified as "R" in the unspiked sample 07CE25-78.

MEE: Samples 07CE25-57 and 07CE25-62 were used as the matrix spike/matrix spike duplicates for Method RSK 175 analyses.

The percent recoveries and RPDs were within the QC criteria (60 – 130%) for sample 07CE25-57MS and 07CE25-57MSD.

All RPDs between 07CE25-62MS and 07CE25-62MSD were less than 30%. The percent recoveries for Methane were greater than 130% in both samples 07CE25-62MS and 07CE25-62MSD. The detection for Methane in the unspiked sample, 07CE25-62, should be qualified as estimated, "J".

6B. LABORATORY CONTROL SAMPLES

VOC: Samples LCS-464889/LCSD-465324, LCS-465195/LCSD-465391 and LCS-465702/ LCSD-466227 are the laboratory control sample and laboratory control sample duplicate pairs for the SW-846 Method 8260B analyses.

LCS-464889 and LCSD-465324 were analyzed April 10, 2007. Zero percent recovery of Methylene chloride was detected for LCS-464889. The %RPD was 200%. The detection of Methylene chloride in sample 07CE25-05 should be qualified "J". Non-detected results in the remaining samples are qualified as unusable "R".

Methylene chloride
07CE25-01, 07CE25-03, 07CE25-05, 07CE25-06, 07CE25-07, 07CE25-08, 07CE25-09, 07CE25-10, 07CE25-11, 07CE25-13, 07CE25-15, 07CE25-17, 07CE25-19, 07CE25-20, 07CE25-23, 07CE25-34, 07CE25-35, 07CE25-36, 07CE25-37, 07CE25-62, 07CE25-62MS, 07CE25-62MSD

LCS-465195 and LCSD-465391 were analyzed April 11, 2007. The percent recovery of Methylene chloride in LCSD-465391 was below the QC limit of 60% but greater than 20%. The RPD for Methylene chloride for LCS-465195 and LCSD-465391 was greater than 30%. The percent recovery of Acetone in LCS-465391 was above the QC limit of 130%. The detection of Methylene chloride in samples 07CE25-22, 07CE25-40, 07CE25-42 and 07CE25-44 and Acetone in sample 07CE25-30 should be qualified as estimated "J". Non-detected results for Methylene chloride in the remaining samples should be qualified as "UJ". Non-detected results for Acetone are not qualified for this criterion.

Methylene chloride, Acetone
07CE25-22, 07CE25-24, 07CE25-26, 07CE25-28, 07CE25-30, 07CE25-32, 07CE25-38, 07CE25-40, 07CE25-42, 07CE25-44, 07CE25-46, 07CE25-48, 07CE25-51, 07CE25-52, 07CE25-53, 07CE25-55, 07CE25-57, 07CE25-59, 07CE25-87

LCS-465702 and LCSD-466227 were analyzed April 12, 2007. The percent recovery of Methylene chloride in LCS-465702 was below the QC limit of 60% but greater than 20%. The percent recovery of Methylene chloride in LCSD-466227 was below 20%. The percent recovery of Acetone in LCSD-466227 was above the QC limit of 130%. The RPDs for Methylene chloride, Acetone, 4-Methyl-2-pentanone and 2-Hexanone were above 30%. The detected results for Acetone in samples 07CE25-61 and OEP-MW-RT08 should be qualified as estimated "J". The non-detected results for Acetone, 4-Methyl-2-pentanone and 2-Hexanone should be qualified as estimated at the detection limit "UJ". The non-detected results for Methylene chloride should be qualified as unusable "R".

Methylene chloride, Acetone, 4-Methyl-2-pentanone, 2-Hexanone
07CE25-21, 07CE25-50, 07CE25-61, 07CE25-67, 07CE25-74, 07CE25-78, 07CE25-78MS, 07CE25-78MSD, 07CE25-79, 07CE25-83, 07CE25-88, 07CE25-92, 07CE25-97, 07CE25-99, 07CE26-02, 07CE26-04, 07CE26-06, 07CE26-08, 07CE26-09, 07CE26-10, OEP-MW-RT08

MEE: Samples LCS-465149/LCSD-465192 and LCS-465154/LCSD-465158 are the laboratory control sample and laboratory control sample duplicate pairs for Method RSK 175 analyses. The percent recoveries for all compounds were within the QC limits (60 – 130%) and all RPDs were less than 30%. No samples required qualification for this criterion.

7. FIELD BLANK AND FIELD DUPLICATE

Samples 07CE25-30/07CE25-32, 07CE25-34/07CE25-36, 07CE25-35/07CE25-37, 07CE25-40/07CE25-42, 07CE25-51/07CE25-52, 07CE25-67/07CE25-74, 07CE25-99/07CE26-02 are field duplicate pairs for the SW-846 Method 8260B analyses. The VOA results and RPDs for the duplicate samples are summarized in the following table.

Analyte	**07CE25-30**	**07CE25-32**	RPDs
Vinyl chloride	0.031 J	0.036 J	14.9 %
Acetone	1.9 J	1.3 U	200 %
1,1-Dichloroethane	0.067	0.075 J	11.3 %
1,1,1-Trichloroethane	0.25	0.29	14.8 %
Trichloroethene	0.84	0.99	16.3 %
cis-1,2-Dichloroethene	0.30	0.32	6.4 %
	07CE25-34	**07CE25-36**	
Methyl tert-butyl ether	0.21	0.23	9.1 %
	07CE25-35	**07CE25-37**	
cis-1,2-Dichloroethene	0.55	0.54	1.8 %
Methyl tert-butyl ether	0.82	0.99	18.8 %
	07CE25-40	**07CE25-42**	
Vinyl chloride	8.8	8.6	2.3 %
Methylene chloride	21	14	40 %
1,1-Dichloroethene	15	16	6.4 %
1,1-Dichloroethane	65	64	1.6 %
1,1,1-Trichloroethane	2.2 J	2.2 J	0 %
Trichloroethene	570	510	11.1 %
cis-1,2-Dichloroethene	310	330	6.2 %
trans-1,2-Dichloroethene	4.0 J	3.8 J	5.1 %
	07CE25-51	**07CE25-52**	
Vinyl chloride	0.056 J	0.047 J	17.5 %
Trichloroethene	0.11 J	0.11 J	0 %
cis-1,2-Dichloroethene	1.3	1.2	8.0 %
Methyl tert-butyl ether	0.71	0.74	4.1 %

