

# Natural Resource Technology, Inc.

N R T

December 22, 2004  
(1313)

Ms. Victoria Stovall  
Wisconsin Department of Natural Resources  
Southeast Region Headquarters  
2300 N. Dr. Martin Luther King Jr. Drive  
Milwaukee, Wisconsin 53212

RE: Transmittal, 2004 Annual Operation, Maintenance, and Monitoring Report  
Campmarina, Former Manufactured Gas Plant Site  
Wisconsin Public Service Corporation  
Sheboygan, Wisconsin  
DNR Activity #: 02-60-000095

Dear Ms. Stovall:

On behalf of the Wisconsin Public Service Corporation (WPS), enclosed is one copy of the 2004 Annual Operation, Maintenance, and Monitoring Report for the Campmarina, Former Manufactured Gas Plant Site located in Sheboygan, Wisconsin. Please forward this report to Mr. John Feeney at the Wisconsin Department of Natural Resources - Plymouth Service Center.

If you have any questions or if you require additional copies for your files, please contact Ms. Shirley Scharff of WPS at (920) 433-1396.

Sincerely,

NATURAL RESOURCE TECHNOLOGY

A handwritten signature in black ink, appearing to read "Heather M. Simon".

Heather M. Simon, E.I.T.  
Environmental Engineer

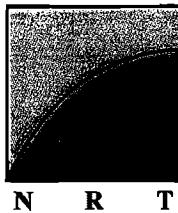
A handwritten signature in black ink, appearing to read "Christopher A. Robb".

Christopher A. Robb, P.E.  
Project Manager

Enclosure: 2004 Annual Operation, Maintenance, and Monitoring Report (1 copy)

cc: Mr. John Feeney, WDNR (transmittal letter only)  
Mr. Shirley Scharff, WPSC (1 copy)

1313\Corres\1313 WDNR 041222 trnsltr.doc



# Natural Resource Technology, Inc.

December 22, 2004  
(1313)

Mr. John Feeney  
Wisconsin Department of Natural Resources  
Richards Street Annex  
4041 N. Richards Street  
P.O. Box 12436  
Milwaukee, Wisconsin 53212

RE: 2004 Annual Operation, Maintenance, and Monitoring Report  
Former Wisconsin Public Service Corporation Manufactured Gas Plant Site,  
Campmarina and Center Avenue Right-of-Way, Sheboygan, WI.  
FID #: 460134950  
DNR Activity #: 02-60-000095

Dear Mr. Feeney:

On behalf of Wisconsin Public Service Corporation (WPSC), enclosed is the Operation, Maintenance and Monitoring Report (O&M Report) for the period of November 1, 2003 through October 31, 2004 for the former WPSC Campmarina Manufactured Gas Plant (MGP) site in Sheboygan, Wisconsin (Figure 1). The report includes:

- Containment performance evaluation;
- Biosparge system performance evaluation; and
- Inspection results of institutional controls.

In addition, the WDNR Form 4400-194 (Operation, Maintenance, Monitoring and Optimization Reporting of Soil and Groundwater Remediation Systems) is included as Appendix A. Finally, a future monitoring schedule is included herein.

## CONTAINMENT PERFORMANCE

The engineered components of the containment barrier consist of a sheet pile barrier wall surrounding the perimeter of the site and keyed into a clay aquitard, and a geosynthetic cap across the entire site. The primary objective of the remedy is to effectively contain the MGP residual remaining on-site. To demonstrate containment of the MGP residuals, two primary performance measures have been identified:

- Primary measure: Evaluation of groundwater elevation data; and
- Secondary measure: Evaluation of contaminant concentration trends in the shallow groundwater monitoring wells and deep piezometers.

Mr. John Feeney  
December 22, 2004  
Page 2

Containment performance is summarized in Table 1 Groundwater Elevation and Vertical Gradients and Figures 2 and 3, showing shallow groundwater elevation contours before and during biosparge operation, respectively. Figures 4 and 5 indicate deeper aquifer potentiometric surface contours. Please note that Table 1, and Figures 2 and 4 are revised from the previous 2003 annual O&M Report to include updated groundwater elevations based on new survey data obtained in February 2004 at all of the wells. The survey was performed to confirm the top of casing elevation of all the groundwater monitoring wells at the site.

Containment of the plume has been achieved based on groundwater elevation data, the primary measure of containment performance. The increasing groundwater elevations in MW-708 outside the containment barrier compared to the lower groundwater elevations in MW-706 within the containment barrier demonstrate containment has been achieved. Recent groundwater elevations collected from the monitoring wells within the containment barrier, indicates shallow groundwater flow to the west towards the river, with a southerly flow component towards well MW-707R. Deeper groundwater appears to continue to flow to the southwest based on data collected prior to and during biosparge system operation.

Groundwater elevations have increased within the containment barrier since startup. If groundwater elevations increase to the elevation of the geosynthetic cap, the drainage/venting layer would convey the groundwater to flow to the perimeter drain and discharge to the sump located below the biosparge treatment building. The cause of the increasing groundwater elevations within the containment barrier has not been fully identified and will be further evaluated through future measurement of groundwater elevations.

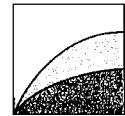
The secondary measure of containment performance is contaminant concentration trends in shallow monitoring wells exterior to the containment barrier (MW-705, MW-708 and MW-709) and piezometers below the containment barrier (PZ-701, PZ-702 and PZ-703). Groundwater samples were collected from all the monitoring wells and piezometers in November 2003 and May 2004. An additional groundwater sample was collected from PZ-703 in August 2004 to better evaluate contaminant trends at this piezometer. Results of the most recent rounds of groundwater monitoring are presented in Appendix B, and summarized in Figure 6, and Tables 2 and 3.

Contaminant concentrations in shallow monitoring wells exterior to the containment barrier and deep piezometers PZ-701 and PZ-702 (below the containment barrier) including BTEX, PAHs and weak acid dissociable cyanide are below their respective NR 140 Preventive Action Limits (PAL) with the exception of benzo(a)pyrene detected at the NR 140 PAL at MW-705. At deep piezometer PZ-703, PAH and BTEX concentrations have increased, as evident on Tables 2 and 3.

In the 2003 Annual O&M report, the following statements were included with respect to the increase in contaminant concentrations at piezometer PZ-703.

"One or more of the following lines of evidence may cause increased concentrations of contaminants in PZ-703 in the recent past:

- Heavy equipment that damaged MW-707 during Phase I remediation activities may have also caused damage to PZ-703. MW-707R replaced MW-707 in February 2001. The concentration of benzene increased by one order of magnitude between groundwater sampling events in January 1999 and June 2002, however, variations in benzene



Mr. John Feeney  
December 22, 2004  
Page 3

concentration of this magnitude between sampling rounds are not uncommon at PZ-703. A contributing factor may be the effect of purging PZ-703 prior to sampling, potentially causing contaminant drag down over time.

- Generally downward vertical gradient at PZ-703 may have contributed to contaminant migration, as concentrations of BTEX and PAH contaminants are relatively high at the nested water table well, MW-707/707R. Table 1 indicates a downward vertical gradient averaging  $8.4 \times 10^{-2}$  ft/ft since installation of PZ-703 in 1998.
- Biosparge well BW-09 is located within 20 feet of PZ-703 (radius of influence for each well is assumed to be 30 feet), and is screened at approximately 571 feet, USGS datum. BW-09 screen is at a significantly higher elevation than the piezometer screen for PZ-703. Biosparge pressures at BW-09 typically range from 4.0 to 4.5 psi (Appendix D), which is a lower pressure range than average across the site. It is unlikely, but possible that short-circuiting of pressurized air from the biosparge system is contributing to downward contaminant migration.

Additional evaluation of data may yield further possible lines of evidence."

Additional evaluation of the data has yielded the following comments:

- The site experienced an unusually wet Spring that may have contributed to further increases in concentrations observed at the piezometer. Additional data is required to further evaluate if unusually heavy precipitation influenced the concentrations observed at PZ-703 and if results observed in 2004 can be categorized as anomalous relative to the heavy rainfall totals. The data collection is discussed below in future monitoring section.
- Piezometer PZ-703 was constructed with a permanent steel casing installed into the clay to an elevation of approximately 569.9 feet. Based on this construction, it is unlikely that this well was damaged in such a way as to affect the annular space seal integrity. While surface damage might possibly affect the integrity as deep as 8 to 10 feet bgs (581.2 to 579.2 feet elevation), the steel casing and associated grout seals this well to at least 569.2 feet elevation. Therefore, it is unlikely that any damage to the well would be significant enough to allow contamination to migrate to the piezometer screen.
- On January 12, 2004, the valve was closed to BW-09 to determine whether or not BW-09 was contributing to downward contaminant migration at PZ-703. BW-09 was determined not to be contributing to the high contaminant concentrations at PZ-703 since contaminant concentrations continued to increase since January 12<sup>th</sup> and based on the evaluation of PZ-703 and BW-09 well construction. Air introduced through biosparge well BW-9 at the well screen, which extends from elevation 570.8 to 568.3 feet is at a depth slightly below the base of the steel casing around PZ-703 (569.2 feet elevation). It is unlikely that this would cause the entire annular seal to desiccate and significantly affect its integrity. Therefore, BW-9 valve was opened on September 21, 2004 to continue sparging in the vicinity of PZ-703.



Mr. John Feeney  
December 22, 2004  
Page 4

## BIOSPARGE SYSTEM PERFORMANCE

The low flow biosparge system consists of 18 biosparge wells that inject air at a relatively low pressure and flow rate to enhance aerobic microbial degradation of contaminants within the containment barrier, as shown on Figures 2 through 6. Passive venting is provided in the form of a perimeter drain and venting system within the containment barrier. The perimeter drain is pitched to a sump located below the biosparge treatment building, to collect water that may accumulate within the containment barrier. Water levels are measured regularly within the sump as an indicator of containment barrier integrity. A passive venting system stack is located above the treatment building, and enhanced by a wind powered exhaust turbine. The biosparge treatment building contains a compressor, manifold conveyance piping and control panel to inject air to six wells at a time, with adjustable manifold cycling intervals. Programmable logic controls will automatically trigger an alarm and cease biosparge compressor operation if pressure in the passive venting stack exceeds 1 psi. Nutrient feed lines are contained within the biosparge conveyance pipes and may be utilized in the future to provide nutrient injection if enhancement biodegradation is warranted.

### Operation and Maintenance

System operation and maintenance included:

- Monitoring for accumulation of vapor phase benzene, ethylbenzene, toluene, and total xylenes (BTEX) in the sump;
- Monitoring for any fluctuations in sump water levels;
- Adjustments to manifold cycling intervals currently set at 4 hours per day per well;
- Compressor oil changes;
- Monitoring of biosparge pressure readings; and
- Inspection of perimeter drain cleanouts.

Routine system monitoring and inspections are performed by WPSC personnel periodically, as shown on operation and maintenance logs provided in Appendix C. Alarm conditions and routine system status checks from the PLC control system are periodically reviewed by Natural Resource Technology, Inc. (NRT). The groundwater biosparge system has operated approximately 88.5% of the time between November 1, 2003 and October 31, 2004. Details of operation, maintenance and monitoring are provided in the WDNR Form 4400-194 (Appendix A).

During this period, the system was not operational from March 5 through 9, 2004, May 8 through 10, 2004, May 21 through 25, 2004, May 30 through June 4, 2004, and June 11 through 28, 2004 due to high building sump alarm conditions. The highest water level observed in the building sump was 41.5 inches deep (approximate 584 feet elevation) on June 1, 2004. The system was shutdown during these periods of high water levels and the system was checked periodically during alarm condition to observe any changes. Plans were initiated to remove the water from the sump, however water levels eventually decreased below alarm conditions.



### Shallow Groundwater Monitoring

Shallow groundwater monitoring was used to evaluate biosparge system performance based on the following:

- Contaminant Concentration Trends – decrease in contaminant concentrations over time in groundwater within the containment barrier (**Trend 1**); and
- Geochemical Trends – evidence of increasing geochemical trends (i.e. methane) or decreasing geochemical trends (i.e. sulfate, nitrate) associated with increased biological activity, and evaluate dissolved oxygen (DO) trends during operation of the biosparge system (**Trend 2**).

To evaluate these trends, enhanced biodegradation of contaminants in groundwater within the containment barrier was evaluated at shallow groundwater monitoring wells MW-701R, MW-706 and MW-707R using the following performance monitoring parameters:

- Analytical Contaminant Parameters: BTEX, PAHs and weak acid dissociable cyanide measured during groundwater monitoring (Tables 2 and 3);
- Analytical Geochemical Parameters: nitrate, sulfate, and methane (Table 4); and
- Field Geochemical Parameters: water levels, dissolved oxygen, alkalinity, pH, temperature, specific conductance, oxidation/reduction potential (Table 4).

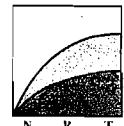
Monitoring wells were sampled for contaminant parameters and geochemical parameters in November 2003 and May 2004. Groundwater levels and field parameters were collected quarterly in November 2003, February, May and August 2004. Groundwater elevations are summarized on Table 1 and evaluated above in the containment performance section. Groundwater quality data from shallow monitoring wells MW-701R, MW-706 and MW-707R within the zone of containment are presented in Appendix B, and summarized on Figure 6 and Tables 2 through 4.

For contaminant concentration trend data (Trend 1), the following observations are noted for this monitoring period:

- Naphthalene concentrations have decreased in monitoring wells MW-701R and MW-706 (within the zone of containment) since July 2003, as shown on Figure 7.
- Benzene and naphthalene concentrations in monitoring well MW-707R have fluctuated and the most recent sampling results are similar to June 2002.

For geochemical trend data (Trend 2), the following observations are noted for this monitoring period:

- In general, sulfate concentrations, an indicator of biological activity, have been decreasing or remaining stable within the containment barrier since June 2002.
- Methane concentrations, another indicator of biological activity (metabolic byproduct of methanogenesis) had decreased between July 2003 and November 2003 within the containment barrier. However, methane concentrations increased within the containment



barrier between November 2003 and May 2004 may be an indication that biological activity is occurring. Methane concentrations are higher within the containment barrier (methane ranges from <10 to 6,700 µg/L) compared to outside the containment barrier (methane ranges from <10 to 250 µg/L).

- Sulfate and methane concentrations at MW-707R had increased between November 2003 and August 2004. These increases may indicate that biological activity not occurring since BW-09, the nearest biosparge well to MW-707R, was turned off.
- In general, oxidation/reduction potential and pH at MW-701R within the containment barrier between July 2003 and August 2004 have decreased. These results may indicate biological activity may be occurring (Table 4).

Trend 1 data will continue to be evaluated for future monitoring rounds. Limited monitoring data will be collected to assess Trend 2 data. The use of a field groundwater quality probe may be limited by the presence of coal tar in monitoring wells within the containment barrier if encountered.

#### Sump/Vent Monitoring

In general, the system performed in accordance with anticipated design parameters. Air monitoring of stack emissions was conducted to evaluate the presence of hydrogen sulfide and BTEX in soil vapors emitted. In addition, water levels within the sump were monitored for potential increase in groundwater elevations beneath the geosynthetic cover.

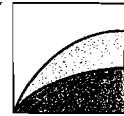
On February 17, 2004, the sump was evaluated for the presence of H<sub>2</sub>S using a multi-gas meter. The meter did not detect the presence of H<sub>2</sub>S in the sump (0.0 ppm). The meter detected 2% LEL that was similar to detected background air. Oxygen detection was 20.8% and carbon monoxide detection was 0 ppm. No vapor phase volatile organics were detected in the vent during system operation, based on photoionization readings on February 17 and May 20, 2004. Two air samples (VENT) were collected from the sampling port on the sump's ventilation stack using an impinger on February 17 and August 26, 2004. The air BTEX concentration results, as shown in Appendix D, were below detection levels of 0.38 µg/L.

Water accumulated in the sump between May and June 2004. The highest water level observed in the building sump was 41.5 inches deep on June 1, 2004, as stated above. Since June 1, 2004 the water had decreased. On September 21, 2004, the water level observed in the sump was 24.5 inches deep. We can not determine the reasons why the increase in water levels at this time but will evaluate in 2005. NRT will continue to evaluate and monitor the water levels in the sump.

#### **OTHER INSTITUTIONAL CONTROLS**

In accordance with the WDNR approved record of decision (ROD), WPSC is responsible for long term performance monitoring of additional remedy components including surface covers for the monitoring wells, cleanouts and biosparge wells, the biosparge building, piping and equipment, and geosynthetic cap and perimeter venting system cleanouts. These features were most recently inspected in August 2004.

Overall, the site appeared in good condition and has maintained its integrity. The cover above the geosynthetic cap has remained stable and has not shown any problems due to erosion. The Park structures are also in good condition with no indication of settling or cracking. Also, the riprap along the



Mr. John Feeney  
December 22, 2004  
Page 7

river appears to be in good condition. A field inspection form completed in August 2004 is included in Appendix C.

## FUTURE GROUNDWATER MONITORING AND BIOSPARGE SYSTEM OPERATION

Long-term trends in groundwater quality will continue to be evaluated with respect to groundwater elevations, groundwater quality and geochemical parameters, as shown on Table 5. Geochemical parameters not significantly affected by aeration will continue to be collected, including only sulfate, nitrate and methane at shallow monitoring wells exterior to the containment barrier (MW-705, 708 and 709R) and piezometers below the containment barrier (PZ-701, 702 and 703). Field geochemical parameters will not be measured at monitoring wells within the containment barrier (MW-701R, 706 and 707R) due to the presence of coal tar. Groundwater samples collected from all the monitoring wells will continue to be analyzed for PAHs, BTEX and weak acid dissociable (WAD) cyanide in Year 3 (November 2004 and May 2005), as indicated on Table 5. If WAD cyanide analyses continue to confirm that cyanide concentrations remain below NR 140 PALs in late 2004 and 2005, future analysis of WAD cyanide will be discontinued and removed from the long-term groundwater monitoring plan.

NRT will assess the groundwater data results from BW-15 and BW-06 collected in May 2004 and future samples to determine whether the data is representative of the groundwater at each well. The groundwater samples will be collected from the nutrient feed tubes using a peristaltic pump and tubing, as they were sampled in May 2004. The first groundwater monitoring event for Year 3 was collected in November 2004. An evaluation of ongoing groundwater quality will be provided in the next annual operation, maintenance and monitoring report, to be submitted in December 2005.

NRT will continue to evaluate and monitor PZ-703 and the performance of the containment barrier. Additional data is required to further evaluate containment and determine the lines of evidence for the increase of contaminant concentrations at PZ-703 including the following:

1. Determine if heavy precipitation at the site in Spring 2004 resulted in anomalous concentration increases at PZ-703 relative to the heavy rainfall totals.

To complete this evaluation, we recommend continued semi-annual monitoring at PZ-703 in accordance with the schedule presented on Table 5. If we determine that heavy precipitation has not influenced concentrations at PZ-703, additional evaluation and data collection may be proposed in 2006. We will continue to operate the biosparge system at the current frequency of 4 hours per day per well. At this time enhancements for the biosparge system such as nutrient addition will not be implemented until further evaluation of PZ-703 is complete, and trend data and lines of evidence are well established.



Mr. John Feeney  
December 22, 2004  
Page 8

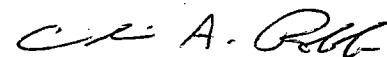
Please contact Ms. Shirley Scharff of WPSC at (920) 433-1396 or the undersigned if you have any questions or if you require additional copies for your files.

Sincerely,

NATURAL RESOURCE TECHNOLOGY, INC.