trans-1,2-Dichloroethene	0.082 J	0.095 J	14.7 %
	07CE25-67	**07CE25-74**	
Vinyl chloride	0.10	0.11	9.5 %
1,1-Dichloroethene	0.085 J	0.083 J	2.4 %
1,2-Dichloroethane	0.30	0.34	12.5 %
Trichloroethene	0.96	0.95	1.0 %
cis-1,2-Dichloroethene	19	18	0 %
Methyl tert-butyl ether	0.99	1.1	10.5 %
trans-1,2-Dichloroethene	1.3	1.3	0 %
	07CE25-99	**07CE26-02**	
1,1-Dichloroethane	0.11 J	0.12 J	8.7 %
Trichloroethene	1.4	1.4	0 %
Tetrachloroethene	0.057 J	0.057 J	0 %
cis-1,2-Dichloroethene	0.49	0.63	25.0 %
trans-1,2-Dichloroethene	0.06 U	0.073 J	200 %

Samples 07CE25-30/07CE25-32, 07CE25-40/07CE25-42, 07CE25-65/07CE25-72 and 07CE25-99/07CE26-02 are field duplicate pairs for the RSK 175 analyses. The MEE results and RPDs for the duplicate samples are summarized in the following table.

Analyte	**07CE25-30**	**07CE25-32**	RPDs
Methane	1.4 U	0.48 U	
	07CE25-40	**07CE25-42**	
Ethane	1.3	16	170 %
Methane	260	250	3.9 %
	07CE25-65	**07CE25-72**	
Methane	9.5	8.0	17.1 %
	07CE25-99	**07CE26-02**	
Methane	0.57 U	0.44 U	

Sample results are not qualified based on the results of field duplicate samples.

Sample 07CE25-48 is the equipment blank and 07CE25-53 is the field blank. The equipment blank contained Chloromethane at 0.18µg/L and Methane at 0.53µg/L. The field blank contained Chloroform above the SAS reporting limit at 1.9 µg/L.

8. INTERNAL STANDARDS

The three internal standard's (Fluorobenzene, Chlorobenzene-d_5, 1,4-Dichlorobenzene-d_4) retention times and area counts for the VOC samples were within the QC limits; therefore, the results are acceptable.

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOC and MEE compounds were properly identified.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

All samples were waters and dilutions were run. The reporting limits for the VOC compounds were less than or equal to the reporting limits specified in the SAS contract for all analytes except cis-1,3-Dichloropropene and trans-1,3-Dichloropropene. The required reporting limit for cis-1,3-Dichloropropene was 0.016 µg/L and the actual reporting limit was 0.017 µg/L. The required reporting limit for trans-1,3-Dichloropropene was 0.015 µg/L and the actual reporting limit was 0.019 µg/L. Xylenes (total) was reported as m,p-Xylene and o-Xylene. The reporting limits for Ethane, Ethene and Methane of less than or equal to 10 µg/L as specified in the SAS contract were met. All target compound quantitations were properly reported.

The following VOC samples reported analyte concentrations below the SAS reporting limits but above the laboratory's detection limits. The concentrations should be qualified as estimated, "J".

07CE25-01
Bromodichloromethane

07CE25-03
Vinyl chloride, 1,1-Dichloroethene, Tetrachloroethene, Chlorobenzene

07CE25-06
Acetone, Carbon disulfide, m & p-Xylene, o-Xylene

07CE25-07
Methyl tert-butyl ether, trans-1,2-Dichloroethene

07CE25-08
Vinyl chloride, Trichloroethene, 2-Hexanone, Methyl tert-butyl ether

07CE25-09
Vinyl chloride, 1,2-Dichloroethane, Trichloroethene

07CE25-11
Isopropylbenzene

07CE25-15, 07CE25-97
Vinyl chloride

07CE25-20
Chloroethane

07CE25-26
Vinyl chloride, cis-1,2-Dichloroethene

07CE25-30
Vinyl chloride, Acetone

07CE25-32
Vinyl chloride, 1,1-Dichloroethane

07CE25-38
cis-1,2-Dichloroethene

07CE25-40, 07CE25-42
1,1,1-Trichloroethane, trans-1,2-Dichloroethene

07CE25-44, 07CE25-46, 07CE26-04
trans-1,2-Dichloroethene

07CE25-50
1,2-Dichloroethane, trans-1,2-Dichloroethene

07CE25-51, 07CE25-52
Vinyl chloride, Trichloroethene, trans-1,2-Dichloroethene

07CE25-57
1,1-Dichloroethane, Methyl tert-butyl ether

07CE25-59
1,1,1-Trichloroethane

07CE25-61
Acetone, Trichloroethene

07CE25-62, 07CE25-67, 07CE25-74
1,1-Dichloroethene

07CE25-87
Trichloroethene

07CE25-99
1,1-Dichloroethane, Tetrachloroethene

07CE26-02
1,1-Dichloroethane, Tetrachloroethene, trans-1,2-Dichloroethene

OEP-MW-RT08
Acetone

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. GC/FID baseline indicated acceptable performance.

12. ADDITIONAL INFORMATION

The final shipment of samples arrived at the Laboratory on April 9, 2007. The sample results were received by Ch2mHill on April 25, 2007 which is well within 21 calendar days of sample receipt.

Photocopies of the airbills were included with this package. The original sample tags, packing list and airbills should have been sent to CH2M HILL.

Copies of the most recent MDL studies were not included with this data package but MDL (LOD – Level of Detection) values are present on the Laboratory Form Is.

VOC SAS Table II. QC Requirements lists the frequency of audits for method blanks as 'at least one per group of 10 or fewer samples'. The laboratory conducted the method blank audits at a frequency of one per 20 samples.

The following VOC samples had analyte concentrations that exceeded the instruments calibration range. The samples were re-analyzed at various dilutions and only the diluted results were reported for the affected samples:

Trichloroethene
07CE25-01, 07CE25-57

Trichloroethene , Cis-1,2-Dichloroethene
07CE25-40, 07CE25-42

Cis-1,2-Dichloroethene
07CE25-67, 07CE25-74

The following MEE samples had analyte concentrations that exceeded the instruments calibration range. The samples were re-analyzed at various dilutions and only the diluted results were reported for the affected samples:

Methane
07CE25-01, 07CE25-03, 07CE25-11, 07CE25-15, 07CE25-24, 07CE25-26, 07CE25-38, 07CE25-40, 07CE25-42, 07CE25-44, 07CE25-46, 07CE25-55, 07CE25-62, 07CE25-81, 07CE25-90, 07CE26-04

The raw data for MEE sample 07CE25-11 (undiluted analysis) was not included with the data package; therefore, all results from the diluted analysis should be used for validation. Corrections for the reporting limits of Ethane and Ethene on Form 1A were made by the data reviewer.

The reporting limits for Ethane and Ethene of sample 07CE25-90 were reported incorrectly on Form 1A when compared to the raw data, corrections on Form 1A were made by the data reviewer.

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Summary of Sample Results (only SAS requested analytes):

Analytes	07CE25-01	07CE25-03	07CE25-05	07CE25-06	07CE25-07
Dilution factors =	100 / 500	20	1.0	1.0	1.0
Chloromethane	5.0 U	1.0 U	0.05 U	0.05 U	0.05 UJ
Bromomethane	6.0 U	1.2 U	0.06 U	0.06 U	0.06 UJ
Vinyl chloride	1.8 U	0.49 J	0.018 U	0.018 U	0.018 UJ
Chloroethane	5. U	1.0 U	0.05 U	0.05 U	0.05 UJ
Methylene chloride	15 R	3.0 R	3.5 J	0.15 R	0.15 R
Acetone	130 UJ	26 UJ	14 J	1.7 J	1.3 UJ
Carbon disulfide	10 U	2.0 U	0.10 U	0.13 J	0.10 UJ
1,1-Dichloroethene	15	2.0 J	0.04 U	0.04 U	0.04 UJ
1,1-Dichloroethane	14	5.2	0.06 U	0.06 U	0.06 UJ
Chloroform	4.0 U	0.8 U	0.04 U	0.04 U	0.04 UJ
1,2-Dichloroethane	3.0 U	0.6 U	0.079	0.03 U	0.03 UJ
2-Butanone	50 U	10 U	0.5 U	0.5 U	0.5 UJ
1,1,1-Trichloroethane	210	98	0.04 U	0.04 U	0.04 UJ
Carbon tetrachloride	4.0 U	0.8 U	0.04 U	0.04 U	0.04 UJ
Bromodichloromethane	4.5 J	0.8 U	0.04 U	0.04 U	0.04 UJ
1,2-Dichloropropane	5.0 U	1.0 U	0.05 U	0.05 U	0.05 UJ
cis-1,3-Dichloropropene	1.7 U	0.34 U	0.017 U	0.017 U	0.017 UJ
Trichloroethene	1000	120	0.05 U	0.05 U	0.05 UJ
Dibromochloromethane	2.9 U	0.58 U	0.029 U	0.029 U	0.029 UJ
1,1,2-Trichloroethane	4.0 U	0.8 U	0.04 U	0.04 U	0.04 UJ
Benzene	4.0 U	0.8 U	0.04 U	0.04 U	0.04 UJ
trans-1,3-Dichloropropene	1.9 U	0.38 U	0.019 U	0.019 U	0.019 UJ
Bromoform	4.0 U	0.8 U	0.04 U	0.04 U	0.04 UJ
4-Methyl-2-pentanone	40 U	8.0 U	0.4 U	0.4 U	0.4 UJ
2-Hexanone	80 U	16 U	0.8 U	0.8 U	0.8 UJ
Tetrachloroethene	5.0 U	1.7 J	0.05 U	0.05 U	0.05 UJ
1,1,2,2-Tetrachloroethane	1.8 U	0.36 U	0.018 U	0.018 U	0.018 UJ
Toluene	5.0 U	1.0 U	0.05 U	0.05 U	0.05 UJ
Chlorobenzene	6.0 U	2.4 J	0.06 U	0.06 U	0.06 UJ
Ethylbenzene	5.0 U	1.0 U	0.05 U	0.05 U	0.05 UJ
Styrene	5.0 U	1.0 U	0.05 U	0.05 U	0.05 UJ
m & p-Xylene	9.0 U	1.8 U	0.09 U	0.11 J	0.09 UJ
cis-1,2-Dichloroethene	64	21	0.03 U	0.03 U	0.93 J
Isopropylbenzene	5.0 U	1.0 U	0.05 U	0.05 U	0.05 UJ
Methyl tert-butyl ether	5.0 U	1.0 U	0.05 U	0.05 U	0.58 J
o-Xylene	5.0 U	1.0 U	0.05 U	0.69 J	0.05 UJ
trans-1,2-Dichloroethene	6.0 U	1.2 U	0.06 U	0.06 U	0.07 J

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-08	07CE25-09	07CE25-10	07CE25-11	07CE25-13
Dilution factors =	1.0	1.0	1.0	1.0	1.0
Chloromethane	0.05 UJ	0.05 UJ	0.05 U	0.15 U	0.10 U
Bromomethane	0.06 UJ	0.06 UJ	0.06 U	0.06 UJ	0.06 UJ
Vinyl chloride	0.05 J	0.036 J	0.018 U	0.06	0.018 U
Chloroethane	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
Methylene chloride	0.15 R	0.15 R	0.15 R	0.15 R	0.15 R
Acetone	1.3 UJ	1.3 UJ	1.3 UJ	1.3 U	1.3 U
Carbon disulfide	0.10 UJ	0.10 UJ	0.10 U	0.10 U	0.10 U
1,1-Dichloroethene	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
1,1-Dichloroethane	0.06 UJ	0.06 UJ	0.06 U	0.06 U	0.06 U
Chloroform	0.04 UJ	0.13 UJ	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	0.03 UJ	0.053 J	0.03 U	0.03 U	0.03 U
2-Butanone	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.04 UJ	0.04 UJ	0.04 UJ	0.04 U	0.04 U
Carbon tetrachloride	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
Bromodichloromethane	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
1,2-Dichloropropane	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene	0.017 UJ	0.017 UJ	0.017 U	0.017 U	0.017 U
Trichloroethene	0.054 J	0.10 J	0.05 U	0.05 U	0.16
Dibromochloromethane	0.029 UJ	0.029 UJ	0.029 U	0.029 U	0.029 U
1,1,2-Trichloroethane	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
Benzene	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
trans-1,3-Dichloropropene	0.019 UJ	0.019 UJ	0.019 U	0.019 U	0.019 U
Bromoform	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U
4-Methyl-2-pentanone	0.4 UJ	0.4 UJ	0.4 U	0.4 U	0.4 U
2-Hexanone	0.96 J	0.8 UJ	0.8 U	0.8 U	0.8 U
Tetrachloroethene	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.018 UJ	0.018 UJ	0.018 U	0.018 U	0.018 U
Toluene	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
Chlorobenzene	0.06 UJ	0.06 UJ	0.06 U	0.06 U	0.06 U
Ethylbenzene	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
Styrene	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
m & p-Xylene	0.09 UJ	0.09 UJ	0.09 U	0.09 U	0.09 U
cis-1,2-Dichloroethene	3.9 J	5.2 J	0.03 U	0.03 U	0.32
Isopropylbenzene	0.05 UJ	0.05 UJ	0.05 U	0.067 J	0.05 U
Methyl tert-butyl ether	0.85 J	0.86 J	0.05 U	0.05 U	0.17
o-Xylene	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	0.29 J	0.43 J	0.06 U	0.06 U	0.06 U