Heather M. Simon, EIT  
Project Engineer



Christopher A. Robb, PE  
Project Manager

cc: Ms. Shirley Scharff, WPSC

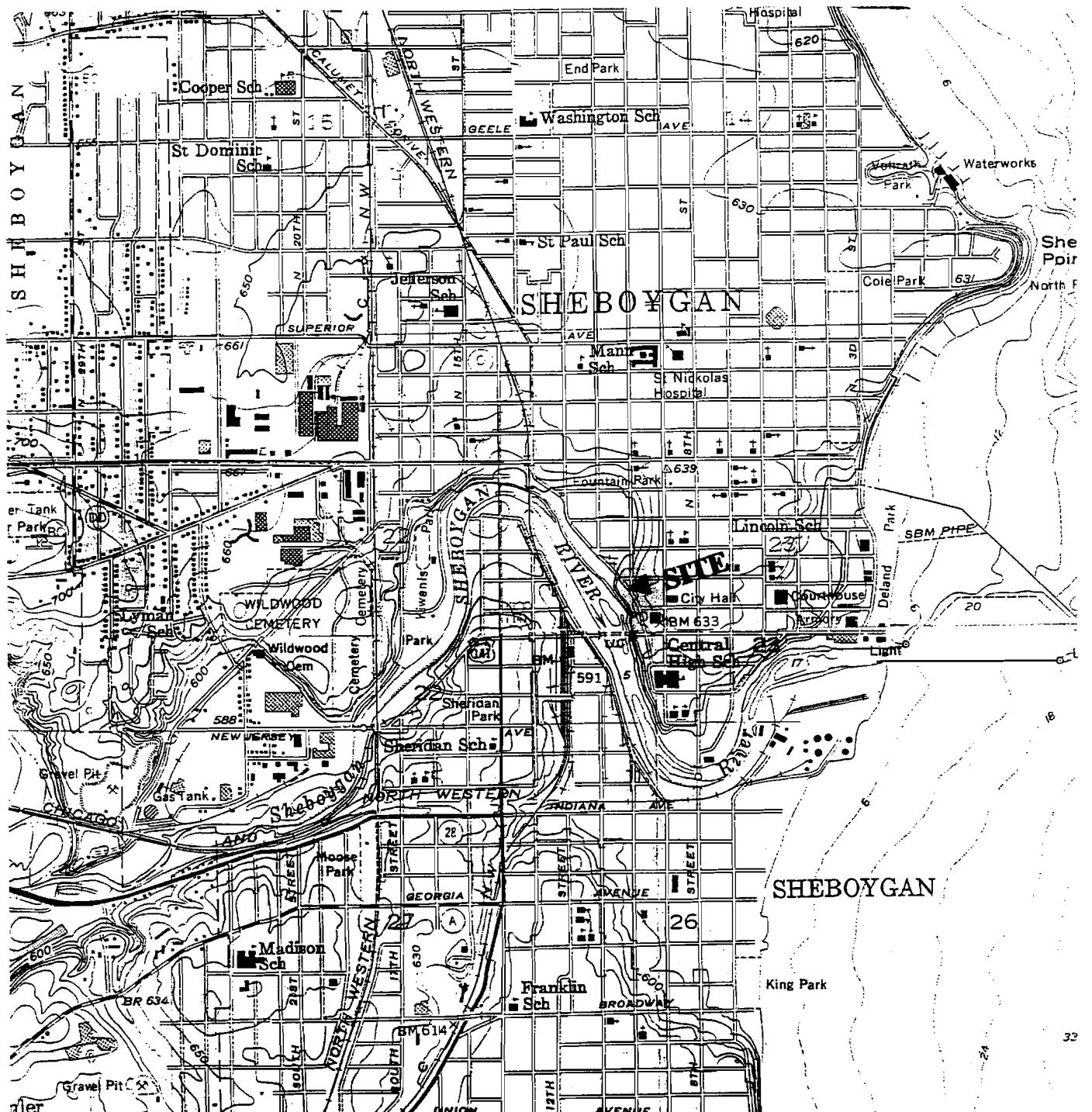
Attachments:

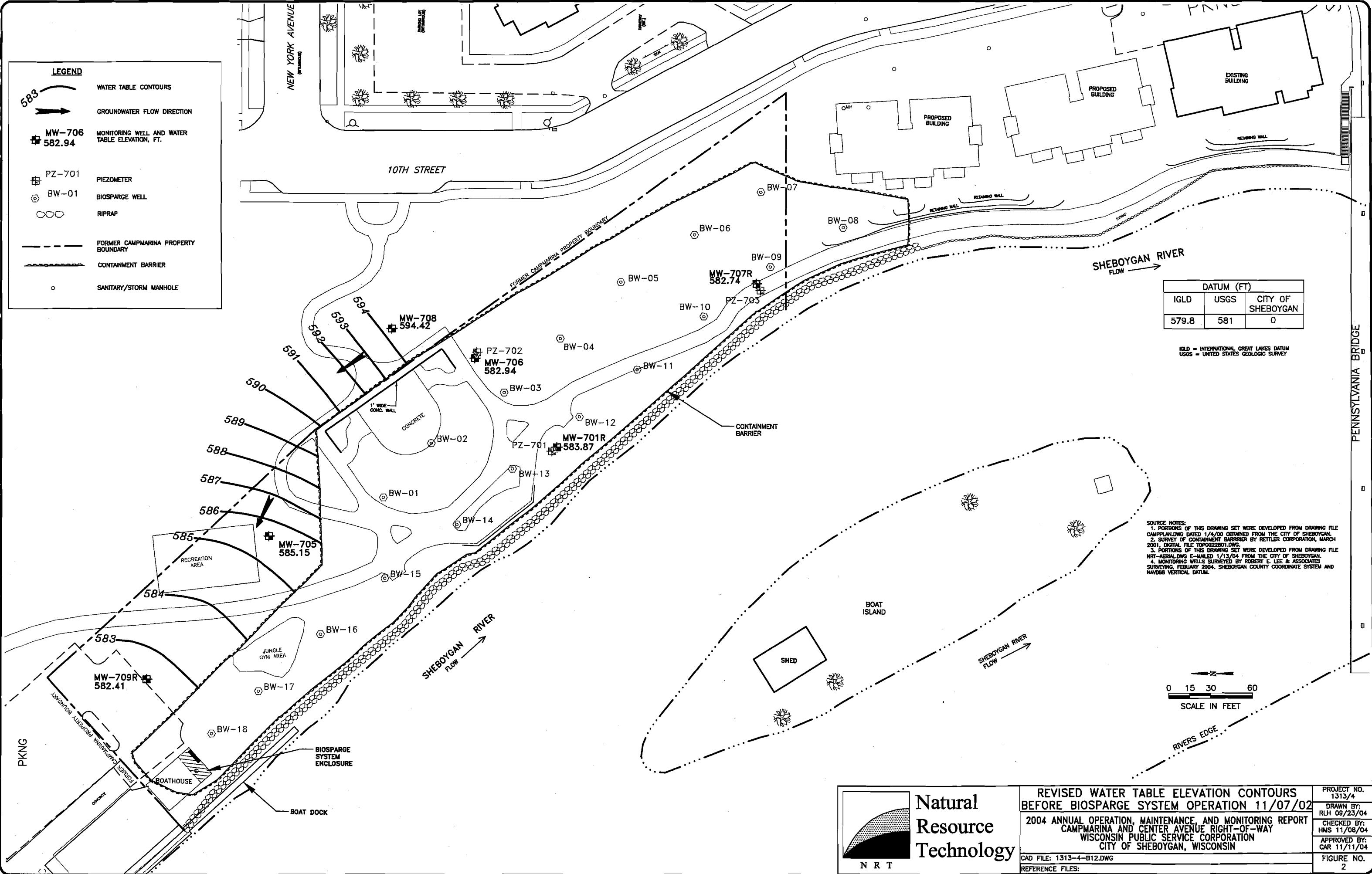
- Figure 1 – Site Location Map
- Figure 2 – Revised Water Table Elevation Contours Before Biosparge System Operation – 11/7/02
- Figure 3 – Water Table Elevation Contours During Biosparge System Operation – 5/20/04
- Figure 4 – Revised Potentiometric Surface Contours Before Biosparge System Operation – 11/7/02
- Figure 5 – Potentiometric Surface Contours During Biosparge System Operation – 5/20/04
- Figure 6 – Groundwater Analytical Summary 2003-2004
- Figure 7 – Contaminant Concentrations versus Time Graphs
- Table 1 – Groundwater Elevation and Vertical Gradients
- Table 2 – Groundwater Analytical Results - Cyanide and BTEX
- Table 3 – Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons
- Table 4 – Groundwater Analytical Results – Field & Laboratory RNA Analytical
- Table 5 – Groundwater and Biosparge System Monitoring Schedule
- Appendix A – Form 4400-194 with Explanations
- Appendix B – Groundwater Analytical Reports
- Appendix C – Field Forms
- Appendix D – Air Sampling Analytical Reports

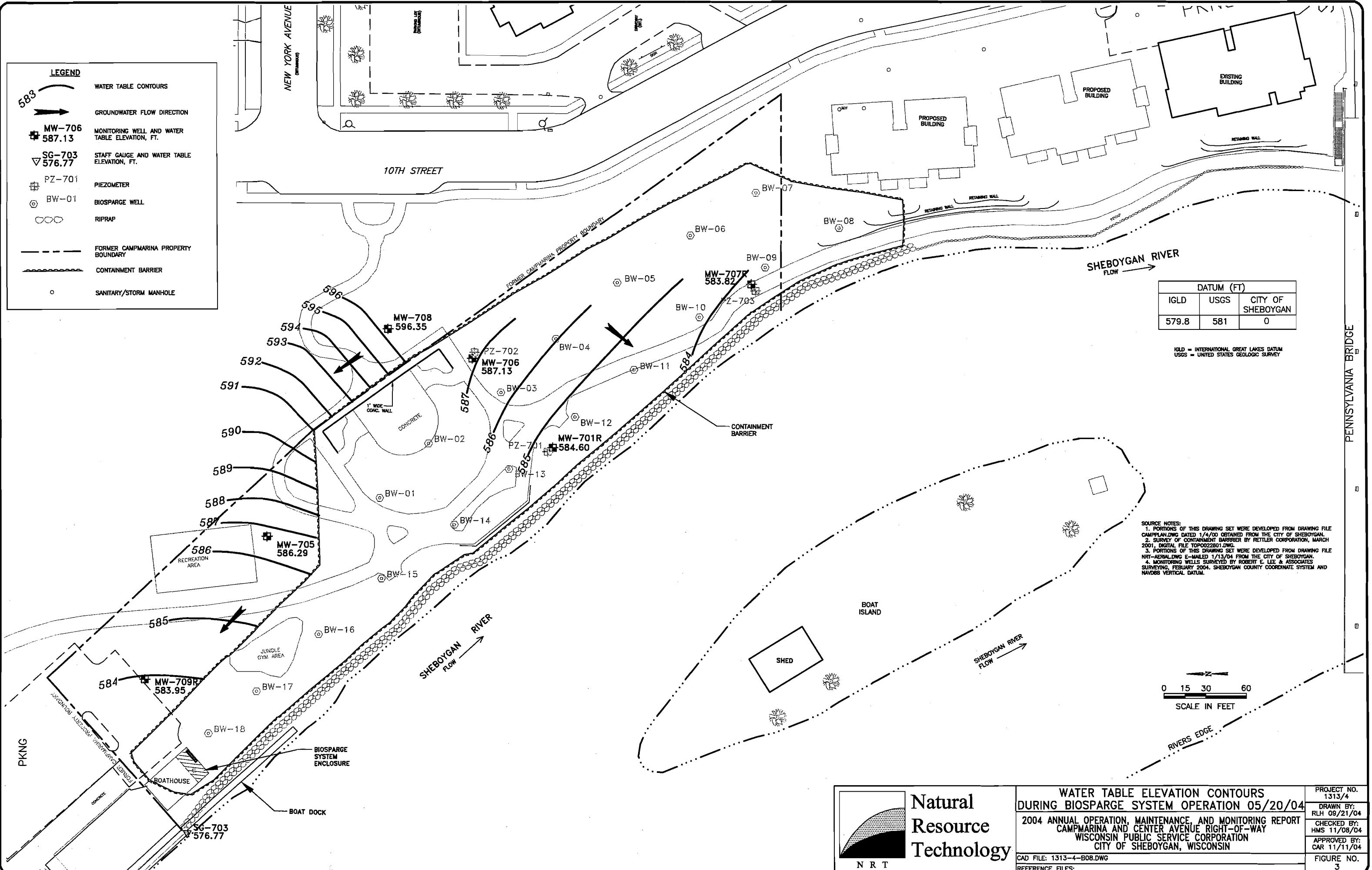
[1313 WDNR O&M Year 2.rpt]

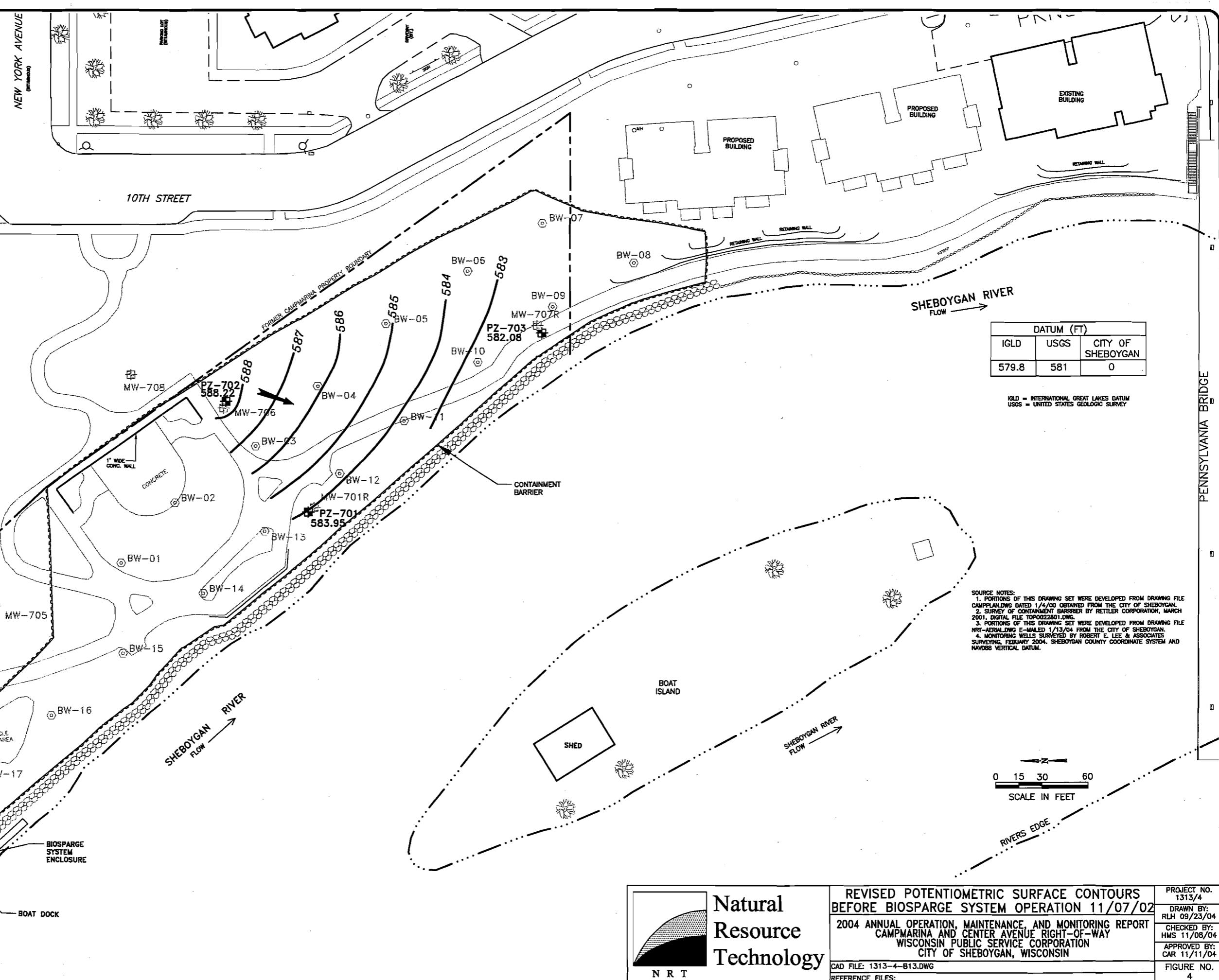
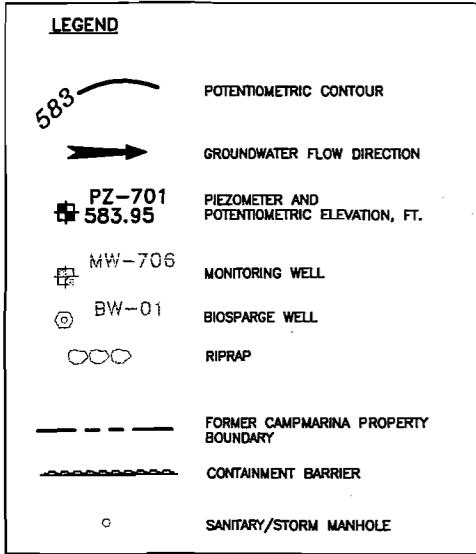


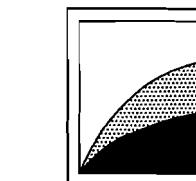
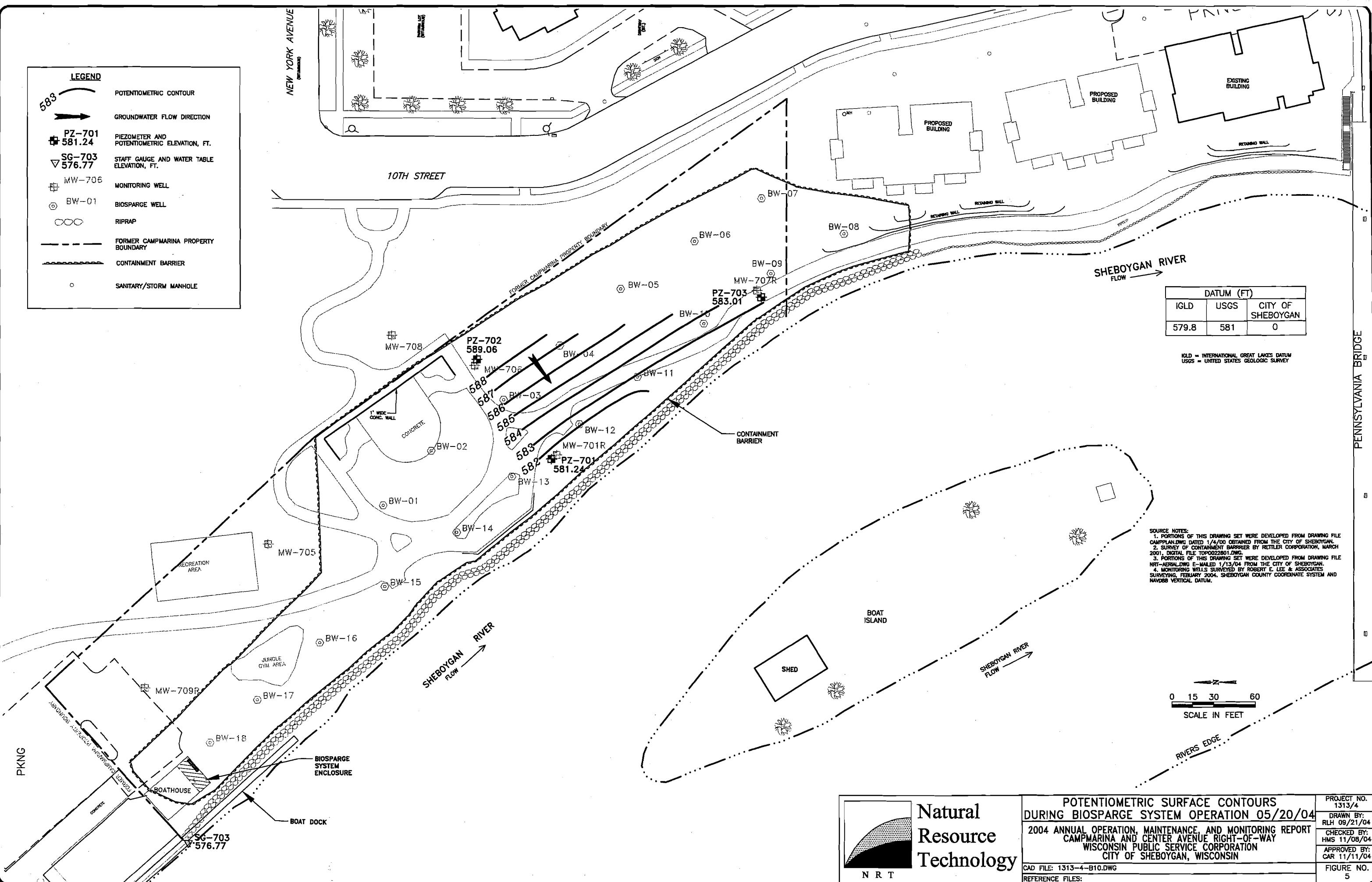
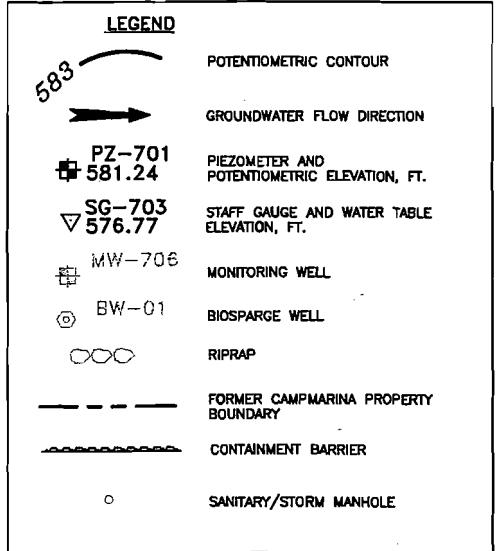
## FIGURES