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-15	07CE25-17	07CE25-19	07CE25-20	07CE25-21
Dilution factors =	1.0	1.0	1.0	1.0	1.0
Chloromethane	0.099 UJ	0.05 U	0.066 U	0.05 U	0.05 U
Bromomethane	0.06 UJ	0.06 UJ	0.06 U	0.06 U	0.06 U
Vinyl chloride	0.018 J	0.018 U	0.018 U	0.018 U	0.018 U
Chloroethane	0.05 UJ	0.05 U	0.05 U	0.093 J	0.05 U
Methylene chloride	0.15 R	0.15 R	0.15 R	0.15 R	0.15 R
Acetone	1.3 UJ	1.3 U	1.3 UJ	1.3 UJ	1.3 UJ
Carbon disulfide	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U
1,1-Dichloroethene	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
1,1-Dichloroethane	0.06 UJ	0.06 U	0.06 U	0.06 U	0.06 U
Chloroform	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U
2-Butanone	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
Carbon tetrachloride	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
Bromodichloromethane	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloropropane	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene	0.017 UJ	0.017 U	0.017 U	0.017 U	0.017 U
Trichloroethene	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane	0.029 UJ	0.029 U	0.029 U	0.029 U	0.029 U
1,1,2-Trichloroethane	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
Benzene	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
trans-1,3-Dichloropropene	0.019 UJ	0.019 U	0.019 U	0.019 U	0.019 U
Bromoform	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
4-Methyl-2-pentanone	0.4 UJ	0.4 U	0.4 U	0.4 U	0.4 UJ
2-Hexanone	0.8 UJ	0.8 U	0.8 U	0.8 U	0.8 UJ
Tetrachloroethene	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.018 UJ	0.018 U	0.018 U	0.018 U	0.018 U
Toluene	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene	0.06 UJ	0.06 U	0.06 U	0.06 U	0.06 U
Ethylbenzene	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
Styrene	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
m & p-Xylene	0.09 UJ	0.09 U	0.09 U	0.09 U	0.09 U
cis-1,2-Dichloroethene	0.03 UJ	0.03 U	0.03 U	0.03 U	0.03 U
Isopropylbenzene	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether	2.0 J	0.05 U	0.05 U	0.05 U	0.05 U
o-Xylene	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	0.06 UJ	0.06 U	0.06 U	0.06 U	0.06 U

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-22	07CE25-23	07CE25-24	07CE25-26	07CE25-28
Dilution factors =	1.0	1.0	1.0	1.0	1.0
Chloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.11 U
Bromomethane	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Vinyl chloride	0.018 U	0.018 U	0.018 U	0.023 J	0.018 U
Chloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride	1.0 J	0.15 R	0.15 UJ	0.15 UJ	0.15 UJ
Acetone	1.3 U	1.3 UJ	1.3 U	1.3 U	1.3 U
Carbon disulfide	0.10 U	0.10 U	0.49	0.10 U	0.10 U
1,1-Dichloroethene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,1-Dichloroethane	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Chloroform	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Butanone	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Carbon tetrachloride	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Bromodichloromethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Trichloroethene	0.05 U	0.05 U	0.40	0.05 U	0.05 U
Dibromochloromethane	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U
1,1,2-Trichloroethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
trans-1,3-Dichloropropene	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U
Bromoform	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
4-Methyl-2-pentanone	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
2-Hexanone	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Tetrachloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Ethylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m & p-Xylene	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
cis-1,2-Dichloroethene	0.03 U	0.03 U	0.50	0.084 J	0.03 U
Isopropylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether	0.05 U	0.05 U	0.31	0.16	0.05 U
o-Xylene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-30	07CE25-32	07CE25-34	07CE25-35	07CE25-36
Dilution factors =	1.0	1.0	1.0	1.0	1.0
Chloromethane	0.05 U	0.05 U	0.11 U	0.13 U	0.10 U
Bromomethane	0.06 U	0.06 U	0.06 U	0.06 UJ	0.06 UJ
Vinyl chloride	0.031 J	0.036 J	0.018 U	0.018 U	0.018 U
Chloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride	0.15 UJ	0.15 UJ	0.15 R	0.15 R	0.15 R
Acetone	1.9 J	1.3 U	1.3 UJ	1.3 U	1.3 U
Carbon disulfide	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1-Dichloroethene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,1-Dichloroethane	0.067	0.075 J	0.06 U	0.06 U	0.06 U
Chloroform	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Butanone	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.25	0.29	0.04 U	0.04 U	0.04 U
Carbon tetrachloride	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Bromodichloromethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Trichloroethene	0.84	0.99	0.05 U	0.05 U	0.05 U
Dibromochloromethane	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U
1,1,2-Trichloroethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
trans-1,3-Dichloropropene	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U
Bromoform	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
4-Methyl-2-pentanone	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
2-Hexanone	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
Tetrachloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Ethylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m & p-Xylene	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
cis-1,2-Dichloroethene	0.30	0.32	0.03 U	0.55	0.03 U
Isopropylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether	0.05 U	0.05 U	0.21	0.82	0.23
o-Xylene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-37	07CE25-38	07CE25-40	07CE25-42	07CE25-44
Dilution factors =	1.0	1.0	25 / 100	25 / 100	50
Chloromethane	0.14 U	0.05 U	1.3 U	1.3 U	2.5 U
Bromomethane	0.06 U	0.06 U	1.5 UJ	1.5 UJ	3.0 UJ
Vinyl chloride	0.018 U	0.018 U	8.8	8.6	1.4
Chloroethane	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
Methylene chloride	0.15 R	0.15 UJ	21 J	14 J	25 J
Acetone	1.3 UJ	1.3 U	1.3 U	1.3 U	65 U
Carbon disulfide	0.10 U	0.10 U	2.5 U	2.5 U	5.0 U
1,1-Dichloroethene	0.04 U	0.04 U	15	16	2.0 U
1,1-Dichloroethane	0.06 U	0.06 U	65	64	12
Chloroform	0.04 U	0.04 U	1.0 U	1.0 U	2.0 U
1,2-Dichloroethane	0.03 U	0.03 U	0.75 U	0.75 U	1.5 U
2-Butanone	0.5 U	0.5 U	13 U	13 U	25 U
1,1,1-Trichloroethane	0.04 U	0.04 U	2.2 J	2.2 J	2.0 U
Carbon tetrachloride	0.04 U	0.04 U	1.0 U	1.0 U	2.0 U
Bromodichloromethane	0.04 U	0.04 U	1.0 U	1.0 U	2.2
1,2-Dichloropropane	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
cis-1,3-Dichloropropene	0.017 U	0.017 U	0.43 U	0.43 U	0.85 U
Trichloroethene	0.05 U	0.05 U	570	510	180
Dibromochloromethane	0.029 U	0.029 U	0.73 U	0.73 U	1.5 U
1,1,2-Trichloroethane	0.04 U	0.04 U	1.0 U	1.0 U	2.0 U
Benzene	0.04 U	0.04 U	1.0 U	1.0 U	2.0 U
trans-1,3-Dichloropropene	0.019 U	0.019 U	0.48 U	0.48 U	0.95 U
Bromoform	0.04 U	0.04 U	1.0 U	1.0 U	2.0 U
4-Methyl-2-pentanone	0.4 U	0.4 U	10 U	10 U	20 U
2-Hexanone	0.8 U	0.8 U	20 U	20 U	40 U
Tetrachloroethene	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
1,1,2,2-Tetrachloroethane	0.018 U	0.018 U	0.45 U	0.45 U	0.90 U
Toluene	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
Chlorobenzene	0.06 U	0.06 U	1.5 U	1.5 U	3.0 U
Ethylbenzene	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
Styrene	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
m & p-Xylene	0.09 U	0.09 U	2.3 U	2.3 U	4.5 U
cis-1,2-Dichloroethene	0.54	0.066 J	310	330	90
Isopropylbenzene	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
Methyl tert-butyl ether	0.99	0.05 U	1.3 U	1.3 U	2.5 U
o-Xylene	0.05 U	0.05 U	1.3 U	1.3 U	2.5 U
trans-1,2-Dichloroethene	0.06 U	0.06 U	4.0 J	3.8 J	6.2 J

Analytes	07CE25-46	07CE25-48	07CE25-50	07CE25-51	07CE25-52
Dilution factors =	5.0	1.0	1.0	1.0	1.0
Chloromethane	0.25 U	0.18	0.05 UJ	0.067 UJ	0.05 UJ
Bromomethane	0.30 U	0.06 U	0.06 UJ	0.06 UJ	0.06 UJ
Vinyl chloride	0.65	0.018 U	0.018 UJ	0.056 J	0.047 J
Chloroethane	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
Methylene chloride	0.75 UJ	0.15 UJ	0.15 R	0.15 UJ	0.15 UJ
Acetone	6.5 U	1.3 U	1.3 UJ	1.3 UJ	1.3 UJ
Carbon disulfide	0.50 U	0.10 U	0.10 UJ	0.10 UJ	0.10 UJ
1,1-Dichloroethene	1.4	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
1,1-Dichloroethane	6.7	0.06 U	0.06 UJ	0.06 UJ	0.06 UJ
Chloroform	0.20 U	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
1,2-Dichloroethane	0.15 U	0.03 U	0.041 J	0.03 UJ	0.03 UJ
2-Butanone	2.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ
1,1,1-Trichloroethane	0.20 U	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
Carbon tetrachloride	0.20 U	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
Bromodichloromethane	0.20 U	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
1,2-Dichloropropane	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
cis-1,3-Dichloropropene	0.085 U	0.017 U	0.017 UJ	0.017 UJ	0.017 UJ
Trichloroethene	33	0.05 U	0.49 J	0.11 J	0.11 J
Dibromochloromethane	0.15 U	0.029 U	0.029 UJ	0.029 UJ	0.029 UJ
1,1,2-Trichloroethane	0.20 U	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
Benzene	0.20 U	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
trans-1,3-Dichloropropene	0.095 U	0.019 U	0.019 UJ	0.019 UJ	0.019 UJ
Bromoform	0.20 U	0.04 U	0.04 UJ	0.04 UJ	0.04 UJ
4-Methyl-2-pentanone	2.0 U	0.4 U	0.4 UJ	0.4 UJ	0.4 UJ
2-Hexanone	4.0 U	0.8 U	0.8 UJ	0.8 UJ	0.8 UJ
Tetrachloroethene	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
1,1,2,2-Tetrachloroethane	0.090 U	0.018 U	0.018 UJ	0.018 UJ	0.018 UJ
Toluene	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
Chlorobenzene	0.30 U	0.06 U	0.06 UJ	0.06 UJ	0.06 UJ
Ethylbenzene	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
Styrene	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
m & p-Xylene	0.45 U	0.09 U	0.09 UJ	0.09 UJ	0.09 UJ
cis-1,2-Dichloroethene	26	0.03 U	0.62 J	1.3 J	1.2 J
Isopropylbenzene	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
Methyl tert-butyl ether	0.25 U	0.05 U	0.64 J	0.71 J	0.74 J
o-Xylene	0.25 U	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
trans-1,2-Dichloroethene	0.80 J	0.06 U	0.069 J	0.082 J	0.095 J