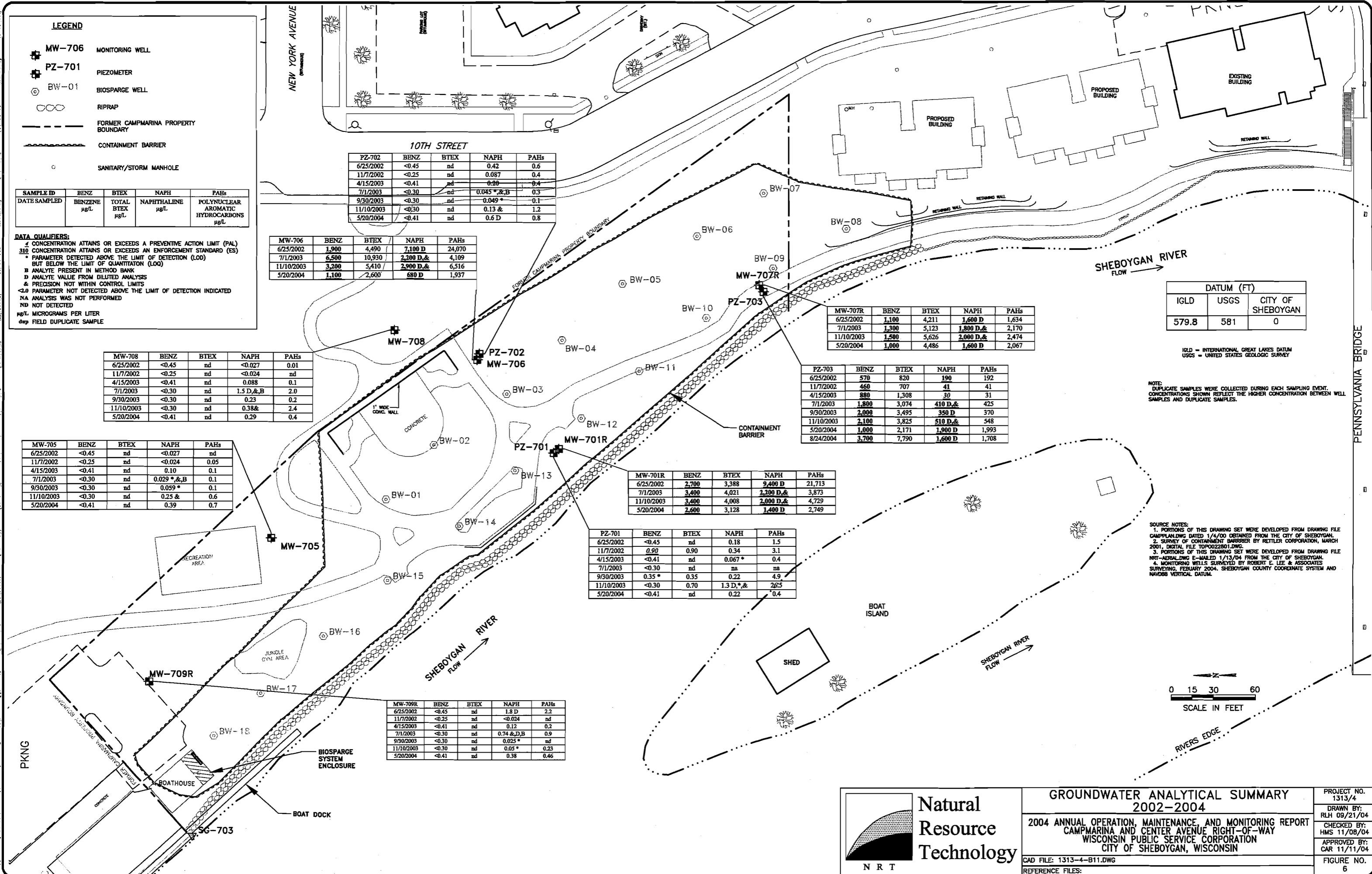


Natural  
Resource  
Technology

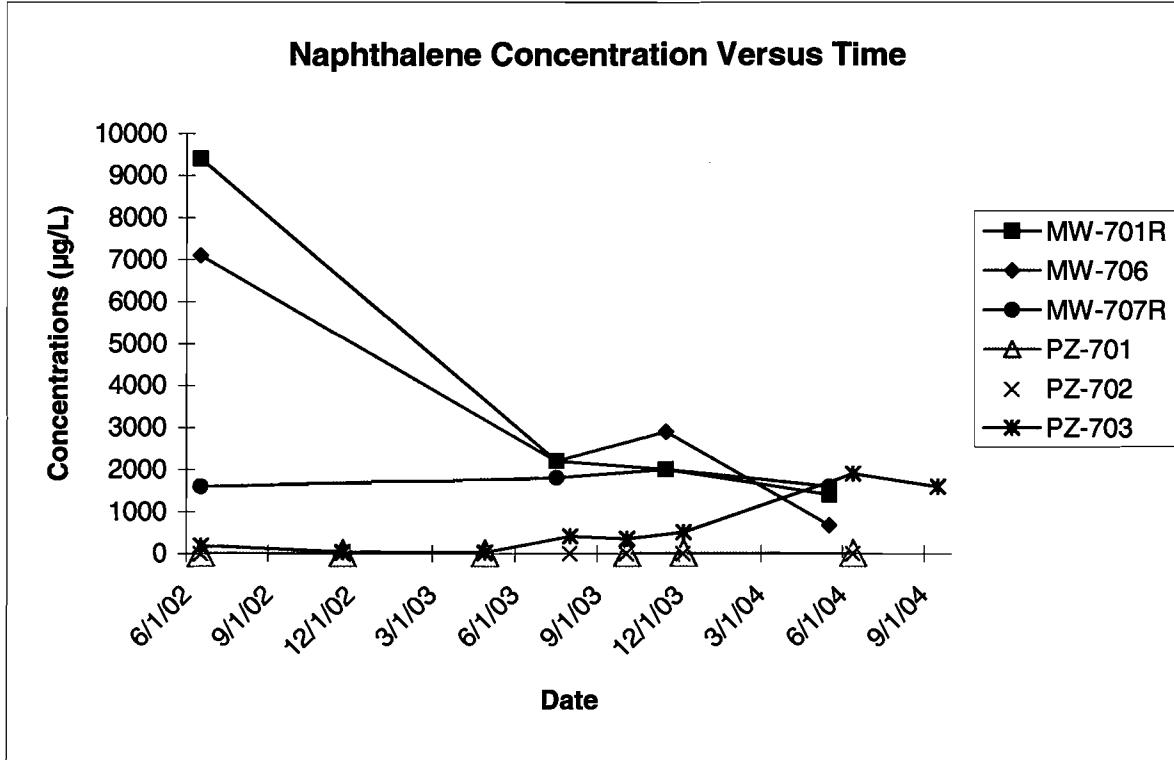
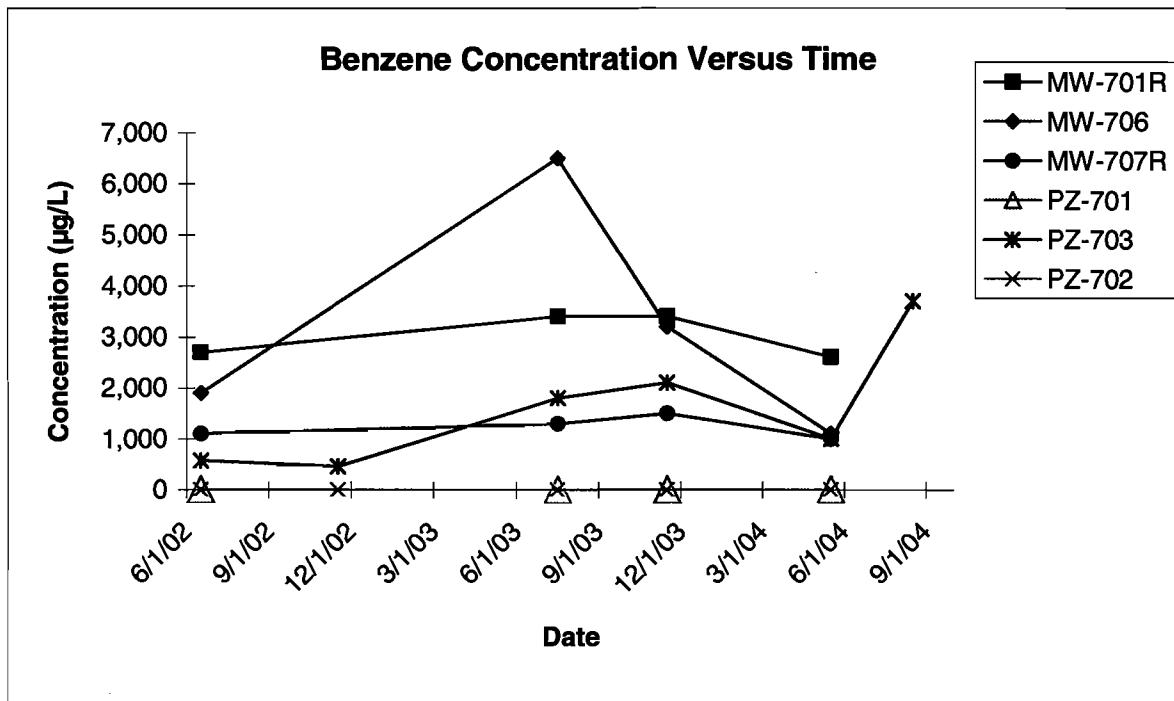
POTENIOMETRIC SURFACE CONTOURS  
DURING BIOSPARGE SYSTEM OPERATION 05/20/04  
2004 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT  
CAMPMARINA AND CENTER AVENUE RIGHT-OF-WAY  
WISCONSIN PUBLIC SERVICE CORPORATION  
CITY OF SHEBOYGAN, WISCONSIN

PROJECT NO.  
1313/4  
DRAWN BY:  
RLH 09/21/04  
CHECKED BY:  
HMS 11/08/04  
APPROVED BY:  
CAR 11/11/04  
FIGURE NO.  
5

CAD FILE: 1313-4-B10.DWG  
REFERENCE FILES:



**Figure 7 - Contaminant Concentrations Versus Time Graphs**  
**Wisconsin Public Service - Campmarina Former MGP Site**  
**Sheboygan, WI**



TABLES

**Table 1. Groundwater Elevations and Vertical Gradients**

Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site

Sheboygan, WI

Monitoring Location	Ground Surface Elevation (feet, MSL)	Top of PVC Elevation (feet, MSL)	Total Well Depth (feet)	Screen Length (feet)	Top of Screen Elevation (feet, MSL)	Middle of Screen Elevation (feet, MSL)	Monitoring Date	Depth to Water (feet)	Groundwater Elevation (feet, MSL)	Change in head (feet)	Change in distance (feet)	Vertical Gradient	Direction
MW-701	588.97	588.51	13.4	10	585.11		8/14/95	5.51	583.00	7.38	27.63	2.67E-01	downward
							8/20/95	5.63	582.88	9.14	27.51	3.32E-01	downward
							9/25/95	5.58	582.93	10.30	27.56	3.74E-01	downward
							12/21/98	5.72	582.79	0.60	27.42	2.19E-02	downward
							4/18/00	5.95	582.56	0.42	27.19	1.54E-02	downward
							6/19/00	5.62	582.89	0.78	27.52	2.83E-02	downward
							Well Replaced	--	--				
MW-701R	590.47	590.23	10.80	5	584.67		6/25/02	6.20	584.27	3.64	28.90	1.26E-01	downward
							11/7/02	6.60	583.87	-0.08	28.50	-2.81E-03	upward
							1/24/03	7.06	583.41	-0.06	28.04	-2.14E-03	upward
							4/15/03	6.21	584.26	0.19	28.89	6.58E-03	downward
							7/1/03	6.18	584.29	0.21	28.92	7.26E-03	downward
							11/10/03	6.31	584.16	0.32	28.79	1.11E-02	downward
	590.43	590.23	10.56	5	584.67		2/17/04	6.53	583.70	0.25	28.33	8.82E-03	downward
							4/20/04	6.02	584.21	0.36	28.84	1.25E-02	downward
							5/20/04	5.63	584.60	3.36	29.23	1.15E-01	downward
							8/24/04	5.98	584.25	0.15	28.88	5.19E-03	downward
PZ-701	589.28	588.89	36.02	5	557.87	555.37	8/14/95	13.27	575.62				
							8/20/95	15.15	573.74				
							9/25/95	16.26	572.63				
							12/21/98	6.70	582.19				
							4/18/00	6.75	582.14				
							6/19/00	6.78	582.11				
	590.53	37.66	5	557.87	555.37		6/25/02	9.90	580.63				
							11/7/02	6.58	583.95				
							1/24/03	7.06	583.47				
							4/15/03	6.46	584.07				
							7/1/03	6.45	584.08				
							9/30/03	6.61	583.92				
							11/10/03	6.69	583.84				
	590.45	590.25	37.38	5	557.87	555.37	2/17/04	6.80	583.45				
							4/20/04	6.40	583.85				
							5/20/04	9.01	581.24				
							8/24/04	6.15	584.10				

**Table 1. Groundwater Elevations and Vertical Gradients**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Monitoring Location	Ground Surface Elevation (feet, MSL)	Top of PVC Elevation (feet, MSL)	Total Well Depth (feet)	Screen Length (feet)	Top of Screen Elevation (feet, MSL)	Middle of Screen Elevation (feet, MSL)	Monitoring Date	Depth to Water (feet)	Groundwater Elevation (feet, MSL)	Change in head (feet)	Change in distance (feet)	Vertical Gradient	Direction
MW-702	590.39	590.09	13.40	10	586.69		8/14/95	4.86	585.23				
<b>Abandoned Monitoring Well</b>													
MW-703	589.16	588.80	13.46	10	585.34		8/14/95	5.63	583.17				
<b>Abandoned Monitoring Well</b>													
MW-704	589.43	589.05	13.20	10	585.85		8/14/95	5.93	583.12				
<b>Abandoned Monitoring Well</b>													
MW-705	590.22	589.91	16.66	10	583.25		8/14/95	6.95	582.96				
<b>Natural Resource Technology</b>													
	593.57	592.2	18.95	10	583.25		6/25/02	10.27	581.93				
							11/7/02	7.05	585.15				
							4/15/03	7.17	585.03				
							7/1/03	6.80	585.40				
							9/30/03	7.23	584.97				
							11/10/03	6.70	585.50				
							2/17/04	7.20	585.00				
							4/20/04	6.41	585.79				
							5/20/04	5.91	586.29				
							8/24/04	6.68	585.52				

**Table 1. Groundwater Elevations and Vertical Gradients**

Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site

Sheboygan, WI

Monitoring Location	Ground Surface Elevation (feet, MSL)	Top of PVC Elevation (feet, MSL)	Total Well Depth (feet)	Screen Length (feet)	Top of Screen Elevation (feet, MSL)	Middle of Screen Elevation (feet, MSL)	Monitoring Date	Depth to Water (feet)	Groundwater Elevation (feet, MSL)	Change in head (feet)	Change in distance (feet)	Vertical Gradient	Direction
MW-706	591.51	591.34	14.10	10	587.94		8/14/95	3.5 *	587.8 *				
							8/20/95	3.4 *	587.9 *				
							9/25/95	3.5 *	587.8 *				
							12/21/98	3.34	588.00	-1.15	29.34	-3.92E-02	upward
							4/18/00	2.98	588.36	-0.20	29.70	-6.73E-03	upward
							6/19/00	3.65	587.69	-0.15	29.03	-5.17E-03	upward
	595.2	594.54	16.60	10	587.94		6/25/02	8.40	586.14	1.27	27.48	4.62E-02	downward
							11/7/02	9.22	582.94	-5.28	24.28	-2.17E-01	upward
							1/24/03	--	--				
							4/15/03	8.25	586.29	-1.94	27.63	-7.02E-02	upward
							7/1/03	8.77	585.77	-2.47	27.11	-9.11E-02	upward
							11/10/03	8.78	585.76	-2.46	27.10	-9.08E-02	upward
							2/17/04	9.37	585.17	-2.86	26.51	-1.08E-01	upward
							4/20/04	8.25	586.29	-2.23	27.63	-8.07E-02	upward
							5/20/04	7.41	587.13	-1.93	28.47	-6.78E-02	upward
							8/24/04	8.51	586.03	-2.53	27.37	-9.24E-02	upward
PZ-702	591.62	591.16	38.62	5	561.2	558.7	12/21/98	2.01	589.15				
							4/18/00	2.60	588.56				
							6/19/00	3.32	587.84				
	596.16	595.34	39.14	5	561.2	558.7	6/25/02	10.47	584.87				
							11/7/02	7.12	588.22				
							1/24/03	7.58	587.76				
							4/15/03	7.11	588.23				
							7/1/03	7.10	588.24				
							9/30/03	7.18	588.16				
							11/10/03	7.12	588.22				
							2/17/04	7.31	588.03				
							4/20/04	6.82	588.52				
							5/20/04	6.28	589.06				
							8/24/04	6.78	588.56				

**Table 1. Groundwater Elevations and Vertical Gradients**

Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site

Sheboygan, WI

Monitoring Location	Ground Surface Elevation (feet, MSL)	Top of PVC Elevation (feet, MSL)	Total Well Depth (feet)	Screen Length (feet)	Top of Screen Elevation (feet, MSL)	Middle of Screen Elevation (feet, MSL)	Monitoring Date	Depth to Water (feet)	Groundwater Elevation (feet, MSL)	Change in head (feet)	Change in distance (feet)	Vertical Gradient	Direction
MW-707	590.29	590.08	13.35	10	586.73		8/14/95	7.48	582.60				
							8/20/95	7.71	582.37				
							9/25/95	7.67	582.41				
							12/21/98	6.65	583.43	2.84	26.71	1.06E-01	downward
							4/18/00	--	--				
							6/19/00	6.05	584.03	3.94	27.31	1.44E-01	downward
							Well Replaced	--	--				
MW-707R		587.78	11.97	10	585.81		6/25/02	4.57	583.21	4.48	26.49	1.69E-01	downward
							11/7/02	5.04	582.74	0.66	26.02	2.54E-02	downward
							1/24/03	--	--	--	--	--	--
							4/15/03	4.9	582.88	0.80	26.16	3.06E-02	downward
							7/1/03	4.99	582.79	5.09	26.07	1.95E-01	downward
							11/10/03	5.13	582.65	12.41	25.93	4.79E-01	downward
	588.9	588.57	12.76	10	585.81		2/17/04	5.30	583.27	2.59	26.55	9.76E-02	downward
							4/20/04	5.03	583.54	1.13	26.82	4.21E-02	downward
							5/20/04	4.75	583.82	0.81	27.10	2.99E-02	downward
							8/24/04	4.87	583.70	0.86	26.98	3.19E-02	downward
PZ-703	589.85	589.22	33.94	5	559.2	556.7	12/21/98	8.63	580.59				
							1/19/99	8.96	580.26				
							4/18/00	9.49	579.73				
							6/19/00	9.13	580.09				
	588.81	588.53	34.33	5	559.2	556.7	6/25/02	9.80	578.73				
							11/7/02	6.45	582.08				
							1/24/03	--	--				
							4/15/03	6.45	582.08				
							7/1/03	10.83	577.70				
							9/30/03	9.40	579.13				
							11/10/03	18.29	570.24				
							2/17/04	7.85	580.68				
							4/20/04	6.12	582.41				
							5/20/04	5.52	583.01				
							8/24/04	5.69	582.84				

**Table 1. Groundwater Elevations and Vertical Gradients**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Monitoring Location	Ground Surface Elevation (feet, MSL)	Top of PVC Elevation (feet, MSL)	Total Well Depth (feet)	Screen Length (feet)	Top of Screen Elevation (feet, MSL)	Middle of Screen Elevation (feet, MSL)	Monitoring Date	Depth to Water (feet)	Groundwater Elevation (feet, MSL)	Change in head (feet)	Change in distance (feet)	Vertical Gradient	Direction
MW-708	606.45	606.09	18.86	15	602.23		12/10/98	16.39	589.70				
							12/21/98	16.78	589.31				
							4/18/00	15.21	590.88				
							6/19/00	14.98	591.11				
	605.87	605.47	18.24	15	602.23		6/25/02	14.22	591.25				
							11/7/02	11.05	594.42				
							1/24/03	11.58	593.89				
							4/15/03	10.35	595.12				
							7/1/03	10.66	594.81				
							9/30/03	11.07	594.40				
							11/10/03	9.85	595.62				
							2/17/04	11.13	594.34				
							4/20/04	10.28	595.19				
							5/20/04	9.12	596.35				
							8/24/04	10.72	594.75				
MW-709	588.51	587.95	12.50	10	585.45		12/21/98	7.27	580.68				
							4/18/00	7.62	580.33				
							6/19/00	7.23	580.72				
						Well Replaced	--	--	--				
MW-709R	589.15	588.81	16.54	10	582.27		6/25/02	9.23	579.58				
							11/7/02	6.40	582.41				
							4/15/03	5.45	583.36				
							7/1/03	5.30	583.51				
							9/30/03	6.33	582.48				
							11/10/03	5.29	583.52				
	588.96	588.58	16.31	10	582.27		2/17/04	6.44	582.14				
							4/20/04	5.02	583.56				
							5/20/04	4.63	583.95				
							8/24/04	5.14	583.44				

**Table 1. Groundwater Elevations and Vertical Gradients**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Monitoring Location	Ground Surface Elevation (feet, MSL)	Top of PVC Elevation (feet, MSL)	Total Well Depth (feet)	Screen Length (feet)	Top of Screen Elevation (feet, MSL)	Middle of Screen Elevation (feet, MSL)	Monitoring Date	Depth to Water (feet)	Groundwater Elevation (feet, MSL)	Change in head (feet)	Change in distance (feet)	Vertical Gradient	Direction
SG-701	na	582.02	na	na	na		8/14/95	2.00	580.02				
							8/20/95	2.33	579.69				
							9/25/95	2.49	579.53				Abandoned
SG-702	na	581.37	na	na	na			2.33	579.04				
													Abandoned
SG-703	na	582.27	na	na	na		4/20/04	4.45	577.82				
							5/20/04	5.5	576.77				
							8/24/04	3.18	579.09				

[U-PAR/JTB 11/03 U-HMS 1/29/04 U-LJH/HMS 2/23/04 U-HMS 2/27/04 U-PAR/HMS 3/04 U-HMS/LJH 6/4/04 U-HMS/MJR 9/17/04]

Notes:

1. PZ-701, MW-701R and MW-707R were surveyed on 7/17/01 by Rettler Corporation from Stevens Point, Wisconsin.
  - PZ-101 was extended from pre-remedial ground surface elevation to existing ground surface elevation.
  2. Elevations are referenced to United States Geologic Survey Geodetic Sea Level Datum.
  3. \* Estimated value.
  4. MW-709 was surveyed on 12/22/03 by NRT using MW-701R TOC as a bench mark and a laser level.
  5. -- Not Measured
  6. On February 17, 2004, Robert E. Lee Associates surveyed top of casing and flushmount covers, and established a staff gauge located at the southwest corner, west face, of the Marina's concrete boat dock (chisel marked blue).
- Wells MW-705, MW-706, PZ-702, PZ-703, and MW-708 were extended or reduced to match final grades during remedial construction activities in 2002. Consequently, the surveyed elevations for these wells were used in groundwater elevation calculations as of 2002.