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-53	07CE25-55	07CE25-57	07CE25-59	07CE25-61
Dilution factors =	1.0	1.0	1.0 / 5.0	1.0	1.0
Chloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Vinyl chloride	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Chloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride	0.15 UJ	0.15 UJ	0.15 UJ	0.15 UJ	0.15 R
Acetone	1.3 U	1.3 U	1.3 U	1.3 U	2.4 J
Carbon disulfide	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1-Dichloroethene	0.04 U	0.04 U	0.13	0.04 U	0.04 U
1,1-Dichloroethane	0.06 U	0.06 U	0.063 J	0.06 U	0.06 U
Chloroform	1.9	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
2-Butanone	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.04 U	0.04 U	0.04 U	0.072 J	0.04 UJ
Carbon tetrachloride	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Bromodichloromethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U
Trichloroethene	0.05 U	0.05 U	30	0.05 U	0.062 J
Dibromochloromethane	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U
1,1,2-Trichloroethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Benzene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
trans-1,3-Dichloropropene	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U
Bromoform	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
4-Methyl-2-pentanone	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UJ
2-Hexanone	0.8 U	0.8 U	0.8 U	0.8 U	0.8 UJ
Tetrachloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene	0.06 U	0.06 U	3.0	0.06 U	0.06 U
Ethylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m & p-Xylene	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
cis-1,2-Dichloroethene	0.03 U	0.03 U	2.6	0.03 U	0.03 U
Isopropylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl tert-butyl ether	0.05 U	0.05 U	0.11 J	0.05 U	0.05 U
o-Xylene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	0.06 U	0.06 U	0.21	0.06 U	0.06 U

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-62	07CE25-67	07CE25-74	07CE25-78	07CE25-79
Dilution factors =	5.0	1.0 / 5.0	1.0 / 5.0	1.0	1.0
Chloromethane	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Bromomethane	0.30 U	0.06 U	0.06 U	0.06 U	0.06 UJ
Vinyl chloride	0.50	0.10	0.11	0.018 U	0.018 UJ
Chloroethane	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Methylene chloride	0.75 R	0.15 R	0.15 R	0.15 R	0.15 R
Acetone	6.5 UJ	1.3 UJ	1.3 UJ	1.3 UJ	1.3 UJ
Carbon disulfide	0.50 U	0.10 U	0.10 U	0.10 UJ	0.10 UJ
1,1-Dichloroethene	0.49 J	0.085 J	0.083 J	0.04 U	0.04 UJ
1,1-Dichloroethane	16	0.06 U	0.06 U	0.06 U	0.06 UJ
Chloroform	0.20 U	0.04 U	0.04 U	0.04 U	0.04 UJ
1,2-Dichloroethane	0.15 U	0.30	0.34	0.03 U	0.03 UJ
2-Butanone	2.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
1,1,1-Trichloroethane	3.3	0.04 UJ	0.04 UJ	0.04 UJ	0.04 UJ
Carbon tetrachloride	0.20 U	0.04 U	0.04 U	0.04 U	0.04 UJ
Bromodichloromethane	0.20 U	0.04 U	0.04 U	0.04 U	0.04 UJ
1,2-Dichloropropane	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
cis-1,3-Dichloropropene	0.085 U	0.017 U	0.017 U	0.017 U	0.017 UJ
Trichloroethene	2.1	0.96	0.95	0.05 U	0.05 UJ
Dibromochloromethane	0.15 U	0.029 U	0.029 U	0.029 U	0.029 UJ
1,1,2-Trichloroethane	0.20 U	0.04 U	0.04 U	0.04 U	0.04 UJ
Benzene	0.20 U	0.04 U	0.04 U	0.04 U	0.04 UJ
trans-1,3-Dichloropropene	0.095 U	0.019 U	0.019 U	0.019 U	0.019 UJ
Bromoform	0.20 U	0.04 U	0.04 U	0.04 U	0.04 UJ
4-Methyl-2-pentanone	2.0 U	0.4 UJ	0.4 UJ	0.4 UJ	0.4 UJ
2-Hexanone	4.0 U	0.8 UJ	0.8 UJ	0.8 UJ	0.8 UJ
Tetrachloroethene	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
1,1,2,2-Tetrachloroethane	0.090 U	0.018 U	0.018 U	0.018 U	0.018 UJ
Toluene	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Chlorobenzene	0.30 U	0.06 U	0.06 U	0.06 U	0.06 UJ
Ethylbenzene	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Styrene	0.25 UJ	0.05 U	0.05 U	0.05 R	0.05 UJ
m & p-Xylene	0.45 U	0.09 U	0.09 U	0.09 U	0.09 UJ
cis-1,2-Dichloroethene	5.7	19	18	0.03 U	0.03 UJ
Isopropylbenzene	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
Methyl tert-butyl ether	0.33	0.99	1.1	0.05 U	0.05 UJ
o-Xylene	0.25 U	0.05 U	0.05 U	0.05 U	0.05 UJ
trans-1,2-Dichloroethene	1.0	1.3	1.3	0.06 U	0.06 UJ