**Table 2. Groundwater Analytical Results - Cyanide and BTEX**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

Sampling Location	Sampling Date	Cyanide, dissolved (mg/L)			BTEX (µg/L)				
		Cyanide (amenable)	Cyanide (weak acid dissociable)	Cyanide (total)	Benzene	Toluene	Ethylbenzene	Xylene, total	Total BTEX
<b>Wisconsin Groundwater Quality Standards (NR140)</b>									
<b>Preventive Action Limit Enforcement Standard</b>		ns	<u>0.04</u>	ns	<u>0.5</u>	<u>200</u>	<u>140</u>	<u>1,000</u>	ns
		ns	<u>0.2</u>	ns	<u>5</u>	<u>1,000</u>	<u>700</u>	<u>10,000</u>	ns
<b>MW-701</b>	8/15/1995	<0.0050	0.025	0.11	<u>10,000</u>	96	<u>880</u>	820	11,796
	9/25/1995	<0.0050	0.020	0.088	<u>12,000</u>	53	<u>780</u>	680	13,513
	12/21/1998	0.05	<u>0.11</u>	0.17	<u>10,200</u>	77 *	<u>818</u>	717	11,812
<b>MW-701R</b>	6/25/2002	0.15	0.012	0.16	<u>2,700</u>	28	<u>330</u>	330	3,388
	11/7/2002	--	--	--	--	--	--	--	--
	7/1/2003	--	--	0.13	<u>3,400</u>	21 *	<u>340</u>	260	4,021
	11/10/2003	--	--	0.16	<u>3,400</u>	18 *	<u>330</u>	260	4,008
	5/20/2004	--	--	0.15	<u>2,600</u>	17 *	<u>300</u>	211	3,128
<b>PZ-701</b>	8/17/1995	0.02	<0.0050	0.02	<u>5</u>	6.3	3.6	11	25.9
	9/25/1995	0.014	<0.0050	0.014	<u>2.2</u>	6.6	1.7	6.8	17.3
	12/21/1998	--	--	--	<u>0.96</u> *	1.8 *	1.1 *	4.2 *	8.1
	6/25/2002	0.74	<u>0.19</u>	0.83	<0.45	<0.68	<0.82	<1.7	nd
	11/7/2002	0.042	<u>0.049</u>	0.18	<u>0.90</u>	<0.84	<0.53	<1.1	0.9
	4/15/2003	0.47	0.028	0.47	<0.41	<0.67	<0.54	<1.8	nd
	7/1/2003	--	--	0.34	<0.30	<0.58	<0.60	<1.2	nd
	9/30/2003	--	--	0.26	0.35 *	<0.58	<0.60	<1.2	0.4
	11/10/2003	--	--	0.21	<0.30	<0.58	0.7 *	<1.2	0.7
	5/20/2004	--	--	0.10	<0.41	<0.67	<0.54	<1.8	nd
<b>MW-702</b>	8/15/1995	<0.0050	<u>0.043</u>	0.20	<u>5,900</u>	<u>2,300</u>	<u>1,500</u>	<u>1,600</u>	11,300
	9/25/1995	<0.0050	0.032	0.072	<u>6,100</u>	<u>2,100</u>	<u>1,400</u>	<u>1,400</u>	11,000
<b>Abandoned Monitoring Well</b>									
<b>MW-703</b>	8/15/1995	<0.0050	0.039	0.12	<u>1,300</u>	29	<u>980</u>	430	2,739
	9/25/1995	<0.0050	0.028	0.14	<u>1,300</u>	23	<u>1,100</u>	450	2,873
	12/21/1998	0.05	<u>0.074</u>	0.20	<u>1,190</u>	9.2 *	<u>973</u>	408	2,580
<b>Abandoned Monitoring Well</b>									
<b>MW-704</b>	8/15/1995	<0.0050	<u>0.056</u>	0.31	<u>340</u>	<u>200</u>	<u>280</u>	430	1,250
dup(MW-799)	8/15/1995	0.190	0.022	0.29	<u>310</u>	190	<u>280</u>	440	1,220
	9/25/1995	<0.0050	<u>0.062</u>	0.28	<u>1,100</u>	<u>380</u>	<u>670</u>	970	3,120
dup(MW-799)	9/25/1995	0.02	<u>0.041</u>	0.36	<u>1,100</u>	<u>360</u>	<u>610</u>	900	2,970
	12/21/1998	0.22	0.017	0.31	<u>29</u>	1.6 *	13	11.3	55
dup(MW-B)	12/21/1998	0.29	0.023	0.29	<u>22</u>	1.2 *	9.5	8.7 *	41
<b>Abandoned Monitoring Well</b>									

**Table 2. Groundwater Analytical Results - Cyanide and BTEX**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

Sampling Location	Sampling Date	Cyanide, dissolved (mg/L)			BTEX (µg/L)				
		Cyanide (amenable)	Cyanide (weak acid dissociable)	Cyanide (total)	Benzene	Toluene	Ethylbenzene	Xylene, total	Total BTEX
Wisconsin Groundwater Quality Standards (NR140)									
Preventive Action Limit		ns	<u>0.04</u>	ns	<u>0.5</u>	<u>200</u>	<u>140</u>	<u>1,000</u>	ns
Enforcement Standard		ns	<u>0.2</u>	ns	<u>5</u>	<u>1,000</u>	<u>700</u>	<u>10,000</u>	ns
MW-705	8/15/1995	<0.0050	<0.0050	<0.0050	<1.0	<1.0	<1.0	<3.0	nd
	9/25/1995	<0.0050	<0.0050	<0.0050	<0.50	<1.0	<1.0	<3.0	nd
	12/21/1998	<0.001	<0.001	<0.001	<0.50	<0.60	<0.60	<2.2	nd
dup(MW-A)	12/21/1998	<0.001	0.004	<0.001	<0.50	<0.60	<0.60	<2.2	nd
	6/25/2002	0.076	0.013	0.080	<0.45	<0.68	<0.82	<1.7	nd
dup(QA/QC-1)	6/25/2002	0.088	0.008	0.10	<0.45	<0.68	<0.82	<1.7	nd
	11/7/2002	0.110	<0.0027	0.060	<0.25	<0.84	<0.53	<1.1	nd
	4/15/2003	0.10	0.0064	0.10	<0.41	<0.67	<0.54	<1.8	nd
	7/1/2003	--	--	0.14	<0.30	<0.58	<0.60	<1.2	nd
	9/30/2003	--	--	0.15	<0.30	<0.58	<0.60	<1.2	nd
	11/10/2003	--	--	0.17	<0.30	<0.58	<0.60	<1.2	nd
	5/20/2004	--	--	0.15	<0.41	<0.67	<0.54	<1.8	nd
MW-706	8/15/1995	<0.0050	<0.0050	<0.0050	<u>34,000</u>	<u>13,000</u>	<u>560</u>	<u>7,900</u>	55,460
	9/25/1995	<0.0050	<0.0050	<0.0050	<u>31,000</u>	<u>12,000</u>	<2,500	<u>7,700</u>	50,700
	6/25/2002	0.078	0.0099	0.081	<u>1,900</u>	<u>1,300</u>	<u>270</u>	<u>1,020</u>	4,490
	11/7/2002	--	--	--	--	--	--	--	--
	7/1/2003	--	--	0.099	<u>6,500</u>	<u>2,200</u>	<u>360</u>	<u>1,870</u>	10,930
	11/10/2003	--	--	0.086	<u>3,200</u>	<u>1,300</u>	<u>150</u>	760	5,410
	5/20/2004	--	--	0.15	<u>1,100</u>	<u>990</u>	110	400	2,600
PZ-702	12/21/1998	<0.002	<0.002	<0.002	<0.50	1.5 *	<0.60	<2.2	1.5
dup(QA/QC-1)	6/25/2002	<0.0023	<0.00084	<0.0023	<0.45	<0.68	<0.82	<1.7	nd
	11/7/2002	<0.0027	<0.0027	<0.0027	<0.25	<0.84	<0.53	<1.1	nd
	4/15/2003	<0.0015	<0.0019	<0.0015	<0.41	<0.67	<0.54	<1.8	nd
dup(field)	4/15/2003	<0.0015	<0.0095 C	<0.0015	<0.41	<0.67	<0.54	<1.8	nd
	7/1/2003	--	--	<0.0015	<0.30	<0.58	<0.60	<1.2	nd
	9/30/2003	--	--	0.0033 *,B	<0.30	<0.58	<0.60	<1.2	nd
	11/10/2003	--	--	0.01	<0.30	<0.58	<0.60	<1.2	nd
	11/10/2003	--	--	0.0032*	<0.30	<0.58	<0.60	<1.2	nd
	5/20/2004	--	--	<0.0016	<0.41	<0.67	<0.54	<1.8	nd
MW-707	8/15/1995	0.210	<u>0.042</u>	0.38	<u>1,500</u>	190	<u>3,600</u>	<u>1,400</u>	6,690
	9/25/1995	<0.0050	<u>0.058</u>	0.44	<u>1,200</u>	130	<u>3,500</u>	<u>1,200</u>	6,030
	12/21/1998	0.13	0.033	0.64	<u>830</u>	82 *	<u>3,110</u>	990 *	5,012
MW-707R	6/25/2002	0.76	0.010	0.78	<u>1,100</u>	51	<u>2,300</u>	760	4,211
	11/7/2002	--	--	--	--	--	--	--	--
	7/1/2003	--	--	0.26	<u>1,300</u>	73	<u>2,800</u>	950	5,123
	11/10/2003	--	--	0.30	<u>1,500</u>	76	<u>3,000</u>	<u>1,050</u>	5,626
	5/20/2004	--	--	--	<u>1,000</u>	76	<u>2,500</u>	910	4,486

**Table 2. Groundwater Analytical Results - Cyanide and BTEX**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

Sampling Location	Sampling Date	Cyanide, dissolved (mg/L)			BTEX (µg/L)				
		Cyanide (amenable)	Cyanide (weak acid dissociable)	Cyanide (total)	Benzene	Toluene	Ethylbenzene	Xylene, total	Total BTEX
Wisconsin Groundwater Quality Standards (NR140)									
Preventive Action Limit		ns	0.04	ns	0.5	200	140	1,000	ns
Enforcement Standard		ns	0.2	ns	5	1,000	700	10,000	ns
PZ-703	12/21/98**	0.002 *	0.002 *	0.002 *	960 **	26 **	429 **	301 **	1,716
	12/21/98***	--	--	--	1,170 ***	26 ***	527 ***	299 ***	2,022
	1/19/1999	--	--	--	71	9.6	12	15.2	108
	6/25/2002	<0.0023	0.0009 *	<0.0023	570	14	150	86	820
	11/7/2002	0.0080 *	<0.0027	0.0070 *	460	16	130	101	707
	4/15/2003	0.0025 *	<0.0019	0.0025 *	880	22	260	146	1,308
	7/1/2003	--	--	0.0019 *	1,800	64	760	450	3,074
	9/30/2003	--	--	0.0039 *,B,A	2,000	65	910	520	3,495
	11/10/2003	--	--	0.0051	2,100	65	1,100	560	3,825
	5/20/2004	--	--	0.039	1,000	31	750	390	2,171
	8/24/2004	--	<0.011 C,N	--	3,700	110	2,800	1,180	7,790
MW-708	12/21/1998	<0.001	<0.001	<0.001	<0.50	<0.60	<0.60	<2.2	nd
	6/25/2002	0.003 *	<0.00084	0.0036 *	<0.45	<0.68	<0.82	<1.7	nd
	11/7/2002	<0.0027	<0.0027	0.0060 *	<0.25	<0.84	<0.53	<1.1	nd
dup(QA/QC-1)	11/7/2002	0.0040 *	<0.0027	0.0040 *	<0.25	<0.84	<0.53	<1.1	nd
	4/15/2003	<0.0015	0.0022 *	<0.0015	<0.41	<0.67	<0.54	<1.8	nd
	7/1/2003	--	--	0.0046 *	<0.30	<0.58	<0.60	<1.2	nd
	9/30/2003	--	--	0.0034 *,B	<0.30	<0.58	<0.60	<1.2	nd
	11/10/2003	--	--	0.0046*	<0.30	<0.58	<0.60	<1.2	nd
	5/20/2004	--	--	0.0042 *	<0.41	<0.67	<0.54	<1.8	nd
MW-709	12/21/1998	0.03	0.014	0.030	<0.50	<0.60	<0.60	<2.2	nd
MW-709R	6/25/2002	0.45	0.027	0.480	<0.45	<0.68	<0.82	<1.7	nd
	11/7/2002	0.038	0.0070 *	0.16	<0.25	<0.84	<0.53	<1.1	nd
	4/15/2003	0.28	0.010	0.28	<0.41	<0.67	<0.54	<1.8	nd
	7/1/2003	--	--	0.25	<0.30	<0.58	<0.60	<1.2	nd
dup(M)	7/1/2003	--	--	0.24 N	<0.30	<0.58	<0.60	<1.2	nd
	9/30/2003	--	--	0.11	<0.30	<0.58	<0.60	<1.2	nd
dup(M)	9/30/2003	--	--	0.12	<0.30	<0.58	<0.60	<1.2	nd
	11/10/2003	--	--	0.10	<0.30	<0.58	<0.60	<1.2	nd
	5/20/2004	--	--	0.046	<0.41	<0.67	<0.54	<1.8	nd
dup(Field)	5/20/2004	--	--	0.041	<0.41	<0.67	<0.54	<1.8	nd

**Table 2. Groundwater Analytical Results - Cyanide and BTEX**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

Sampling Location	Sampling Date	Cyanide, dissolved (mg/L)			BTEX (µg/L)				
		Cyanide (amenable)	Cyanide (weak acid dissociable)	Cyanide (total)	Benzene	Toluene	Ethylbenzene	Xylene, total	Total BTEX
<b>Wisconsin Groundwater Quality Standards (NR140)</b>									
<b>Preventive Action Limit</b>		ns	<u>0.04</u>	ns	<u>0.5</u>	<u>200</u>	<u>140</u>	<u>1,000</u>	
<b>Enforcement Standard</b>		ns	<b><u>0.2</u></b>	ns	<b><u>5</u></b>	<b><u>1,000</u></b>	<b><u>700</u></b>	<b><u>10,000</u></b>	ns
<b>Biosparge Wells</b>									
<b>BW-6</b>	5/20/2004	--	--	0.0032	<0.41	<0.67	<0.54	<1.8	nd
<b>BW-15</b>	5/20/2004	--	--	0.077	<u>2.8</u>	<0.67	2.5	2.6 *	7.9

[U-PAR/JTB 11/03 U-HMS 1/29/04 U-LJH/HMS 2/23/04 U-HMS/LJH 6/4/04 U-HMS/MJR 9/17/04]

**Notes:**

- 1) Concentrations that attain/exceed a preventive action limit (PAL) are *italics and underlined*.
- 2) Concentrations that attain/exceed an enforcement standard (ES) are underlined and bold.

<0.0050 : Parameter not detected above the Limit of Detection indicated.

-- : Analysis was not performed

nd : Analyte not detected

ns : NR 140 standard not established

dup(QA/QC-1): Field duplicate sample (field identity shown in parentheses).

**Laboratory Notes:**

\* : Laboratory note - Parameter detected above the limit of detection (LOD) but below the limit of Quantitation (LOQ).

\*\* : Laboratory note - The original analysis contained concentrations above the calibration curve.

\*\*\* : Laboratory note - The sample was reanalyzed past hold time, concentrations were within the calibration curve.

A : Laboratory note-Laboratory Control Spike recovery not within control limits.

B : Laboratory note-Analyte present in method blank.

C : Laboratory note- Elevated detection limit.

N : Laboratory note-Spiked sample recovery not within control limits.

M : Field duplicate identity was erroneously identified (field duplicate or field blank)

**Table 3. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

**Table 3. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

Sampling Location	Sampling Date	POLYNUCLEAR AROMATIC HYDROCARBONS - PAHs (µg/L)																		
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (ghi) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
Wisconsin Groundwater Quality Standards (NR 140)																				
Preventive Action Limit Enforcement Standard		ns	ns	<u>600</u>	ns	<u>0.02</u>	<u>0.02</u>	ns	ns	<u>0.02</u>	ns	<u>80</u>	<u>80</u>	ns	ns	ns	<u>8</u>	ns	<u>50</u>	ns
		ns	ns	<u>3,000</u>	ns	<u>0.2</u>	<u>0.2</u>	ns	ns	<u>0.2</u>	ns	<u>400</u>	<u>400</u>	ns	ns	ns	<u>40</u>	ns	<u>250</u>	ns
MW-705	8/15/1995	<1.0	<2.0	<0.20	<0.050	<0.20	<0.050	<0.10	<0.050	<0.10	<0.10	<0.20	<0.40	<0.10	--	--	<1.0	<0.40	<0.20	nd
	9/25/1995	<1.0	<2.0	<0.20	<0.050	<0.20	<0.050	<0.10	<0.050	<0.10	<0.10	<0.20	<0.40	<0.10	--	--	<1.0	<0.40	<0.20	nd
	12/21/1998	<1.4	<1.3	<0.10	<0.10	<0.21	<0.12	<0.23	<0.23	<0.092	<0.25	<0.23	<0.056	<0.11	<0.94	<0.92	<0.73	<0.11	<0.39	nd
dup(MW-A)	12/21/1998	<1.4	<1.3	<0.10	<0.10	<0.21	<0.12	<0.23	<0.23	<0.092	<0.25	<0.23	<0.056	<0.11	<0.94	<0.92	<0.73	<0.11	<0.39	nd
dup(QA/QC-1)	6/25/2002	<0.018	<0.023	<0.020	<0.019	<0.012	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	<0.021	<0.014	--	--	<0.027	<0.019	<0.020	nd
	6/25/2002	<0.018	<0.023	<0.020	<0.019	<0.012	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	<0.021	<0.014	--	--	<0.027	<0.019	<0.020	nd
	11/7/2002	<0.018	<0.019	<0.020	<0.012	0.017 *	0.013 *	<0.016	<0.019	<0.014	<0.016	0.016 *	<0.017	<0.021	<0.017	<0.017	<0.024	<0.016	<0.017	0.05
	4/15/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	0.031 *	0.10	<0.016	<0.017	0.1
	7/1/2003	<0.018 &	<0.019 &	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	0.015 *	<0.017	<0.021	<0.018 A,&	<0.017 &	0.029 *,&B	<0.016	0.018 *	0.1
	9/30/2003	<0.018	<0.019	<0.020	0.016 *	0.014 *	<0.013	<0.016	<0.019 &	0.014 *	<0.016	0.014 *	<0.017	<0.021	<0.018	<0.017	0.059 *	<0.016	0.020 *	0.1
	11/10/2003	<0.018 &	0.044*	0.024*	0.021 *	0.017 *	<0.013	<0.016	<0.019	0.014 *	<0.016	0.028 *	0.019*	<0.021	0.044*	0.053*	0.25&	0.071	0.039 *	0.6
	5/20/2004	0.019*	<0.018	<0.019	0.017 *	<u>0.02 *</u>	0.015 *	<0.018	0.016 *	<0.015	0.025 *	<0.016	<0.02	0.082	0.04	0.39	0.022*	0.029 *	0.7	
MW-706	8/15/1995	197,000	1,480,000	<u>177,000</u>	129,000	<u>83,000</u>	<u>31,000</u>	62,000	29,000	<u>82,000</u>	13,000	<u>266,000</u>	<u>640,000</u>	32,000	--	--	<u>1,900,000</u>	730,000	<u>142,000</u>	5,993,000
	9/25/1995	9,400	82,000	<u>15,000</u>	11,000	<u>6,700</u>	<u>2,400</u>	4,900	980	<u>5,400</u>	<10	<u>8,400</u>	<u>57,000</u>	2,700	--	--	<u>166,000</u>	56,000	<u>9,700</u>	437,580
	6/25/2002	<290 D	2,700 D	<u>1,400 D</u>	1,000 D	<u>830 D</u>	<u>270 D, *</u>	270 D, *	460 D, *	<u>920 D</u>	<270 D	<u>2,200 D</u>	<u>1,200</u>	320 D, *	--	--	<u>7,100 D</u>	3,200 D	<u>2,200</u>	24,070
	11/7/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	7/1/2003	34 &	370 D,*,&	<200 D	<120 D	<140 D	<u>29</u>	21	31	<140 D	6.4	<130 D	<170 D	18	510 D,A,*,&	640 D,&	<u>2,200 D,&amp;</u>	250 D, *	<170 D	4,109
	11/10/2003	41 &	400D	140	190	<u>130</u>	<u>70</u>	43	70	<u>130</u>	14*	<u>280</u>	<u>150</u>	38*	510D	640D	<u>2,900 D,&amp;</u>	410D	<u>360D</u>	6,516
	5/20/2004	16	220 D	43	65 *,D	<u>87 *,D</u>	<u>44</u>	31	36	<u>47</u>	11	<u>80 *,D</u>	40	27	130 D	140 D	<u>680 D</u>	110 D	<u>130 D</u>	1,937
PZ-702	12/21/1998	<1.4	<1.3	0.44	0.90	<0.21	<u>0.20 *</u>	<0.23	<0.23	<u>0.27 *</u>	<0.25	1.5	0.50	<0.11	<0.94	<0.92	1.2 *	1.5	2.3	8.8
dup(QA/QC-1)	6/25/2002	<0.018	0.059*	<0.020	<0.019	<0.012	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	0.030*	<0.014	--	--	0.42	0.063	0.021 *	0.6
	11/7/2002	<0.018	0.023 *	<0.020	0.015 *	<0.014	<0.013	0.016 *	<0.019	<u>0.023 *</u>	<0.016	0.039 *	0.020 *	<0.021	0.031 *	0.032 *	0.087	0.084	0.046 *	0.4
	4/15/2003	<0.018	<0.019	<0.020	0.013 *	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	0.013	0.017	<0.021	0.054 *	0.045 *	0.12	0.042 *	0.018 *	0.3
	4/15/2003	<0.018	<0.019	<0.020	0.012 *	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	0.042 *	0.072	0.20	0.026 *	<0.017	0.4
	7/1/2003	<0.018 &	0.037 *,&B	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	0.014 *	<0.016	0.022 *	<0.017	<0.021	0.029 *,&A,B	0.022 *,&B	0.045 *,&B	0.058 B	0.033 *	0.3
	9/30/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019 &	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	<0.017	0.049 *	0.019 *	<0.017	0.1
dup(field)	11/10/2003	0.027 &,*	0.03*	0.025*	0.038*	<u>0.034*</u>	<u>0.019*</u>	<0.019	<u>0.033*</u>	<0.016	0.046	0.02*	<0.021	0.030*	0.032 *	0.13&	0.082	0.080	0.6	
	11/10/2003	<0.018	0.22*	<0.02																

**Table 3. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

Sampling Location	Sampling Date	POLYNUCLEAR AROMATIC HYDROCARBONS - PAHs (µg/L)																				
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (ghi) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs		
Wisconsin Groundwater Quality Standards (NR 140)																						
Preventive Action Limit Enforcement Standard		ns	ns	<u>600</u>	ns	<u>0.02</u>	<u>0.02</u>	ns	ns	<u>0.02</u>	ns	<u>80</u>	<u>80</u>	ns	ns	<u>8</u>	ns	<u>50</u>	ns			
		ns	ns	<u>3,000</u>	ns	<u>0.2</u>	<u>0.2</u>	ns	ns	<u>0.2</u>	ns	<u>400</u>	<u>400</u>	ns	ns	<u>40</u>	ns	<u>250</u>	ns			
MW-707R	6/25/2002	< 120 D	6.4	6.2	1.8	<u>1.2</u>	<u>0.73*</u>	0.61 *	0.51 *	<u>1.2</u>	<0.34	7.5	<130 D	0.48 *	--	--	<u>1,600 D</u>	<120 D	7.3	1,634		
	11/7/2002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	7/1/2003	<180 D,&	6.8 &	9	1.8 *	<u>1.5 *</u>	<1.3	<1.6	<1.9	<u>1.8 *</u>	<1.6	9.6	39	<2.1	270 D,A,*,&	18 &	<u>1,800 D,&amp;</u>	<160 D	12	2,170		
	11/10/2003	<180 D,&D.	11	13	6.80	<u>5.20</u>	<u>2.7*</u>	2.3*	2.6*	<u>5.6</u>	<1.6	18	47	<2.1	310 D, *	21	<u>2,000 D, &amp;</u>	<160D	29	2,474		
	5/20/2004	43	6.1	12	5.2	<u>4.1*</u>	<u>2.0*</u>	2.2*	2.3*	<u>4.4</u>	<1.5	15	31	<2.0	230 *,D	14	<u>1,600 D</u>	77 *,D	19	2,067		
PZ-703	12/21/1998	<1.4	<1.3	0.20 *	0.22 *	<0.21	<0.12	<0.23	<0.23	<0.092	<0.25	0.25 *	0.44	<0.11	2.8 *	<0.92	<u>86</u>	0.53	0.64 *	91		
	6/25/2002	1.2	<0.46	0.45 *	<0.38	<0.24	<0.28	<0.30	<0.26	<0.36	<0.34	<0.56	<0.42	<0.28	--	--	<u>190</u>	0.38 *	<0.40	192		
	11/7/2002	<1.8	<1.9	<2.0	<1.2	<1.4	<1.3	<1.6	<1.9	<1.4	<1.6	<1.3	<1.7	<2.1	<1.7	<1.7	<u>41</u>	<1.6	<1.7	41		
	4/15/2003	<1.4	<1.5	<1.6	<0.96	<1.1	<1.0	<1.3	<1.5	<1.1	<1.3	<1.0	<1.4	<1.7	<1.4	<1.4	<u>30</u>	1.4 *	<1.4	31		
	7/1/2003	2.8 &,*	<1.9 &	<2.0	<1.2	<1.4	<1.3	<1.6	<1.9	<1.4	<1.6	<1.3	<1.7	<2.1	7.0 &A	5.0 &,*	<u>410 D,&amp;</u>	<1.6	<1.7	425		
	9/30/2003	3.9	0.47 *	<0.40	<0.24	<0.28	<0.26	<0.32	<0.38 &	<0.28	<0.32	<0.26	0.41 *	<0.42	8.4	7.2	<u>350 D</u>	0.41 *	<0.34	371		
	11/10/2003	7.4&	<1.9	<2.0	<1.2	<1.4	<1.3	<1.6	<1.9	<1.4	<1.6	<1.3	<1.7	<2.1	13	12	<u>510 D, &amp;</u>	4.2 *	1.8 *	548		
	5/20/2004	15	<1.8	<1.9	<1.1	<1.3	<1.2	<1.5	<1.8	<1.3	<1.5	<1.2	<1.6	<2.0	38	40	<u>1,900 D</u>	<1.5	<1.6	1,993		
	8/24/2004	21 *	<7.7	<7.1	<7.8	<7.2	<7.2	<8.3	<7.7	<6.6	<8.8	<6.6	<8.7	<6.8	45	42	<u>1,600 D</u>	<8.2	<6.5	1,708		
MW-708	12/21/1998	<1.4	<1.3	<0.10	<0.10	<0.21	<0.12	<0.23	<0.23	<0.092	<0.25	<0.23	<0.056	<0.11	<0.94	<0.92	<0.73	<0.11	<0.39	nd		
	6/25/2002	<0.018	<0.023	<0.020	<0.019	0.014 *	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	<0.021	<0.014	--	--	<0.027	<0.019	<0.020	0.01		
	11/7/2002	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.017	<0.017	<0.024	<0.016	<0.017	nd		
dup(QA/QC-1)	11/7/2002	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.017	<0.017	<0.024	<0.016	<0.017	nd		
	4/15/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	0.019 *	0.026 *	0.088	<0.016	<0.017	0.1		
	7/1/2003	0.056 *,&B	0.032 *,&B	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	0.020 *,&B	<0.021	0.20 A,&B	0.20 B,&	1.5 B,D,&	0.024 *,&B	<0.017	2.0
	9/30/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019 &	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	<0.017	0.23	<0.016	<0.017	0.2		
	11/10/2003	0.031 *,&	0.27	0.11	0.11	<u>0.068</u>	<u>0.033*</u>	0.026*	0.038*	<u>0.071</u>	<0.016	0.15	0.11	0.022*	0.16	0.19	0.38&	0.36	0.22	2.4		
	5/20/2004	<0.017	<0.018	<0.019	<0.011	<0.013	<0.012	<0.015	<0.018	<0.013	<0.015	<0.012	<0.016	<0.02	0.048*	0.02*	0.29	<0.015	<0.016	0.36		

**Table 3. Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, Wisconsin**

Sampling Location	Sampling Date	POLYNUCLEAR AROMATIC HYDROCARBONS - PAHs (µg/L)																		
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (ghi) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Total PAHs
Wisconsin Groundwater Quality Standards (NR 140)																				
Preventive Action Limit Enforcement Standard		ns	ns	<u>600</u>	ns	<u>0.02</u>	<u>0.02</u>	ns	ns	<u>0.02</u>	ns	<u>80</u>	<u>80</u>	ns	ns	ns	<u>8</u>	ns	<u>50</u>	ns
		ns	ns	<b>3,000</b>	ns	<b>0.2</b>	<b>0.2</b>	ns	ns	<b>0.2</b>	ns	<b>400</b>	<b>400</b>	ns	ns	ns	<b>40</b>	ns	<b>250</b>	ns
MW-709	12/21/1998	3.4 *	<1.3	2.9	1.3	<u>0.30 *</u>	<u>0.51</u>	<0.23	<0.23	<u>0.66</u>	<0.25	6.6	3.3	<0.11	<0.94	<0.92	4.6	8.4	10	42
MW-709R	6/25/2002	0.13	<0.023	0.032*	<0.019	<u>0.10</u>	<0.014	<0.015	<0.013	<0.018	<0.017	<0.028	0.041 *	<0.014	--	--	1.8 D	0.084	0.027*	2.2
	11/7/2002	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<0.017	<0.017	<0.024	<0.016	<0.017	nd
	4/15/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<u>0.020</u> *	<u>0.034</u> *	0.12	<0.016	<0.017	0.2
	7/1/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<u>0.020</u> *	<u>0.019</u> *	0.040*	<0.016	<0.017	0.1
dup(M)	7/1/2003	0.023 *,&B	0.019 *	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019	<0.014	<0.016	<0.013	<0.017	<0.021	<u>0.084</u> A,&B	<u>0.044</u> *,&B	0.74 B,D,&	<0.016	<0.017	0.9
	9/30/2003	<0.018	<0.019	<0.020	<0.012	<0.014	<0.013	<0.016	<0.019 &	<0.014	<0.016	<0.013	<0.017	<0.021	<0.018	<0.017	<0.024	<0.016	<0.017	nd
dup(M)	9/30/2003	<0.018	<0.019	<0.020	<u>0.065</u>	<u>0.059</u>	<u>0.066</u>	0.098	0.056 *&	<u>0.057</u>	0.093	<0.013	<0.017	0.094	<0.018	<0.017	0.025*	<0.016	<0.017	0.6
	11/10/2003	<0.018	<0.019	0.022*	0.016*	<0.014	<0.013	<0.016	<0.019	0.015*	<0.016	0.027*	<0.017	<0.021	<0.018	<0.017	0.050*	0.064	0.033*	0.2
	5/20/2004	<0.017	<0.018	<0.019	<0.011	<0.013	<0.012	<0.015	<0.018	<0.013	<0.015	<0.012	<0.016	<0.02	0.057	0.023*	0.38	<0.015	<0.016	0.5
dup(Field)	5/20/2004	<0.017	<0.018	<0.019	<0.011	<0.013	<0.012	<0.015	<0.018	<0.013	<0.015	<0.012	<0.016	<0.02	0.031*	0.044*	0.15	<0.015	<0.016	0.23
<b>Biosparge Well</b>																				
BW-6	5/20/2004	<0.017	<0.018	<0.019	<0.011	<0.013	<0.012	<0.015	<0.018	<0.013	<0.015	<0.012	<0.016	<0.02	<0.017	<0.016	0.075*	<0.015	<0.016	0.1
BW-15	5/20/2004	0.22	<0.018	<0.019	<0.011	<0.013	<0.012	<0.015	<0.018	<0.013	<0.015	<0.012	0.043*	<0.02	1.3 D	0.32	5.9 D	0.031*	<0.016	7.8

[U-PAR/JTB 11/03 U-HMS 1/29/04 U-LJH/HMS 2/23/04 U-HMS/LJH 6/4/04 U-HMS/MJR 9/17/04]

**Notes:**

- Concentrations that attain/exceed a preventive action limit (PAL) are *italics and underlined*.
- Concentrations that attain/exceed an enforcement standard (ES) are **underlined and bold**.

<2.0 : Parameter not detected above the Limit of Detection indicated.

-- : Analysis was not performed

nd : Analyte not detected

ns : NR 140 standard not established

dup(QA/QC-1): Field duplicate sample (field identity shown in parentheses).

**Laboratory Notes**

\* : Laboratory note - Parameter detected above the limit of detection (LOD) but below the limit of Quantitation (LOQ).

A : Laboratory note-Laboratory Control Spike recovery not within control limits.

B : Laboratory note-Analyte present in method blank.

D : Laboratory note- Analyte value from diluted analysis.

& : Laboratory note-Precision not within control limits.

M : Field duplicate identity was erroneously identified (field duplicate or field blank)

**Table 4. Groundwater Analytical Results - Field & Laboratory RNA Analytical**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Well	Date	Laboratory Analytical					Pre Purge Field Measurements				
		Alkalinity (mg/L)	Nitrite+Nitrate (mg/L)	Sulfate (mg/L)	Total Iron (µg/L)	Methane (µg/L)	Dissolved Iron (µg/L)	Conductivity (mmhos/cm)	pH (s.u.)	Temperature (C)	Dissolved Oxygen (mg/L)
<b>Wisconsin Groundwater Quality Standards (NR140)</b>											
Preventive Action Limit		ns	2	125	ns	ns	150	ns	ns	ns	ns
Enforcement Standard		ns	10	250	ns	ns	300	ns	ns	ns	ns
MW-701R	6/25/2002	1,200	<0.23	3.8 B	52,000	--	<u>20,000</u>			Coal Tar	
	11/7/2002	--	--	--	--	--	--	1.267	7.18	13.39	1.08
	1/24/2003	--	--	--	--	--	--			Coal Tar	
	7/1/2003	--	<0.047	2.3	--	11,000	<u>18,000</u>	1.243	9.32	12.84	4.29
	9/30/2003	--	--	--	--	--	--	--	--	--	--
	11/10/2003**	--	<0.047	<1.1	--	5,800	<u>40,000</u>	1.001	9.12	12.38	0.25
	2/17/2003	--	--	--	--	--	--			Coal Tar	
	5/20/2004	--	<0.063	1.0*	--	6,700	--	0.173	9.74	9.9	7.36
	8/24/2004	--	--	--	--	--	--	2.244	6.46	15.66	0.74
PZ-701	6/25/2002	150	0.12	<u>320</u>	7,300	--	<u>440</u>	0.871	8.25	12.52	5.92
	11/7/2002	--	<0.075	<u>200</u>	--	250	<u>300</u>	0.562	7.74	14.02	1.92
	1/24/2003	--	--	--	--	--	--			quality probe wouldn't fit in well	
	4/15/2003	--	--	--	--	--	--	0.159	8.84	9.79	7.49
	7/1/2003	--	0.057 *	98	--	490	<u>170</u>			quality probe wouldn't fit in well	
	9/30/2003	--	--	--	--	--	--	0.595	7.56	10.5	--
	11/10/2003**	--	0.048*	58	--	250	92			quality probe wouldn't fit in well	
	2/17/2003	--	--	--	--	--	--			quality probe wouldn't fit in well	
	5/20/2004	--	0.14	51	--	57	--	0.00	9.91	18.06	1.01
	8/24/2004	--	--	--	--	--	--	0.712	6.76	16.6	3.73

**Table 4. Groundwater Analytical Results - Field & Laboratory RNA Analytical**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Well	Date	Laboratory Analytical					Pre Purge Field Measurements					
		Alkalinity (mg/L)	Nitrite+Nitrate (mg/L)	Sulfate (mg/L)	Total Iron (µg/L)	Methane (µg/L)	Dissolved Iron (µg/L)	Conductivity (mmhos/cm)	pH (s.u.)	Temperature (C)	Dissolved Oxygen (mg/L)	
<b>Wisconsin Groundwater Quality Standards (NR140)</b>												
Preventive Action Limit	ns	2	125	ns	ns	150	ns	ns	ns	ns	ns	
Enforcement Standard	ns	10	250	ns	ns	300	ns	ns	ns	ns	ns	
MW-705 dup(QA/QC-1)	6/25/2002	460	<0.023	190	1,200	--	410	1.232	8.7	10.85	4.75	403
	6/25/2002	300	<0.023	91	3,200	--	240	1.232	8.7	10.85	4.75	403
	11/7/2002	--	<0.075	<1.1	--	--	<61	1.407	7.76	11.02	6.42	539
	4/15/2003	--	--	--	--	--	--	1.404	8.41	7.45	6.28	262
	7/1/2003	--	<0.047	380	--	93	670	1.500	9.25	12.40	4.26	262
	9/30/2003	--	--	--	--	--	--	2.630	6.98	13.9	--	--
	11/10/2003**	--	0.21	380	--	74	310	1.084	9.84	12.21	0.27	36
	2/17/2003	--	--	--	--	--	--	3.300	6.68	6.52	7.61	200.7
	5/20/2004	--	<0.063	350	--	32	--	0.058	9.71	11.35	1.53	10
	8/24/2004	--	--	--	--	--	--	2.916	6.83	15.09	1.2	192
MW-706	6/25/2002	140	23	1,200	3,800	--	620	0.011	7.69	Coal Tar 9.44	1.88	541
	11/7/2002	--	--	--	--	--	--	0.011	7.69	Coal Tar 9.44	1.88	541
	1/24/2003	--	--	--	--	--	--	0.011	7.69	Coal Tar 9.44	1.88	541
	7/1/2003	--	0.67	880	--	25	140	1.358	9.35	10.71	2.51	270
	11/10/2003**	--	7.6	500	--	<10	280	0.749	9.51	12.8	0.08	14
	2/17/2003	--	--	--	--	--	--	0.011	7.69	Coal Tar 9.44	1.88	541
	5/20/2004	--	0.85	880	--	<10	--	0.385	9.98	10.15	8.9	-4
	8/24/2004	--	--	--	--	--	--	2.413	6.59	13.93	0.72	235

**Table 4. Groundwater Analytical Results - Field & Laboratory RNA Analytical**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Well	Date	Laboratory Analytical					Pre Purge Field Measurements					
		Alkalinity (mg/L)	Nitrite+Nitrate (mg/L)	Sulfate (mg/L)	Total Iron (µg/L)	Methane (µg/L)	Dissolved Iron (µg/L)	Conductivity (mmhos/cm)	pH (s.u.)	Temperature (C)	Dissolved Oxygen (mg/L)	Redox Potential (Eh/ORP) (mV)
<b>Wisconsin Groundwater Quality Standards (NR140)</b>												
<b>Preventive Action Limit</b>	ns	ns	2	125	ns	ns	150	ns	ns	ns	ns	ns
<b>Enforcement Standard</b>	ns	ns	10	250	ns	ns	300	ns	ns	ns	ns	ns
PZ-702	6/25/2002	50	<0.023	3.7 *, B	15,000	--	25	0.154	8.5	11.32	3.42	362
	11/7/2002	--	--	--	--	22	--	0.220	8.04	13.76	1.51	515
	1/24/2003	--	--	--	--	--	--	0.200	8.02	10.02	2.33	247
	4/15/2003	--	--	--	--	--	--	0.216	9.01	7.63	2.48	260
	7/1/2003	--	0.053 *	3.6	--	39	48 *	0.103	9.71	10.76	4.52	277
	9/30/2003	--	--	--	--	--	--	0.217	8.22	10.6	--	--
	11/10/2003**	--	<0.047	<1.1	--	<10	<18	0.095	10.36	10.28	2.0	13
dup (field)	11/10/2003	--	<0.047	<1.1	--	14	<18	--	--	--	--	--
	2/17/2003	--	--	--	--	--	--	0.265	7.54	8.83	7.76	179.5
	5/20/2004	--	0.2*	3.2	--	16	--	0.101	10.0	9.53	1.06	4
	8/24/2004	--	--	--	--	--	--	0.317	7.43	14.4	4.41	319
MW-707R	6/25/2002	460	<0.023	40	25,000	--	730			Coal Tar		
	11/7/2002	--	--	--	--	--	--	1.099	7.39	12.86	1.39	523
	1/24/2003	--	--	--	--	--	--			Coal Tar		
	7/1/2003	--	0.049 *	30	--	5,800	510	0.870	9.58	13.81	1.93	198
	11/10/2003**	--	<0.047	20	--	1,800	1.1	0.785	9.76	13.01	3.36	-85
	2/17/2003	--	--	--	--	--	--			Coal Tar		
	5/20/2004	--	<0.063	41	--	3,400	--	0.349	10.19	10.15	5.23	-73
	8/24/2004	--	--	--	--	--	--	1.65	6.81	17.15	1.08	214

**Table 4. Groundwater Analytical Results - Field & Laboratory RNA Analytical**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Well	Date	Laboratory Analytical					Pre Purge Field Measurements				
		Alkalinity (mg/L)	Nitrite+Nitrate (mg/L)	Sulfate (mg/L)	Total Iron (µg/L)	Methane (µg/L)	Dissolved Iron (µg/L)	Conductivity (mmhos/cm)	pH (s.u.)	Temperature (C)	Dissolved Oxygen (mg/L)
<b>Wisconsin Groundwater Quality Standards (NR140)</b>											
Preventive Action Limit	ns	2	125	ns	ns	150	ns	ns	ns	ns	ns
Enforcement Standard	ns	10	250	ns	ns	300	ns	ns	ns	ns	ns
PZ-703	6/25/2002	73	<0.023	4.7 B	27,000	--	370	0.283	8.95	11.7	0.64
	11/7/2002	--	<0.075	4.2	--	71	<61	0.028	8.33	13.01	1.49
	1/24/2003	--	--	--	--	--	--	quality probe wouldn't fit in well due to ice			
	4/15/2003	--	--	--	--	--	--	0.687	9.08	7.28	2.25
	7/1/2003	--	<0.047	4.3	--	230	100	0.204	9.99	9.91	2.51
	9/30/2003	--	--	--	--	--	--	0.320	8.61	10.6	--
	11/10/2003**	--	<0.047	4.7	--	53	<18	0.162	10.68	9.94	4.82
	2/17/2003	--	--	--	--	--	--	0.429	10.42	6.69	6.55
	5/20/2004	--	<0.063	77	--	120	--	0.105	9.95	10.36	8.07
	8/24/2004	--	--	--	--	--	--	0.574	7.7	17.72	1.72
MW-708	6/25/2002	520	0.18	63	35,000	--	2,500	2.301	7.35	13.49	4.56
	11/7/2002	--	0.13 *	66	--	<10	<61	2.407	7.82	14.37	2.72
dup(QA/QC-1)	11/7/2002	--	0.18 *	67	--	<10	<61	--	--	--	--
	1/24/2003	--	--	--	--	--	--	4.941	7.83	10.49	1.93
	4/15/2003	--	--	--	--	--	--	2.875	8.67	9.19	2.52
	7/1/2003	--	0.14 *	70	--	<10	51 *	2.771	9.43	12.36	2.32
	9/30/2003	--	--	--	--	--	--	5.130	7.09	13.6	--
	11/10/2003**	--	0.12*	71	--	<10	<18	2.103	9.34	13.63	0.13
	2/17/2003	--	--	--	--	--	--	5.014	6.88	10.55	4.71
	5/20/2004	--	0.18	68	--	<10	--	1.041	9.91	9.67	6.1
	8/24/2004	--	--	--	--	--	--	4.948	6.9	14.38	1.63

**Table 4. Groundwater Analytical Results - Field & Laboratory RNA Analytical**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Well	Date	Laboratory Analytical					Pre Purge Field Measurements				
		Alkalinity (mg/L)	Nitrite+Nitrate (mg/L)	Sulfate (mg/L)	Total Iron (µg/L)	Methane (µg/L)	Dissolved Iron (µg/L)	Conductivity (mmhos/cm)	pH (s.u.)	Temperature (C)	Dissolved Oxygen (mg/L)
<b>Wisconsin Groundwater Quality Standards (NR140)</b>											
Preventive Action Limit		ns	12	125	ns	ns	150	ns	ns	ns	ns
Enforcement Standard		ns	10	250	ns	ns	300	ns	ns	ns	ns
MW-709R	6/25/2002	900	2.7	440	4,000	--	490	1.32	7.97	14.74	4.44
	11/7/2002	--	--	--	--	--	--	1.534	7.57	13.99	1.82
	4/15/2003	--	--	--	--	--	--	1.480	8.65	6.92	10.14
<i>dup(M)</i>	7/1/2003	--	0.093 *	500	--	<10	820	0.462	9.72	16.03	4.34
	7/1/2003	--	0.13 *	510	--	17	830	--	--	--	--
	9/30/2003	--	--	--	--	--	--	3.350	6.92	16.2	--
<i>dup(Field)</i>	11/10/2003**	--	0.94	210	--	<10	90	1.066	9.54	12.22	1.06
	2/17/2003	--	--	--	--	--	--	2.680	6.86	5.02	9.38
	5/20/2004	--	0.79	130	--	<10	--	0.221	9.7	11.63	1.23
	5/20/2004	--	0.8	130	--	<10	--	--	--	--	--
	8/24/2004	--	--	--	--	--	--	1.524	7.04	17.22	1.86

**Table 4. Groundwater Analytical Results - Field & Laboratory RNA Analytical**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

Well	Date	Laboratory Analytical					Pre Purge Field Measurements				
		Alkalinity (mg/L)	Nitrite+Nitrate (mg/L)	Sulfate (mg/L)	Total Iron (µg/L)	Methane (µg/L)	Dissolved Iron (µg/L)	Conductivity (mmhos/cm)	pH (s.u.)	Temperature (C)	Dissolved Oxygen (mg/L)
<b>Wisconsin Groundwater Quality Standards (NR140)</b>											
Preventive Action Limit	ns	<u>2</u>	<u>125</u>	ns	ns	<u>150</u>	ns	ns	ns	ns	ns
Enforcement Standard	ns	<b><u>10</u></b>	<b><u>250</u></b>	ns	ns	<b><u>300</u></b>	ns	ns	ns	ns	ns
Biosparge Well BW-6	11/7/2002 5/20/2004 8/24/2004	-- <0.063 --	0.13 30 --	35 -- --	-- <10 --	<10 <61 --	0.004 8.36 --	10.72 3.4 --	391 quality probe wouldn't fit in well	3.4 -- --	391 --
BW-15	5/20/2004	--	1.1	<u>1,500</u>	--	<10	--	--	--	--	--

(O-JTB/GRL7/30/02)(U-PAR/JTB 11/03)(U-PAR/? 3/04)(U-HMS/LJH 6/4/04)(U-HMS/MJR 9/17/04)

Notes:

- 1) Concentrations that attain/exceed a preventive action limit (PAL) are *italics and underlined*.
- 2) Concentrations that attain/exceed an enforcement standard (ES) are **underlined and bold**.
- 3) The field monitor for dissolved oxygen and ORP was not functioning on 09/30/2003.