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Analytes	07CE25-83	07CE25-87	07CE25-88	07CE25-92	07CE25-97
Dilution factors =	1.0	1.0	1.0	20	1.0
Chloromethane	0.05 U	0.05 U	0.05 U	1.0 U	0.14 U
Bromomethane	0.06 U	0.06 U	0.06 U	1.2 U	0.06 U
Vinyl chloride	0.018 U	0.018 U	0.018 U	1.3	0.043 J
Chloroethane	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
Methylene chloride	0.15 R	0.15 UJ	0.15 R	3.0 R	0.15 R
Acetone	1.3 UJ	1.3 U	1.3 UJ	26 UJ	1.3 UJ
Carbon disulfide	0.10 U	0.10 U	0.10 U	2.0 U	0.10 U
1,1-Dichloroethene	0.04 U	0.04 U	0.04 U	15	0.04 U
1,1-Dichloroethane	0.06 U	0.06 U	0.06 U	54	0.06 U
Chloroform	0.04 U	0.04 U	0.04 U	0.8 U	0.04 U
1,2-Dichloroethane	0.03 U	0.03 U	0.03 U	0.6 U	0.03 U
2-Butanone	0.5 U	0.5 U	0.5 U	10 U	0.5 U
1,1,1-Trichloroethane	0.04 UJ	0.04 U	0.04 U	86	0.04 U
Carbon tetrachloride	0.04 U	0.04 U	0.04 U	0.8 U	0.04 U
Bromodichloromethane	0.04 U	0.04 U	0.04 U	0.8 U	0.04 U
1,2-Dichloropropane	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
cis-1,3-Dichloropropene	0.017 U	0.017 U	0.017 U	0.34 U	0.017 U
Trichloroethene	0.05 U	0.081 J	0.05 U	110	0.05 U
Dibromochloromethane	0.029 U	0.029 U	0.029 U	0.58 U	0.029 U
1,1,2-Trichloroethane	0.04 U	0.04 U	0.04 U	0.8 U	0.04 U
Benzene	0.04 U	0.04 U	0.04 U	0.8 U	0.04 U
trans-1,3-Dichloropropene	0.019 U	0.019 U	0.019 U	0.38 U	0.019 U
Bromoform	0.04 U	0.04 U	0.04 U	0.8 U	0.04 U
4-Methyl-2-pentanone	0.4 UJ	0.4 U	0.4 UJ	8.0 UJ	0.4 UJ
2-Hexanone	0.8 UJ	0.8 U	0.8 UJ	16 UJ	0.8 UJ
Tetrachloroethene	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
1,1,2,2-Tetrachloroethane	0.018 U	0.018 U	0.018 U	0.36 U	0.018 U
Toluene	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
Chlorobenzene	0.06 U	0.06 U	0.06 U	1.2 U	0.06 U
Ethylbenzene	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
Styrene	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
m & p-Xylene	0.09 U	0.09 U	0.09 U	1.8 U	0.09 U
cis-1,2-Dichloroethene	0.03 U	0.43	0.03 U	34	0.75
Isopropylbenzene	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
Methyl tert-butyl ether	0.05 U	0.66	0.05 U	1.0 U	0.53
o-Xylene	0.05 U	0.05 U	0.05 U	1.0 U	0.05 U
trans-1,2-Dichloroethene	0.06 U	0.06 U	0.06 U	18	0.06 U

SAS Project: 07CE25 SDG Number: 59529-VOC
Site Name: Oconomowoc Electroplating (WI) Laboratory: CT Laboratories

Analytes	07CE25-99	07CE26-02	07CE26-04	07CE26-06	07CE26-08
Dilution factors =	1.0	1.0	200	1.0	1.0
Chloromethane	0.05 U	0.12 U	10 U	0.05 U	0.05 U
Bromomethane	0.06 U	0.06 U	12 U	0.06 U	0.06 U
Vinyl chloride	0.018 U	0.018 U	30	0.018 U	0.018 U
Chloroethane	0.05 U	0.05 U	10 U	0.05 U	0.05 U
Methylene chloride	0.15 R	0.15 R	30 R	0.15 R	0.15 R
Acetone	1.3 UJ	1.3 UJ	260 UJ	1.3 UJ	1.3 UJ
Carbon disulfide	0.10 U	0.10 U	20 U	0.10 U	0.10 U
1,1-Dichloroethene	0.04 U	0.04 U	8 U	0.04 U	0.04 U
1,1-Dichloroethane	0.11 J	0.12 J	12 U	0.06 U	0.06 U
Chloroform	0.04 U	0.04 U	8 U	0.04 U	1.3 U
1,2-Dichloroethane	0.03 U	0.03 U	6 U	0.03 U	0.03 U
2-Butanone	0.5 U	0.5 U	100 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.43 U	0.33 U	8 U	0.04 U	0.04 U
Carbon tetrachloride	0.04 U	0.04 U	8 U	0.04 U	0.04 U
Bromodichloromethane	0.04 U	0.04 U	8 U	0.04 U	0.04 U
1,2-Dichloropropane	0.05 U	0.05 U	10 U	0.05 U	0.05 U
cis-1,3-Dichloropropene	0.017 U	0.017 U	3.4 U	0.017 U	0.017 U
Trichloroethene	1.4	1.4	10 U	0.05 U	0.05 U
Dibromochloromethane	0.029 U	0.029 U	5.8 U	0.029 U	0.029 U
1,1,2-Trichloroethane	0.04 U	0.04 U	8 U	0.04 U	0.04 U
Benzene	0.04 U	0.04 U	8 U	0.04 U	0.04 U
trans-1,3-Dichloropropene	0.019 U	0.019 U	3.8 U	0.019 U	0.019 U
Bromoform	0.04 U	0.04 U	8 U	0.04 U	0.04 U
4-Methyl-2-pentanone	0.4 UJ	0.4 UJ	80 UJ	0.4 UJ	0.4 UJ
2-Hexanone	0.8 UJ	0.8 UJ	160 UJ	0.8 UJ	0.8 UJ
Tetrachloroethene	0.057 J	0.057 J	10 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.018 U	0.018 U	3.6 U	0.018 U	0.018 U
Toluene	0.05 U	0.05 U	10 U	0.05 U	0.05 U
Chlorobenzene	0.06 U	0.06 U	12 U	0.06 U	0.06 U
Ethylbenzene	0.05 U	0.05 U	10 U	0.05 U	0.05 U
Styrene	0.05 U	0.05 U	10 U	0.05 U	0.05 U
m & p-Xylene	0.09 U	0.09 U	18 U	0.09 U	0.09 U
cis-1,2-Dichloroethene	0.49	0.63	1200	0.03 U	0.03 U
Isopropylbenzene	0.05 U	0.05 U	10 U	0.05 U	0.05 U
Methyl tert-butyl ether	0.05 U	0.05 U	10 U	0.05 U	0.05 U
o-Xylene	0.05 U	0.05 U	10 U	0.05 U	0.05 U
trans-1,2-Dichloroethene	0.06 U	0.073 J	20 J	0.06 U	0.06 U