C° : Degrees celcius

mg/L : milligrams per liter

µg/L : micrograms per liter

mV : millivolts

-- : Analysis was not performed

dup(QA/QC-1) : Field duplicate sample (field identity shown in parentheses)

Coal Tar : Free phased product present in well.

\*\*: Field Measurements are post purge measurements.

ns : NR 140 standard not established

M : Field duplicate identity was erroneously identified  
(field duplicate or field blank)

**Laboratory Notes:**

B : Laboratory note-Analyte present in method blank.

\* : Laboratory note - Parameter detected above the limit of detection (LOD) but below the limit of Quantitation (LOQ).

**Table 5. Groundwater and Biosparge System Monitoring Schedule**  
**Wisconsin Public Service Corporation - Campmarina Former Manufactured Gas Plant Site**  
**Sheboygan, WI**

	Year 1					Year 2				Year 3			
	Nov-02	Jan-03	Apr-03	Jul-03	Sep-03	Nov-03	Feb-04	May-04	Aug-04	Nov-04	Feb-05	May-05	Aug-05
<b>Biosparge System Monitoring</b>													
<b>Vent Monitoring</b>													
BTEX (8260)	X					X							
BTEX (8021)								X		X		X	
PID	X		X			X	X			X	X	X	X
<b>Sump Monitoring</b>													
Hydrogen Sulfide (4 gas meter)		X				X				X			
Water Level	X	X	X			X	X	X		X	X	X	X
<b>Groundwater Monitoring</b>													
<b>Monitoring Wells</b>													
BW-6	X						X			X		X	
BW-15							X			X		X	
MW-701R			X			X	X			X		X	
PZ-701	X	X	X	X		X	X			X		X	
MW-706			X			X	X			X		X	
PZ-702	X	X	X	X		X	X			X		X	
MW-707R			X			X	X			X		X	
PZ-703	X	X	X	X		X		X	X	X		X	
MW-705	X	X	X	X		X		X		X		X	
MW-708	X	X	X	X		X		X		X		X	
MW-709R	X	X	X	X		X		X		X		X	
<b>Field Parameters</b>													
Water Quality Probe	X	X	X	X	X	X	X	X	X	X	X	X	X
Water Levels	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Analytical Parameters</b>													
Dissolved, Fe	X		X			X							
Nitrogen, Nitrate, Nitrite	X		X			X		X		X		X	
Methane	X		X			X		X		X		X	
Sulfate	X		X			X		X		X		X	
BTEX (USEPA 8260)	X		X					X	X				
BTEX (USEPA 8021)			X	X		X				X		X	
PAHs (USEPA 8270)	X	X	X	X		X		X	X	X		X	
Cyanide (USEPA 335.4)	X	X	X	X		X		X					
Weak Acid Dissociable Cyanide (SM 4500)									X	X		X	

**Notes:**

1. X - Indicates site visit, activity or sample collected during that visit.
2. X - Field Parameters were measured in PZ-701,702, 703; MW-708. Field Parameters were also measured in MW-701R, 706, and 707R.
3. Monitoring wells and piezometers sampled for BTEX (USEPA 8620B/8021B), PAHs (USEPA 8270), and Cyanides (total, amenable, and dissociable)(USEPA 335.4)
4. X - Indicates planned site visit, scheduled activity or sample collected during that visit. Future cyanide monitoring will include only dissociable cyanide.
5. Water quality probe parameters will only be collected from monitoring wells that do not contain coal tar as observed during that monitoring event.
6. Water quality probe parameters include dissolved oxygen, pH, temperature, specific conductance and oxidation / reduction potential.

FORM 4400-194 WITH EXPLANATIONS

APPENDIX A

**PURPOSE AND APPLICABILITY OF THIS FORM:** Completion of this form is required under s. NR 724.13(e), Wis. Adm. Code. Use of this form is mandatory. Failure to submit this form as required is a violation of s. NR 724.13, Wis. Adm. Code, and is subject to the penalties in s. 144.99, Wis. Stats.. This form must be submitted every six months for active soil and groundwater remediation projects and every twelve months for passive (natural attenuation) remediation projects that are regulated under the NR 700 series of Wis. Adm. Code. Specifically, for sites meeting any of the following criteria:

- Soil or groundwater remediation projects that report progress in accordance with s. NR 700.11(1), Wis. Adm. Code.
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.13(3), Wis. Adm. Code. (Note: s. NR 724.13(3) requires progress reports for operation and maintenance of active systems to be submitted every three months however the Department considers submittal of this form every six months to satisfy the requirements of the rules, unless otherwise directed by the Department on a site specific basis.)
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.17(3), Wis. Adm. Code. (Note: s. NR 724.17(3) requires progress reports every time that samples are collected however the Department considers submittal of this form every twelve months to satisfy the requirements of the rules for monitoring natural attenuation, unless otherwise directed by the Department on a site specific basis.)

Submittal of this form is not a substitute for reporting required by Department programs such as Wastewater or Air Management. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Please refer to the instructions that are attached to the back of these forms starting on page INS-1. In all cases, when asked to "explain," those explanations are to be included on separate sheets of paper. Explanations must include a title that refers to the page and item number, for example: Page GI-2, C.1.a.

**A. GENERAL INFORMATION:**

1. Site name: Former Campmarina Manufactured Gas Plant Site
2. Reporting period from: 11/1/03 To: 10/31/04 Days in period: 365
3. Regulatory agency (enter DNR, DCOM, DATCP and/or other): Wisconsin Department of Natural Resources
4. DNR issued site number: BRRTS ID #02-60-000095
5. State reimbursement fund claim number and fund name (if not applicable, enter NA): N/A
6. Site location:
  - a. DNR region and county: Southeast Region, Sheboygan County
  - b. Street address and municipality: 732 N. Water Street, Sheboygan, WI
  - c. Township, range, section and quarter quarter section: NW 1/4, SW 1/4, Section 23, T15N, R23E
7. Responsible party:
  - a. Name: Wisconsin Public Service Corporation
  - b. Mailing address: 700N. Adams Street P.O. Box 19002  
Green Bay, Wisconsin 54307-9002 Attn: Ms. Shirley Scharff
  - c. Phone number: (920) 433-1396
8. Consultant:
  - a. Company name: Natural Resource Technology, Inc.
  - b. Mailing address: 23713 W. Paul Road, Unit D  
Pewaukee, Wisconsin 53072
  - c. Phone number: (262) 523-9000
9. Contaminants: BTEX, PAH's, Cyanide
10. Soil types (USCS or USDA): Heterogeneous fill-SM/SC-CL/ML
11. Hydraulic conductivity (cm/sec):  $1.27 \times 10^{-5}$  to  $1.27 \times 10^{-4}$
12. Average linear velocity of groundwater (ft/yr): 63

GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: Former Campmarina Manufactured Gas Plant Site

Reporting period from: 11/1/03 To: 10/31/04 Days in period: 365

A. GENERAL INFORMATION (CONTINUED):

13. If soil is treated ex situ, is the treatment location off site? (Y/N) If yes, give location:

a. DNR region and county: Southeast Region, Sheboygan County

b. Township, range, section and quarter quarter section: NW 1/4, SW 1/4, Section 23, T15N, R23E

B. REMEDIATION METHOD: Only submit pages that apply to an individual site. Check all that apply:

- Groundwater extraction (submit a completed page GW-1).  
 Free product recovery (submit a completed page GW-1).  
 In situ air sparging (submit a completed page GW-2).  
 Groundwater natural attenuation (submit a completed page GW-3).  
 Other groundwater remediation method (submit a completed page GW-4).  
 Soil venting (including soil vapor extraction and bioventing, submit a completed page IS-1).  
 Soil natural attenuation (submit a completed page IS-2).  
 Other in situ soil remediation method (submit a completed page IS-3).  
 Biopiles (submit a completed page ES-1).  
 Landspreading/thinspreading of petroleum contaminated soil (submit a completed page ES-2).  
 Other ex situ soil remediation method (submit a completed page ES-3).

C. GENERAL EFFECTIVENESS EVALUATION FOR ALL ACTIVE SYSTEMS: If the remediation is active (not natural attenuation), complete this subsection.

1. Is the system operating at design rates and specifications? (Y/N): Y  
If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.
2. Are modifications to the system warranted to improve effectiveness? (Y/N) If yes, explain: N
3. Is natural attenuation an effective low cost option at this time? (Y/N): N
4. Is closure sampling warranted at this time? (Y/N): N
5. Are there any modifications that can be made to the remediation to improve cost effectiveness? (Y/N) If yes, explain: N

D. ECONOMIC AND COST DATA TO DATE:

1. Total investigation costs (\$): \$600,000
2. Implementation costs (design, capital and installation costs, excluding investigation costs) (\$): \$2,600,000.00
3. Total costs during the previous reporting period (\$): \$26,000.00
4. Total costs during this reporting period (\$): \$32,000.00
5. Total anticipated costs for the next reporting period (\$): \$42,000.00
6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? (Y/N) If yes explain: N
7. If close out is anticipated within 12 months, estimated costs for project closeout (\$):

GENERAL SITE INFORMATION, CONTINUED

SITE NAME AND REPORTING PERIOD:

Site name: Former Campmarina Manufactured Gas Plant Site

Reporting period from: 11/1/03 To: 10/31/04 Days in period: 365

E. NAME(S), SIGNATURE(S) AND DATE OF PERSON(S) SUBMITTING FORM: Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form.

Registered Professional Engineers:

I (print name) Christopher A. Robb, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title, P.E. number and date: C. A. ROBB, PROJECT MANAGER, E-34688

12/22/04

Hydrogeologists:

I (print name) \_\_\_\_\_, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

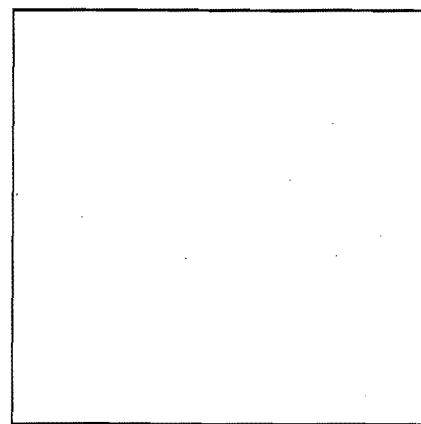
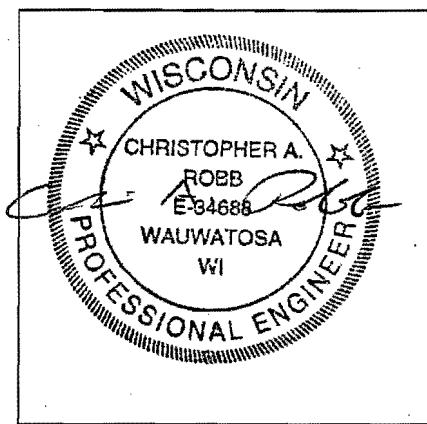
Signature, title and date: \_\_\_\_\_

Scientists:

I (print name) \_\_\_\_\_, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title and date: \_\_\_\_\_

Professional Seal(s), if applicable:



### OTHER GROUNDWATER REMEDIATION METHODS

**SITE NAME AND REPORTING PERIOD:**

Site name: Former Campmarina Manufactured Gas Plant Site

Reporting period from: 11/1/03 To: 10/31/04 Days in period: 365

Date that the system was first started up: 11/7/02

**A. EFFECTIVENESS EVALUATION:**

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in A.1.a.

a. Contaminant: Free Product, contained by engineered barrier system

b. Percent reduction necessary: N/A

c. Maximum contaminant concentration level in any monitoring well (µg/L): Benzene 3,700 µg/L

2. Is the size of the plume increasing, stabilized, or decreasing: Plume only within containment barrier

3. Describe the method used to remediate groundwater at the site. See Attached

---

---

---

---

4. List any additional information required by the DNR for this method for this site:

See Attached

---

---

---

---

---

---

---

---

---

**B. ADDITIONAL ATTACHMENTS:** Attach the following to this form:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Graph of contaminant concentrations versus time for the contaminant listed in A.1.a. (above) for the monitoring point with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- Any other attachments required by the DNR for this remediation method.

**ADDITIONAL INFORMATION FOR PERIOD OF 11/1/03 THROUGH 10/31/04:  
OPERATION, MAINTENANCE, MONITORING AND OPTIMIZATION REPORTING OF  
SOIL AND GROUNDWATER REMEDIATION SYSTEMS (WDNR Form 4400-194)**

**Page GW-4, A.3.**

Groundwater at the site is contained by an engineered containment system that consists of Waterloo® sheet pile barrier surrounding the perimeter of the site and a geosynthetic cap to limit infiltration to groundwater. Aerobic degradation of groundwater contaminants within the engineered containment system is stimulated by a low flow biosparge system that is designed to provide an increased source of oxygen to the groundwater via low flow injection of ambient air.

**Page GW-4, A.4.**

The engineered containment system has drains along the entire interior perimeter of the containment system to provide relief for groundwater fluctuation and pressure during biosparge operations. The interior perimeter drain is connected to a sump in the building that houses the biosparge system. During operation and maintenance of the biosparge system, the sump is inspected for collected water and vapors in the form of volatile organic compounds (VOCs) and hydrogen sulfide ( $H_2S$ , an indicator of anaerobic biodegradation in the subsurface).

**Assessment of Water Collected in the Sump:**

During this period, the system was not operational from March 5 through 9, 2004, May 8 through 10, 2004, May 21 through 25, 2004, May 30 through June 4, 2004, and June 11 through 28, 2004 due to the high building sump alarm condition. The highest water level observed in the building sump was 41.5 inches deep on June 1, 2004. The system was shutdown during times of high water alarms and the system was checked periodically during alarm condition to observe any changes. Water levels decreased after each alarm condition either by evaporation or by groundwater levels reduction within the containment barrier.

**Assessment of Vapors in the Sump:**

On February 17, 2004, a PID reading of 0.0 ppm was collected from the sump air vent. In addition, the sump was evaluated for the presence of  $H_2S$  using a multi-gas meter. The meter did not detect the presence of  $H_2S$  in the sump (0.0 ppm). The meter detected 2% LEL that was similar to detected background air. Oxygen detection was 20.8% and carbon monoxide detection was 0 ppm.

On May 20, 2004, a PID reading of 0.0 ppm was collected from the sump air vent.

Two air samples (VENT) were collected from the sampling port on the sump's ventilation stack using an impinger on February 17, 2004 and August 26, 2004. The samples were analyzed for benzene, ethylbenzene, toluene and total xylenes (BTEX). The result of the air sample did not detect any compounds above the stated levels of detection (<0.38  $\mu g/L$ ).

**GROUNDWATER ANALYTICAL REPORTS**

**APPENDIX B**



Corporate Office & Laboratory  
1241 Bellevue Street, Suite 9, Green Bay, WI 54302  
920-469-2436, 800-7-ENCHEM, Fax: 920-469-8827  
[www.enchem.com](http://www.enchem.com)

## Analytical Report Number: 840872

Client : WISCONSIN PUBLIC SERVICE

Project Name : SHEBOYGAN CAMP MARINA

Project Number : 1313

Lab Sample Number	Field ID	Matrix	Collection Date
840872-001	PZ-703	WATER	11/10/03
840872-002	MW-707R	WATER	11/10/03
840872-003	PZ-701	WATER	11/10/03
840872-004	MW-701R	WATER	11/10/03
840872-005	PZ-702	WATER	11/10/03
840872-006	MW-706	WATER	11/10/03
840872-007	MW-708	WATER	11/10/03
840872-008	MW-705	WATER	11/10/03
840872-009	MW-709R	WATER	11/10/03
840872-010	FIELD DUPLICATE	WATER	11/10/03
840872-011	TRIP BLANK	WATER	11/10/03

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

Date

11/24/03

En Chem Inc.

Analytical Report Number: 840872

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Project Number : 1313

Report Date : 11/24/03

Field ID : PZ-703

Lab Sample Number : 840872-001

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	< 18	18	59		1	ug/L		11/14/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.0051	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.047	0.047	0.16		1	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	4.7	1.1	3.7		1	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	2100	3.0	10		10	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	1100	6.0	20		10	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	65	5.8	19		10	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	300	6.4	21		10	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	260	12	40		10	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	95				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method	
Methane	53				10	1	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	13	1.8	6.0		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	12	1.7	5.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Acenaphthene	7.4	1.8	6.0		100	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Acenaphthylene	< 1.9	1.9	6.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Anthracene	< 2.0	2.0	6.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 1.2	1.2	4.0		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 1.4	1.4	4.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 1.3	1.3	4.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 1.6	1.6	5.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 1.9	1.9	6.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Chrysene	< 1.4	1.4	4.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 1.6	1.6	5.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	< 1.3	1.3	4.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluorene	< 1.7	1.7	5.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 2.1	2.1	7.0		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Naphthalene	510	48	160		2000	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Phenanthrene	4.2	1.6	5.3		100	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Pyrene	1.8	1.7	5.7		100	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 840872**

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Project Number : 1313

Report Date : 11/24/03

Field ID : MW-707R

Lab Sample Number : 840872-002

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	1100	18	59		1	ug/L		11/14/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.30	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.047	0.047	0.16		1	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	20	1.1	3.7		1	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	1500	7.5	25		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	3000	15	50		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	76	14	48		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	760	16	53		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	290	30	100		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	99				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	1800			250	25	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	310	180	600		10000	ug/L	QD	11/12/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	21	1.7	5.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Acenaphthene	< 180	180	600		10000	ug/L	*D	11/12/03	SW846 3510C	8270C-SIM
Acenaphthylene	11	1.9	6.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Anthracene	13	2.0	6.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	6.8	1.2	4.0		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	5.2	1.4	4.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	2.7	1.3	4.3		100	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	2.3	1.6	5.3		100	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	2.6	1.9	6.3		100	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Chrysene	5.6	1.4	4.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Dibeno(a,h)anthracene	< 1.6	1.6	5.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	18	1.3	4.3		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluorene	47	1.7	5.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 2.1	2.1	7.0		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Naphthalene	2000	240	800		10000	ug/L	*D	11/12/03	SW846 3510C	8270C-SIM
Phenanthrene	< 160	160	530		10000	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Pyrene	29	1.7	5.7		100	ug/L		11/12/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 840872**

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Project Number : 1313

Report Date : 11/24/03

Field ID : PZ-701

Lab Sample Number : 840872-003

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	92	18	59		1	ug/L		11/15/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.21	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO3 + NO2	0.048	0.047	0.16		1	mg/L	Q	11/13/03	EPA 353.2	EPA 353.2
Sulfate	58	1.1	3.7		1	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.30	0.30	1.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	0.70	0.60	2.0		1	ug/L	Q	11/12/03	SW846 5030B	SW846 M8021
Toluene	< 0.58	0.58	1.9		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	< 0.64	0.64	2.1		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	< 1.2	1.2	4.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	104				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	250			20	2	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.27	0.018	0.060		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.17	0.017	0.057		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Acenaphthene	0.28	0.018	0.060		1	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Acenaphthylene	0.68	0.38	1.3		20	ug/L	QD	11/12/03	SW846 3510C	8270C-SIM
Anthracene	1.2	0.40	1.3		20	ug/L	QD	11/12/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	2.4	0.24	0.80		20	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	1.5	0.28	0.93		20	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	1.1	0.26	0.87		20	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	0.65	0.32	1.1		20	ug/L	QD	11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	1.1	0.38	1.3		20	ug/L	QD	11/12/03	SW846 3510C	8270C-SIM
Chrysene	1.5	0.28	0.93		20	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	0.24	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	4.4	0.26	0.87		20	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Fluorene	0.34	0.017	0.057		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	0.60	0.42	1.4		20	ug/L	QD	11/12/03	SW846 3510C	8270C-SIM
Naphthalene	1.3	0.48	1.6		20	ug/L	Q*D	11/12/03	SW846 3510C	8270C-SIM
Phenanthrene	4.6	0.32	1.1		20	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Pyrene	4.2	0.34	1.1		20	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	62				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	46				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	88				1	%Recov		11/12/03	SW846 3510C	8270C-SIM

En Chem Inc.