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

SAS RLs	Analytes	07CE26-09	07CE26-10	OEP-MW-RT08
	Dilution factors=	1.0	1.0	1.0
0.2	Chloromethane	0.05 U	0.05 UJ	0.05 U
0.2	Bromomethane	0.06 U	0.06 UJ	0.06 U
0.018	Vinyl chloride	0.018 U	0.018 UJ	0.018 U
0.2	Chloroethane	0.05 U	0.05 UJ	0.05 U
0.2	Methylene chloride	0.15 R	0.15 R	0.15 R
2.0	Acetone	1.3 UJ	1.3 UJ	1.7 J
0.4	Carbon disulfide	0.10 U	0.10 UJ	0.10 U
0.2	1,1-Dichloroethene	0.04 U	0.04 UJ	0.04 U
0.2	1,1-Dichloroethane	0.06 U	0.06 UJ	0.06 U
0.2	Chloroform	0.04 U	0.04 UJ	0.04 U
0.2	1,2-Dichloroethane	0.03 U	0.03 UJ	0.03 U
2.0	2-Butanone	0.5 U	0.5 UJ	0.5 U
1.0	1,1,1-Trichloroethane	0.04 UJ	0.04 UJ	0.04 U
0.2	Carbon tetrachloride	0.04 U	0.04 UJ	0.04 U
0.05	Bromodichloromethane	0.04 U	0.04 UJ	0.04 U
0.2	1,2-Dichloropropane	0.05 U	0.05 UJ	0.05 U
0.016	cis-1,3-Dichloropropene	0.017 U	0.017 UJ	0.017 U
0.2	Trichloroethene	0.05 U	0.05 UJ	0.05 U
0.2	Dibromochloromethane	0.029 U	0.029 UJ	0.029 U
0.2	1,1,2-Trichloroethane	0.04 U	0.04 UJ	0.04 U
0.2	Benzene	0.04 U	0.04 UJ	0.04 U
0.015	trans-1,3-Dichloropropene	0.019 U	0.019 UJ	0.019 U
0.2	Bromoform	0.04 U	0.04 UJ	0.04 U
2.0	4-Methyl-2-pentanone	0.4 UJ	0.4 UJ	0.4 UJ
2.0	2-Hexanone	0.8 UJ	0.8 UJ	0.8 UJ
0.2	Tetrachloroethene	0.05 U	0.05 UJ	0.05 U
0.018	1,1,2,2-Tetrachloroethane	0.018 U	0.018 UJ	0.018 U
1.0	Toluene	0.05 U	0.05 UJ	0.05 U
0.2	Chlorobenzene	0.06 U	0.06 UJ	0.06 U
0.05	Ethylbenzene	0.05 U	0.05 UJ	0.05 U
0.2	Styrene	0.05 U	0.05 UJ	0.05 U
0.2	m & p-Xylene	0.09 U	0.09 UJ	0.09 U
0.2	cis-1,2-Dichloroethene	0.12	0.03 UJ	0.03 U
0.2	Isopropylbenzene	0.05 U	0.05 UJ	0.05 U
0.2	Methyl tert-butyl ether	0.05 U	0.05 UJ	0.05 U
0.2	o-Xylene	0.05 U	0.05 UJ	0.05 U
0.2	trans-1,2-Dichloroethene	0.06 U	0.06 UJ	0.06 U

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

	07CE25-01		07CE25-03		07CE25-11		07CE25-13		07CE25-15	
	DF=		DF=		DF=		DF=		DF=	
Ethane	1.0	0.4 U	1.0	0.4 U	100	40 U	1.0	0.4 U	1.0	0.4 U
Ethene	1.0	0.5 U	1.0	0.5 U	100	50 U	1.0	0.5 U	1.0	0.5 U
Methane	4.0	20	4.0	29	100	920	1.0	4.2	4.0	20

	07CE25-17		07CE25-24		07CE25-26		07CE25-28		07CE25-30	
	DF=		DF=		DF=		DF=		DF=	
Ethane	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U
Ethene	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U
Methane	1.0	1.2 U	5.0	58	5.0	55	1.0	6.8	1.0	1.4 U

	07CE25-32		07CE25-38		07CE25-40		07CE25-42		07CE25-44	
	DF=		DF=		DF=		DF=		DF=	
Ethane	1.0	0.4 U	1.0	0.4 U	1.0	1.3	1.0	16	1.0	0.4 U
Ethene	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U
Methane	1.0	0.48 U	50	370	20	260	20	250	4.0	38

	07CE25-46		07CE25-48		07CE25-53		07CE25-55		07CE25-57	
	DF=		DF=		DF=		DF=		DF=	
Ethane	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U
Ethene	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U
Methane	5.0	58	1.0	0.53	1.0	0.25 U	50	610	1.0	2.9

	07CE25-59		07CE25-62		07CE25-65		07CE25-72		07CE25-81	
	DF=		DF=		DF=		DF=		DF=	
Ethane	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U
Ethene	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U
Methane	1.0	0.25 U	4.0	27 J	1.0	9.5	1.0	8.0	10	80

	07CE25-90		07CE25-97		07CE25-99		07CE26-02		07CE26-04	
	DF=		DF=		DF=		DF=		DF=	
Ethane	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U	1.0	0.4 U
Ethene	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U	1.0	0.5 U
Methane	5.0	9.8	1.0	12	1.0	0.57 U	1.0	0.44 U	5.0	38

	07CE26-06	
	DF=	
Ethane	1.0	0.4 U
Ethene	1.0	0.5 U
Methane	1.0	1.7 U

Reviewed by: Steffanie Tobin / TechLaw-ESAT
Date: June 11, 2007

SAS Project: 07CE25
Site Name: Oconomowoc Electroplating (WI)

SDG Number: 59529-VOC
Laboratory: CT Laboratories

Data Qualifier Sheet

For the purpose of defining the flagging nomenclature utilized in this document, the following code letters and associated definitions are provided:

VALUE – if the result is a value greater than or equal to the Contract Required Quantitation Limit (CRQL).

U	Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
J	Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound but the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
N	Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound (TIC), where the identification is based on a mass spectral library search.
R	Indicates the data are unusable. (The compound may or may not be present.)
P	Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detect concentrations between the two GC columns. The lower of the two results is reported.
C	Indicates pesticide results that have been confirmed by GC/MS.
B	Indicates the analyte is detected in the associated method blank as well as the sample.
E	Indicates compounds whose concentrations exceeded the calibration range of the instrument.
D	Indicates an identified compound in an analysis has been diluted. This flag alert the data user to any difference between the concentrations rported in the two analyses.
A	Indicates TICs that are suspected to be aldol condensation products.
G	Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
L	Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
T	Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.

X, Y, Z are reserved for laboratory defined flags.

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