## Analytical Report Number: 840872

1241 Bellevue Street  
 Green Bay, WI 54302  
 920-469-2436

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Project Number : 1313

Report Date : 11/24/03

Field ID : MW-701R

Lab Sample Number : 840872-004

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	40000	19	62		1	ug/L		11/17/03	SW846 3010A	SW846 6010B
Cyanide, Total - Dissolved	0.16	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO3 + NO2	< 0.047	0.047	0.16		1	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	< 1.1	1.1	3.7		1	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	3400	7.5	25		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	330	15	50		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	18	14	48		25	ug/L	Q	11/12/03	SW846 5030B	SW846 M8021
Xylene, o	160	16	53		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	100	30	100		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	96				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	5800			500	50	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	420	94	310		5000	ug/L	D	11/13/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	480	89	300		5000	ug/L	D	11/13/03	SW846 3510C	8270C-SIM
Acenaphthene	400	94	310		5000	ug/L	*D	11/13/03	SW846 3510C	8270C-SIM
Acenaphthylene	25	4.0	13		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Anthracene	120	100	350		5000	ug/L	QD	11/13/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	100	2.5	8.4		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	66	2.9	9.8		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	28	2.7	9.1		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	24	3.4	11		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	30	4.0	13		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Chrysene	72	2.9	9.8		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	6.2	3.4	11		200	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	140	68	230		5000	ug/L	QD	11/13/03	SW846 3510C	8270C-SIM
Fluorene	110	89	300		5000	ug/L	QD	11/13/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	18	4.4	15		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Naphthalene	2000	130	420		5000	ug/L	*D	11/13/03	SW846 3510C	8270C-SIM
Phenanthrene	420	84	280		5000	ug/L	D	11/13/03	SW846 3510C	8270C-SIM
Pyrene	270	89	300		5000	ug/L	QD	11/13/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM

**En Chem Inc.****Analytical Report Number: 840872**
 1241 Bellevue Street  
 Green Bay, WI 54302  
 920-469-2436

Client : WISCONSIN PUBLIC SERVICE

Project Name : SHEBOYGAN CAMP MARINA

Project Number : 1313

Field ID : MW-706

Matrix Type : WATER

Collection Date : 11/10/03

Report Date : 11/24/03

Lab Sample Number : 840872-006

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	280	18	59		1	ug/L		11/15/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.086	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO3 + NO2	7.6	0.24	0.78		5	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	500	5.5	18		5	mg/L		11/17/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	3200	7.5	25		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	150	15	50		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	1300	14	48		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	460	16	53		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	300	30	100		25	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	97				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method	
Methane	< 10				10	1	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	510	110	360		2000	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	640	100	340		2000	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Acenaphthene	41	11	36		200	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Acenaphthylene	400	110	380		2000	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Anthracene	140	12	40		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	190	7.2	24		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	130	8.4	28		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	70	7.8	26		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	43	9.6	32		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	70	11	38		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Chrysene	130	8.4	28		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	14	9.6	32		200	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	280	7.8	26		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluorene	150	10	34		200	ug/L		11/12/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	38	13	42		200	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Naphthalene	2900	140	480		2000	ug/L	*D	11/12/03	SW846 3510C	8270C-SIM
Phenanthrene	410	96	320		2000	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Pyrene	360	100	340		2000	ug/L	D	11/12/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	11/12/03	SW846 3510C	8270C-SIM

**En Chem Inc.****Analytical Report Number: 840872**
 1241 Bellevue Street  
 Green Bay, WI 54302  
 920-469-2436

Client : WISCONSIN PUBLIC SERVICE

Project Name : SHEBOYGAN CAMP MARINA

Project Number : 1313

Field ID : MW-708

Matrix Type : WATER

Collection Date : 11/10/03

Report Date : 11/24/03

Lab Sample Number : 840872-007

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	< 18	18	59		1	ug/L		11/15/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.0046	0.0015	0.0050		1	mg/L	Q	11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO3 + NO2	0.12	0.047	0.16		1	mg/L	Q	11/13/03	EPA 353.2	EPA 353.2
Sulfate	71	1.1	3.7		1	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.30	0.30	1.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	< 0.60	0.60	2.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	< 0.58	0.58	1.9		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	< 0.64	0.64	2.1		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	< 1.2	1.2	4.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	103				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10			10	1	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.16	0.018	0.060		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.19	0.017	0.057		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Acenaphthene	0.031	0.018	0.060		1	ug/L	Q*	11/12/03	SW846 3510C	8270C-SIM
Acenaphthylene	0.27	0.019	0.063		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Anthracene	0.11	0.020	0.067		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	0.11	0.012	0.040		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	0.068	0.014	0.047		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	0.033	0.013	0.043		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	0.026	0.016	0.053		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	0.038	0.019	0.063		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Chrysene	0.071	0.014	0.047		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Dibeno(a,h)anthracene	< 0.016	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	0.15	0.013	0.043		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluorene	0.11	0.017	0.057		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	0.022	0.021	0.070		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Naphthalene	0.38	0.024	0.080		1	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Phenanthrene	0.36	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Pyrene	0.22	0.017	0.057		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	96				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	78				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	112				1	%Recov		11/12/03	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 840872**

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Project Number : 1313

Report Date : 11/24/03

Field ID : MW-705

Lab Sample Number : 840872-008

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	310	18	59		1	ug/L		11/15/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.17	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.21	0.047	0.16		1	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	380	5.5	18		5	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.30	0.30	1.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	< 0.60	0.60	2.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	< 0.58	0.58	1.9		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	< 0.64	0.64	2.1		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	< 1.2	1.2	4.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	103				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	74			10	1	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.044	0.018	0.060		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.053	0.017	0.057		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Acenaphthene	< 0.018	0.018	0.060		1	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Acenaphthylene	0.044	0.019	0.063		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Anthracene	0.024	0.020	0.067		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	0.021	0.012	0.040		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	0.017	0.014	0.047		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.013	0.013	0.043		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.016	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.019	0.019	0.063		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Chrysene	0.014	0.014	0.047		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 0.016	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	0.028	0.013	0.043		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Fluorene	0.019	0.017	0.057		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.021	0.021	0.070		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Naphthalene	0.25	0.024	0.080		1	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Phenanthrene	0.071	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Pyrene	0.039	0.017	0.057		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	101				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	81				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	112				1	%Recov		11/12/03	SW846 3510C	8270C-SIM

**En Chem Inc.****Analytical Report Number: 840872**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Client : WISCONSIN PUBLIC SERVICE

Project Name : SHEBOYGAN CAMP MARINA

Project Number : 1313

Field ID : MW-709R

Matrix Type : WATER

Collection Date : 11/10/03

Report Date : 11/24/03

Lab Sample Number : 840872-009

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	90	18	59		1	ug/L		11/15/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.10	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.94	0.047	0.16		1	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	210	5.5	18		5	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.30	0.30	1.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	< 0.60	0.60	2.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	< 0.58	0.58	1.9		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	< 0.64	0.64	2.1		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	< 1.2	1.2	4.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	103				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10			10	1	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/13/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	< 0.018	0.018	0.060		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	< 0.017	0.017	0.057		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Acenaphthene	< 0.018	0.018	0.060		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Acenaphthylene	< 0.019	0.019	0.063		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Anthracene	0.022	0.020	0.067		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	0.016	0.012	0.040		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 0.014	0.014	0.047		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.013	0.013	0.043		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.016	0.016	0.053		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.019	0.019	0.063		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Chrysene	0.015	0.014	0.047		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 0.016	0.016	0.053		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Fluoranthene	0.027	0.013	0.043		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Fluorene	< 0.017	0.017	0.057		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.021	0.021	0.070		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Naphthalene	0.050	0.024	0.080		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Phenanthrene	0.064	0.016	0.053		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Pyrene	0.033	0.017	0.057		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	62				1	%Recov		11/13/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	67				1	%Recov		11/13/03	SW846 3510C	8270C-SIM
Terphenyl-d14	129				1	%Recov		11/13/03	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 840872**

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Report Date : 11/24/03

Project Number : 1313

Lab Sample Number : 840872-005

Field ID : PZ-702

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	< 18	18	59		1	ug/L		11/15/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.010	0.0015	0.0050		1	mg/L		11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.047	0.047	0.16		1	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	< 1.1	1.1	3.7		1	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.30	0.30	1.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	< 0.60	0.60	2.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	< 0.58	0.58	1.9		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	< 0.64	0.64	2.1		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	< 1.2	1.2	4.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	102				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10			10	1	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/11/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.030	0.018	0.060		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.032	0.017	0.057		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Acenaphthene	0.027	0.018	0.060		1	ug/L	Q*	11/12/03	SW846 3510C	8270C-SIM
Acenaphthylene	0.030	0.019	0.063		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Anthracene	0.025	0.020	0.067		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	0.038	0.012	0.040		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	0.034	0.014	0.047		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	0.019	0.013	0.043		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	0.019	0.016	0.053		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.019	0.019	0.063		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Chrysene	0.033	0.014	0.047		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 0.016	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluoranthene	0.046	0.013	0.043		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Fluorene	0.020	0.017	0.057		1	ug/L	Q	11/12/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.021	0.021	0.070		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Naphthalene	0.13	0.024	0.080		1	ug/L	*	11/12/03	SW846 3510C	8270C-SIM
Phenanthrene	0.082	0.016	0.053		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Pyrene	0.080	0.017	0.057		1	ug/L		11/12/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	64				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	57				1	%Recov		11/12/03	SW846 3510C	8270C-SIM
Terphenyl-d14	112				1	%Recov		11/12/03	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 840872**

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Project Number : 1313

Report Date : 11/24/03

Field ID : FIELD DUPLICATE

Lab Sample Number : 840872-010

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Iron - Dissolved	< 18	18	59		1	ug/L		11/15/03	SW846 6010B	SW846 6010B
Cyanide, Total - Dissolved	0.0032	0.0015	0.0050		1	mg/L	Q	11/13/03	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.047	0.047	0.16		1	mg/L		11/13/03	EPA 353.2	EPA 353.2
Sulfate	< 1.1	1.1	3.7		1	mg/L		11/11/03	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 11/12/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.30	0.30	1.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Ethylbenzene	< 0.60	0.60	2.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Toluene	< 0.58	0.58	1.9		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylene, o	< 0.64	0.64	2.1		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
Xylenes, m + p	< 1.2	1.2	4.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	102				1	%Recov		11/12/03	SW846 5030B	SW846 M8021

**METHANE**

Prep Date: 11/20/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	14			10	1	ug/L		11/20/03	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 11/13/03

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.022	0.018	0.060		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.025	0.017	0.057		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Acenaphthene	< 0.018	0.018	0.060		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Acenaphthylene	0.022	0.019	0.063		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Anthracene	< 0.020	0.020	0.067		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Benzo(a)anthracene	0.025	0.012	0.040		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Benzo(a)pyrene	0.021	0.014	0.047		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	0.014	0.013	0.043		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.016	0.016	0.053		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.019	0.019	0.063		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Chrysene	0.028	0.014	0.047		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 0.016	0.016	0.053		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Fluoranthene	0.034	0.013	0.043		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Fluorene	< 0.017	0.017	0.057		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.021	0.021	0.070		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Naphthalene	0.11	0.024	0.080		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Phenanthrene	0.068	0.016	0.053		1	ug/L		11/13/03	SW846 3510C	8270C-SIM
Pyrene	0.054	0.017	0.057		1	ug/L	Q	11/13/03	SW846 3510C	8270C-SIM
Nitrobenzene-d5	76				1	%Recov		11/13/03	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	77				1	%Recov		11/13/03	SW846 3510C	8270C-SIM
Terphenyl-d14	125				1	%Recov		11/13/03	SW846 3510C	8270C-SIM

En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Analytical Report Number: 840872

Client : WISCONSIN PUBLIC SERVICE

Matrix Type : WATER

Project Name : SHEBOYGAN CAMP MARINA

Collection Date : 11/10/03

Report Date : 11/24/03

Project Number : 1313

Lab Sample Number : 840872-011

Field ID : TRIP BLANK

BTEX										Prep Date: 11/12/03		
Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method		
Benzene	< 0.30	0.30	1.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021		
Ethylbenzene	< 0.60	0.60	2.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021		
Toluene	< 0.58	0.58	1.9		1	ug/L		11/12/03	SW846 5030B	SW846 M8021		
Xylene, o	< 0.64	0.64	2.1		1	ug/L		11/12/03	SW846 5030B	SW846 M8021		
Xylenes, m + p	< 1.2	1.2	4.0		1	ug/L		11/12/03	SW846 5030B	SW846 M8021		
a,a,a-Trifluorotoluene	102				1	%Recov		11/12/03	SW846 5030B	SW846 M8021		

## Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
N	All	Spiked sample recovery not within control limits.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

**En Chem Inc.**

**Analysis Summary by Laboratory**

1241 Bellevue Street  
Green Bay, WI 54302

1090 Kennedy Avenue  
Kimberly, WI 54136

Test Group Name

	840872-001	840872-010	840872-009	840872-008	840872-007	840872-006	840872-005	840872-004	840872-003	840872-002	BTEX
CYANIDE, TOTAL - DISSOLVED	K	K	K	K	K	K	K	K	K	K	
IRON - DISSOLVED	G	G	G	G	G	G	G	G	G	G	
METHANE	G	G	G	G	G	G	G	G	G	G	
NITROGEN, NO <sub>3</sub> + NO <sub>2</sub>	K	K	K	K	K	K	K	K	K	K	
PAH/ PNA	G	G	G	G	G	G	G	G	G	G	
SULFATE	G	G	G	G	G	G	G	G	G	G	

Wisconsin Certification

G = En Chem Green Bay

405132750 / DATCP: 105 000444

K = En Chem Kimberly

445134030

S = En Chem Superior

Not Applicable

C = Subcontracted Analysis

# En Chem, Inc. Cooler Receipt Log

Batch No. 840872

Project Name or ID 1312

No. of Coolers: 2 Temps: ROT

A. Receipt Phase: Date cooler was opened: 11-10-03 By: GP

- 1: Were samples received on ice? (Must be ≤ 6 C)..... YES NO<sup>2</sup>
- 2: Was there a Temperature Blank?..... YES NO
- 3: Were custody seals present and intact? (Record on COC)..... YES NO
- 4: Are COC documents present?..... YES NO<sup>2</sup>
- 5: Does this Project require quick turn around analysis?..... YES NO
- 6: Is there any sub-work?..... YES NO
- 7: Are there any short hold time tests?..... YES NO
- 8: Are any samples nearing expiration of hold-time? (Within 2 days)..... YES<sup>1</sup> NO Contacted by/Who \_\_\_\_\_
- 9: Do any samples need to be Filtered or Preserved in the lab?..... YES<sup>1</sup> NO Contacted by/Who \_\_\_\_\_

B. Check-in Phase: Date samples were Checked-in: 11-10-03 By: GP

- 1: Were all sample containers listed on the COC received and intact?..... YES NO<sup>2</sup> NA
- 2: Sign the COC as received by En Chem. Completed..... YES NO
- 3: Do sample labels match the COC? ..... YES NO<sup>2</sup>
- 4: Completed pH check on preserved samples.. .... YES NO NA  
*(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*
- 5: Do samples have correct chemical preservation?..... YES NO<sup>2</sup> NA  
*(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*
- 6: Are dissolved parameters field filtered?..... YES NO<sup>2</sup> NA
- 7: Are sample volumes adequate for tests requested? ..... YES NO<sup>2</sup>
- 8: Are VOC samples free of bubbles >6mm ..... YES NO<sup>2</sup> NA
- 9: Enter samples into logbook. Completed..... YES NO
- 10: Place laboratory sample number on all containers and COC. Completed..... YES NO
- 11: Complete Laboratory Tracking Sheet (LTS). Completed..... YES NO NA
- 12: Start Nonconformance form. ..... YES NO NA
- 13: Initiate Subcontracting procedure. Completed..... YES NO NA
- 14: Check laboratory sample number on all containers and COC. .... CX YES NO NO NA

## Short Hold-time tests:

48 Hours or less	7 days	Footnotes
Coliform (6 hrs)	Flashpoint	1 Notify proper lab group immediately.
Hexavalent Chromium (24 Hrs)	TSS	2 Complete nonconformance memo.
BOD	Total Solids	
Nitrite or Nitrate	TDS	
Low Level Mercury	Sulfide	
Ortho Phosphorus	Free Liquids	
Turbidity	Total Volatile Solids	
Surfactants	Aqueous Extractable Organics- ALL	
Sulfite	Unpreserved VOC's	
En Core Preservation	Ash	
Color		

Rev. 4/11/03, Attachment to 1-REC-5.

Subject to QA Audit.

Reviewed by/date SB 11/11/03

(Please Print Legibly)

Company Name: Wis. Public ServiceBranch or Location: Green BayProject Contact: Mike MasonTelephone: (920) 433-1397Project Number: 1313Project Name: Shibogyan Camp MarinaProject State: WISampled By (Print): Mike Mason

Data Package Options - (please circle if requested)

Regulatory Program

Sample Results Only (no QC)

EPA Level II (Subject to Surcharge)

EPA Level III (Subject to Surcharge)

EPA Level IV (Subject to Surcharge)

Matrix Codes
W=Water
S=Soil
A=Air
C=Charcoal
B=Biota
SI=Sludge

UST
RCRA
SDWA
NPDES
CERCLA

LABORATORY ID (Lab Use Only)	FIELD ID	COLLECTION		MATRIX	ANALYSES REQUESTED										TOTAL # OF BOTTLES SENT	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
		DATE	TIME		N	N	N	N	N	N	N	N	N	N			
001	PZ-703	11/10/03	W	X	X	X	X	X	X	X	X	X	X	X	11	0 analyses requested	10/11/03
002	MW-707R														11	added based on history and bottles received	
003	PZ-701														11		rB 11/1/03
004	MW-701R														11		
005	PZ-702														11		
006	MW-706														11		
007	MW-708														11		
008	MW-705														11		
009	MW-709R														11		
010	Field Duplicate				X	X	X	X	X	X	X	X	X	X	11		
011	Trip Blank				X	X	X	X	X	X	X	X	X	X	2	2-40ml His 10%	

Rush Turnaround Time Requested (TAT) - Prelim

(Rush TAT subject to approval/surcharge)

Date Needed:

Transmit Prelim Rush Results by (circle):

Phone    Fax    E-Mail

Phone #:

Fax #:

E-Mail Address:

Samples on HOLD are subject to special pricing and release of liability



1241 Bellevue St., Suite 9  
Green Bay, WI 54302  
920-469-2436  
FAX 920-469-8827

525 Science Drive  
Madison, WI 53711  
608-232-3300  
FAX: 608-233-0502

## CHAIN OF CUSTODY

89077

Page 1 of 1

P.O. # \_\_\_\_\_ Quote # \_\_\_\_\_

Mail Report To: Mike MasonCompany: WPSAddress: P.O.Box 19002G.R. 54307-9002Invoice To: Accounts PayableCompany: WPSAddress: Same

Mail Invoice To:

Relinquished By: <u>Mike Mason 11/10/03 15:15</u>	Date/Time:	Received By: <u>Steve Ratajko 11/10/03 1515</u>	Date/Time:	Environ Project No: <u>89077</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt Temp: <u>RT</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Placement PH: <u>OK</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Container/Custody Seal: <u>Intact / Not Intact</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Presently Not Present: <u>OK</u>



Corporate Office & Laboratory  
1241 Bellevue Street, Suite 9, Green Bay, WI 54302  
920-469-2436, Fax: 920-469-8827  
[www.enchem.com](http://www.enchem.com)

## Analytical Report Number: 846808

Client: NATURAL RESOURCE TECHNOLOGY, INC.

Lab Contact: Tom Trainor

Project Name: WPSC - CAMP MARINA

Project Number: 1313

Lab Sample Number	Field ID	Matrix	Collection Date
846808-001	BW-6	WATER	05/20/04
846808-002	BW-15	WATER	05/20/04
846808-003	MW-701R	WATER	05/20/04
846808-004	MW-705	WATER	05/20/04
846808-005	MW-706	WATER	05/20/04
846808-006	MW-707R	WATER	05/20/04
846808-007	MW-708	WATER	05/20/04
846808-008	MW-709R	WATER	05/20/04
846808-009	PZ-703	WATER	05/20/04
846808-010	PZ-702	WATER	05/20/04
846808-011	PZ-701	WATER	05/20/04
846808-012	FIELD DUPLICATE	WATER	05/20/04
846808-013	TRIP BLANK	WATER	05/20/04

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

A handwritten signature in black ink that reads "Tom Trainor".

Date

A handwritten date stamp in black ink that reads "6/4/04".

En Chem Inc.

## Analytical Report Number: 846808

 1241 Bellevue Street  
 Green Bay, WI 54302  
 920-469-2436

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Project Name : WPSC - CAMP MARINA

Project Number : 1313

Field ID : BW-6

Matrix Type : WATER

Collection Date : 05/20/04

Report Date : 06/03/04

Lab Sample Number : 846808-001

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.0032	0.0016	0.0055		1	mg/L	Q	06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.063	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	30	0.37	1.2		1	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	92				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	91				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	80				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method	
Methane	< 10				10	1	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	< 0.017	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthene	< 0.017	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Anthracene	< 0.019	0.019	0.063		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 0.011	0.011	0.038		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Chrysene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluorene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Naphthalene	0.075	0.023	0.075		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Phenanthrene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Pyrene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	54				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	31				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
Terphenyl-d14	108				1	%Recov		05/21/04	SW846 3510C	8270C-SIM

En Chem Inc.

## Analytical Report Number: 846808

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : BW-15

Lab Sample Number : 846808-002

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.077	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	1.1	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	1500	18	62		50	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	2.8	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	2.5	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	2.6	0.83	2.8		1	ug/L	Q	05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	92				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	92				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	78				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10			10	1	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	1.3	0.34	1.1		20	ug/L	D	05/24/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.32	0.016	0.054		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthene	0.22	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Anthracene	< 0.019	0.019	0.063		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 0.011	0.011	0.038		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.015	0.015	0.051		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Chrysene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	< 0.015	0.015	0.051		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluorene	0.043	0.016	0.054		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Naphthalene	5.9	0.45	1.5		20	ug/L	D	05/24/04	SW846 3510C	8270C-SIM
Phenanthrene	0.031	0.015	0.051		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Pyrene	< 0.016	0.016	0.054		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	81				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	40				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
Terphenyl-d14	116				1	%Recov		05/21/04	SW846 3510C	8270C-SIM

En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

## Analytical Report Number: 846808

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Report Date : 06/03/04

Project Number : 1313

Field ID : MW-701R

Lab Sample Number : 846808-003

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.15	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.063	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	1.0	0.37	1.2		1	mg/L	Q	05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	2600	10	34		25	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	300	14	45		25	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	17	17	56		25	ug/L	Q	05/27/04	SW846 5030B	SW846 8260B
Xylene, o	140	21	69		25	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	71	45	150		25	ug/L	Q	05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	88				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	88				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	79				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	6700			1000	100	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	270	85	280		5000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	280	80	270		5000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Acenaphthene	250	85	280		5000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Acenaphthylene	10	1.8	6.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Anthracene	< 94	94	310		5000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	30	1.1	3.8		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	21	1.3	4.4		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	9.4	1.2	4.1		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	8.7	1.5	5.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	11	1.8	6.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Chrysene	24	1.3	4.4		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	1.9	1.5	5.0		100	ug/L	Q	05/22/04	SW846 3510C	8270C-SIM
Fluoranthene	67	61	200		5000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Fluorene	< 80	80	270		5000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	6.0	2.0	6.6		100	ug/L	Q	05/22/04	SW846 3510C	8270C-SIM
Naphthalene	1400	110	380		5000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Phenanthrene	240	75	250		5000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Pyrene	120	80	270		5000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM

**En Chem Inc.****Analytical Report Number: 846808**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Project Name : WPSC - CAMP MARINA

Project Number : 1313

Field ID : MW-705

Matrix Type : WATER

Collection Date : 05/20/04

Report Date : 06/03/04

Lab Sample Number : 846808-004

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.15	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.063	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	350	3.7	12		10	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	90				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	91				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	80				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	32			10	1	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.082	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.040	0.016	0.053		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Acenaphthene	0.019	0.017	0.057		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Anthracene	< 0.019	0.019	0.063		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	0.017	0.011	0.038		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	0.020	0.013	0.044		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	0.015	0.012	0.041		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Chrysene	0.016	0.013	0.044		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluoranthene	0.025	0.012	0.041		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Fluorene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Naphthalene	0.39	0.023	0.075		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Phenanthrene	0.022	0.015	0.050		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Pyrene	0.029	0.016	0.053		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	108				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	105				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
Terphenyl-d14	130				1	%Recov		05/21/04	SW846 3510C	8270C-SIM

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : MW-706

Lab Sample Number : 846808-005

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.15	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.85	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	880	7.4	25		20	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	1100	4.1	14		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	110	5.4	18		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	990	6.7	22		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	130	8.3	28		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	270	18	60		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	95				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	91				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	77				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10				10	1 ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	130	34	110		2000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	140	32	110		2000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Acenaphthene	16	1.7	5.7		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Acenaphthylene	220	36	120		2000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Anthracene	43	1.9	6.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	65	23	75		2000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	87	26	88		2000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	44	1.2	4.1		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	31	1.5	5.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	36	1.8	6.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Chrysene	47	1.3	4.4		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	11	1.5	5.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Fluoranthene	80	25	82		2000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Fluorene	40	1.6	5.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	27	2.0	6.6		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Naphthalene	680	45	150		2000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Phenanthrene	110	30	100		2000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Pyrene	130	32	110		2000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 846808**

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : MW-707R

Lab Sample Number : 846808-006

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.063	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	41	0.37	1.2		1	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX** Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	1000	8.2	27		20	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	2500	11	36		20	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	76	13	45		20	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	670	17	55		20	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	240	36	120		20	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	91				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	90				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	79				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE** Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	3400				250	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA** Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	230	85	280		5000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	14	1.6	5.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Acenaphthene	43	1.7	5.7		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Acenaphthylene	6.1	1.8	6.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Anthracene	12	1.9	6.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	5.2	1.1	3.8		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	4.1	1.3	4.4		100	ug/L	Q	05/22/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	2.0	1.2	4.1		100	ug/L	Q	05/22/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	2.2	1.5	5.0		100	ug/L	Q	05/22/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	2.3	1.8	6.0		100	ug/L	Q	05/22/04	SW846 3510C	8270C-SIM
Chrysene	4.4	1.3	4.4		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	< 1.5	1.5	5.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Fluoranthene	15	1.2	4.1		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Fluorene	31	1.6	5.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 2.0	2.0	6.6		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Naphthalene	1600	110	380		5000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Phenanthrene	77	75	250		5000	ug/L	QD	05/25/04	SW846 3510C	8270C-SIM
Pyrene	19	1.6	5.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM

En Chem Inc.

 1241 Bellevue Street  
 Green Bay, WI 54302  
 920-469-2436

## Analytical Report Number: 846808

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : MW-708

Lab Sample Number : 846808-007

## INORGANICS

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.0042	0.0016	0.0055		1	mg/L	Q	06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.18	0.063	0.21		1	mg/L	Q	05/26/04	EPA 353.2	EPA 353.2
Sulfate	68	0.37	1.2		1	mg/L		05/21/04	EPA 300.0	EPA 300.0

## BTEX

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	93				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	91				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	79				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

## METHANE

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10			10	1	ug/L		06/02/04	SW846 M8015	SW846 M8015

## PAH/ PNA

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.048	0.017	0.057		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.020	0.016	0.053		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Acenaphthene	< 0.017	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Anthracene	< 0.019	0.019	0.063		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 0.011	0.011	0.038		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Chrysene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluorene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Naphthalene	0.29	0.023	0.075		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Phenanthrene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Pyrene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	73				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	85				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
Terphenyl-d14	124				1	%Recov		05/21/04	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 846808**

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : MW-709R

Lab Sample Number : 846808-008

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.046	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.79	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	130	1.8	6.2		5	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L	M	05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L	M	05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L	M	05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L	M	05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L	M	05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	92				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	90				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	80				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10			10	1	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.057	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.023	0.016	0.053		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Acenaphthene	< 0.017	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Anthracene	< 0.019	0.019	0.063		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 0.011	0.011	0.038		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Chrysene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluorene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Naphthalene	0.38	0.023	0.075		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Phenanthrene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Pyrene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	87				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	98				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
Terphenyl-d14	132				1	%Recov		05/21/04	SW846 3510C	8270C-SIM

En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

## Analytical Report Number: 846808

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : PZ-703

Lab Sample Number : 846808-009

## INORGANICS

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.039	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	< 0.063	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	77	1.8	6.2		5	mg/L		05/21/04	EPA 300.0	EPA 300.0

## BTEX

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	1000	4.1	14		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	750	5.4	18		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	31	6.7	22		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	220	8.3	28		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	170	18	60		10	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	92				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	89				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	77				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

## METHANE

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	120				10	ug/L		06/02/04	SW846 M8015	SW846 M8015

## PAH/ PNA

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	38	1.7	5.7		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	40	1.6	5.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Acenaphthene	15	1.7	5.7		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 1.8	1.8	6.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Anthracene	< 1.9	1.9	6.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 1.1	1.1	3.8		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 1.3	1.3	4.4		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 1.2	1.2	4.1		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 1.5	1.5	5.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 1.8	1.8	6.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Chrysene	< 1.3	1.3	4.4		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 1.5	1.5	5.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Fluoranthene	< 1.2	1.2	4.1		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Fluorene	< 1.6	1.6	5.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 2.0	2.0	6.6		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Naphthalene	1900	110	380		5000	ug/L	D	05/25/04	SW846 3510C	8270C-SIM
Phenanthrene	< 1.5	1.5	5.0		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Pyrene	< 1.6	1.6	5.3		100	ug/L		05/22/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM
Terphenyl-d14	NA				1	%Recov	D	05/22/04	SW846 3510C	8270C-SIM

**En Chem Inc.****Analytical Report Number: 846808**
 1241 Bellevue Street  
 Green Bay, WI 54302  
 920-469-2436

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Project Name : WPSC - CAMP MARINA

Project Number : 1313

Field ID : PZ-702

Matrix Type : WATER

Collection Date : 05/20/04

Report Date : 06/03/04

Lab Sample Number : 846808-010

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	< 0.0016	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.20	0.063	0.21		1	mg/L	Q	05/26/04	EPA 353.2	EPA 353.2
Sulfate	3.2	0.37	1.2		1	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	90				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	91				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	82				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	16			10	1	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.029	0.017	0.057		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.034	0.016	0.053		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Acenaphthene	< 0.017	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthylene	0.031	0.018	0.060		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Anthracene	< 0.019	0.019	0.063		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 0.011	0.011	0.038		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Chrysene	0.015	0.013	0.044		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluoranthene	0.017	0.012	0.041		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Fluorene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Naphthalene	0.60	0.045	0.15		2	ug/L	D	05/24/04	SW846 3510C	8270C-SIM
Phenanthrene	0.028	0.015	0.050		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Pyrene	0.027	0.016	0.053		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	109				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	115				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
Terphenyl-d14	128				1	%Recov		05/21/04	SW846 3510C	8270C-SIM

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 846808**

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : PZ-701

Lab Sample Number : 846808-011

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.10	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.14	0.063	0.21		1	mg/L	Q	05/26/04	EPA 353.2	EPA 353.2
Sulfate	51	0.37	1.2		1	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	90				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	91				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	77				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	57				10	1 ug/L		06/02/04	SW846 M8015	SW846 M8015

En Chem Inc.

## Analytical Report Number: 846808

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : FIELD DUPLICATE

Lab Sample Number : 846808-012

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Total - Dissolved	0.041	0.0016	0.0055		1	mg/L		06/02/04	EPA 335.4	EPA 335.4
Nitrogen, NO <sub>3</sub> + NO <sub>2</sub>	0.80	0.063	0.21		1	mg/L		05/26/04	EPA 353.2	EPA 353.2
Sulfate	130	1.8	6.2		5	mg/L		05/21/04	EPA 300.0	EPA 300.0

**BTEX**

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	92				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	90				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	79				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

**METHANE**

Prep Date: 06/02/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Methane	< 10			10	1	ug/L		06/02/04	SW846 M8015	SW846 M8015

**PAH/ PNA**

Prep Date: 05/21/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	0.031	0.017	0.057		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	0.044	0.016	0.053		1	ug/L	Q	05/21/04	SW846 3510C	8270C-SIM
Acenaphthene	< 0.017	0.017	0.057		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Anthracene	< 0.019	0.019	0.063		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 0.011	0.011	0.038		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Chrysene	< 0.013	0.013	0.044		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Dibenzo(a,h)anthracene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Fluorene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Naphthalene	0.15	0.023	0.075		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Phenanthrene	< 0.015	0.015	0.050		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Pyrene	< 0.016	0.016	0.053		1	ug/L		05/21/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	80				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	84				1	%Recov		05/21/04	SW846 3510C	8270C-SIM
Terphenyl-d14	137				1	%Recov		05/21/04	SW846 3510C	8270C-SIM

En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Analytical Report Number: 846808

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/20/04

Project Number : 1313

Report Date : 06/03/04

Field ID : TRIP BLANK

Lab Sample Number : 846808-013

BTEX

Prep Date: 05/27/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		05/27/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	90				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Toluene-d8	89				1	%Recov		05/27/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	81				1	%Recov		05/27/04	SW846 5030B	SW846 8260B

## Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
HF	Inorganic	This test is considered a field parameter, and the recommended holding time is 15 minutes from collection. The analysis was performed in the laboratory beyond the recommended holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
M	Organic	Sample pH was greater than 2
N	All	Spiked sample recovery not within control limits.
O	Organic	Sample received overweight.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

**En Chem Inc.**

**Analysis Summary by Laboratory**

1241 Bellevue Street  
Green Bay, WI 54302

1090 Kennedy Avenue  
Kimberly, WI 54136

Test Group Name

	846808-001	846808-002	846808-003	846808-004	846808-005	846808-006	846808-007	846808-008	846808-009	846808-010	846808-011	846808-012	846808-013
BTEX	G	G	G	G	G	G	G	G	G	G	G	G	G
CYANIDE, TOTAL - DISSOLVED	G	G	G	G	G		G	G	G	G	G	G	G
METHANE	G	G	G	G	G	G	G	G	G	G	G	G	G
NITROGEN, NO <sub>3</sub> + NO <sub>2</sub>	G	G	G	G	G	G	G	G	G	G	G	G	G
PAH/ PNA	G	G	G	G	G	G	G	G	G	G	G	G	G
SULFATE	G	G	G	G	G	G	G	G	G	G	G	G	G

Wisconsin Certification

G = En Chem Green Bay

405132750 / DATCP: 105 000444

K = En Chem Kimberly

445134030

S = En Chem Superior

Not Applicable

C = Subcontracted Analysis

# En Chem, Inc. Cooler Receipt Log

Batch No. 846808

Project Name or ID Sheboygan - Camp Martine No. of Coolers: 1 Temps: 70° F

A. Receipt Phase: Date cooler was opened: 5/20/04 By: CX

- |   |   |  |                        |
|---|---|--|------------------------|
| 1: Were samples received on ice? (Must be ≤ 6 C )                   | <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO <sup>2</sup> | NA                     |
| 2. Was there a Temperature Blank?                                   | <input type="checkbox"/> YES              | <input checked="" type="checkbox"/> NO   |                        |
| 3: Were custody seals present and intact on cooler? (Record on COC) | <input type="checkbox"/> YES              | <input checked="" type="checkbox"/> NO   |                        |
| 4: Are COC documents present?                                       | <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO <sup>2</sup> |                        |
| 5: Does this Project require quick turn around analysis?            | <input type="checkbox"/> YES              | <input checked="" type="checkbox"/> NO   |                        |
| 6: Is there any sub-work?   | <input type="checkbox"/> YES              | <input checked="" type="checkbox"/> NO   |                        |
| 7: Are there any short hold time tests?                             | <input checked="" type="checkbox"/> YES   | <input type="checkbox"/> NO              |                        |
| 8: Are any samples nearing expiration of hold-time? (Within 2 days) | <input type="checkbox"/> YES <sup>1</sup> | <input checked="" type="checkbox"/> NO   | Contacted by/Who _____ |
| 9: Do any samples need to be Filtered or Preserved in the lab?      | <input type="checkbox"/> YES <sup>1</sup> | <input checked="" type="checkbox"/> NO   | Contacted by/Who _____ |

B. Check-in Phase: Date samples were Checked-in: 5/20/04 By: CX

- |  |   |  |  |
|--|---|--|--|
| 1: Were all sample containers listed on the COC received and intact?   | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO <sup>2</sup> | NA                                     |
| 2: Sign the COC as received by En Chem. Completed  | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO              |  |
| 3: Do sample labels match the COC?   | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO <sup>2</sup> |  |
| 4: Completed pH check on preserved samples. ....<br><i>(This statement does not apply to water: VOC, O&amp;G, TOC, DRO, Total Rec. Phenolics)</i>  | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO              | NA                                     |
| 5: Do samples have correct chemical preservation?<br><i>(This statement does not apply to water: VOC, O&amp;G, TOC, DRO, Total Rec. Phenolics)</i> | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO <sup>2</sup> | NA                                     |
| 6: Are dissolved parameters field filtered?  | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO <sup>2</sup> | NA                                     |
| 7: Are sample volumes adequate for tests requested?  | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO <sup>2</sup> |  |
| 8: Are VOC samples free of bubbles >6mm  | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO <sup>2</sup> | NA                                     |
| 9: Enter samples into logbook. Completed   | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO              |  |
| 10: Place laboratory sample number on all containers and COC. Completed  | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO              |  |
| 11: Complete Laboratory Tracking Sheet (LTS). Completed  | <input type="checkbox"/> YES            | <input type="checkbox"/> NO              | <input checked="" type="checkbox"/> NA |
| 12: Start Nonconformance form.   | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO              | NA                                     |
| 13: Initiate Subcontracting procedure. Completed   | <input type="checkbox"/> YES            | <input type="checkbox"/> NO              | <input checked="" type="checkbox"/> NA |
| 14: Check laboratory sample number on all containers and COC.  | <u>KD</u>                               | <input checked="" type="checkbox"/> YES  | <input type="checkbox"/> NO NA         |

## Short Hold-time tests:

24 Hours or less	48 Hours	7 days	Footnotes
Coliform	BOD	Ash	1 Notify proper lab group immediately.
Corrosivity = pH	Color	Aqueous Extractable Organics- ALL	2 Complete nonconformance memo.
Dissolved Oxygen	Nitrite or Nitrate	Flashpoint	
Hexavalent Chromium	Ortho Phosphorus	Free Liquids	
HPC	Surfactants	Sulfide	
Ferrous Iron	Turbidity	TDS	
Eh	En Core Preservation	TSS	
Odor	Power stop preservation	Total Solids	
Residual Chlorine		TVS	
Sulfite		TVSS	
		Unpreserved VOC's	

Rev. 2/05/04, Attachment to 1-REC-5.  
Subject to QA Audit.

Reviewed by/date MJT 5/21/04

(Please Print Legibly)

Company Name: Wis. Public Service  
 Branch or Location: Green Bay  
 Project Contact: Mike Mason  
 Telephone: 433-1397  
 Project Number: 1313

Project Name: Shabogyan-Camp Marion  
 Project State: WI.  
 Sampled By (Print): Sarah Gauswien & M. k. Mason  
 PO #:

Data Package Options - (please circle if requested)  
 Sample Results Only (no QC)  
 EPA Level II (Subject to Surcharge)  
 EPA Level III (Subject to Surcharge)  
 EPA Level IV (Subject to Surcharge)

LABORATORY ID (Lab Use Only)	FIELD ID	COLLECTION		MATRIX	ANALYSES REQUESTED	TOTAL # OF BOTTLES SENT	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
		DATE	TIME					
001	BW-6	5/20/04	13:40	W	B, E, T, X	10	6-40ml ea (3-250ml (A,C,G)) / 1-L Amber	
002	BW-15		14:00	S	Methane	10		
003	MW-701R		12:00	A	PAH	10		
004	MW-705		13:05	C	S, T, G, X	10		
005	MW-706		12:50	B	N2O + NOx/Nitrogen	10		
006	MW-707R		11:30	B	Gaseous USEPA 316-G	10		
007	MW-708		12:35			10	2-250ml (A,C)	
008	MW-709R		11:15			10	3-250ml (A,C,G)	
009	PZ-703		11:40			10		
010	PZ-702		12:40			10		
011	PZ-701		12:10	X	X	10		
012	Field Duplicate	X	-	X	X	10		

Rush Turnaround Time Requested (TAT) - Prelim  
 (Rush TAT subject to approval/surcharge)

Date Needed:

Transmit Prelim Rush Results by (circle):

Phone    Fax    E-Mail

Phone #:

Fax #:

E-Mail Address:

Samples on HOLD are subject to  
 special pricing and release of liability



1241 Bellevue St., Suite 9  
 Green Bay, WI 54302  
 920-469-2436  
 Fax 920-469-8827

## CHAIN OF CUSTODY

120130

Page 1 of 2

Quote #:

Mail Report To: Heather Simon  
 Company: Natural Resources Defense Council

Address: 23713 W. Paul Dr. Bldg 107  
Reedsburg, WI. 53957

Invoice To: Accounts Payable  
 Company: Wis. Public Service

Address: P.O. Box 19002  
Green Bay, WI. 54307-9002

Mail Invoice To: \_\_\_\_\_

Relinquished By:	Date/Time:	Received By:	Date/Time:	En Chem Project No.
<u>Mike Mason 5/20/04 15:25</u>		<u>CLC/K</u>	<u>5/20/04 1525</u>	<u>8416808</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt Temp.
				<u>70°C</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH (Wet/Metals)
				<u>OK</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Cooler Custody Seal
				<u>OK</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Present / Not Present
				<u>OK</u>
Relinquished By:	Date/Time:	Received By:	Date/Time:	Intact / Not Intact
				<u>OK</u>





Corporate Office & Laboratory  
1241 Bellevue Street, Suite 9, Green Bay, WI 54302  
920-469-2436, Fax: 920-469-8827  
[www.enchem.com](http://www.enchem.com)

## Analytical Report Number: 846911

Client: NATURAL RESOURCE TECHNOLOGY, INC.

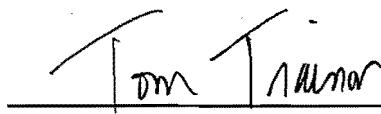
Lab Contact: Tom Trainor

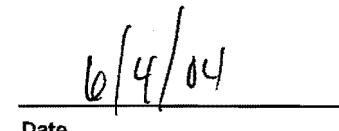
Project Name: WPSC - CAMP MARINA

Project Number: 1313

Lab Sample Number	Field ID	Matrix	Collection Date
846911-001	PZ-701	GW	05/24/04

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

  
\_\_\_\_\_  
Approval Signature

  
\_\_\_\_\_  
Date

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 846911**

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : GROUNDWATER

Project Name : WPSC - CAMP MARINA

Collection Date : 05/24/04

Report Date : 05/27/04

Project Number : 1313

Lab Sample Number : 846911-001

Field ID : PZ-701

<b>PAH/ PNA</b>										<b>Prep Date: 05/26/04</b>	
<b>Analyte</b>	<b>Result</b>	<b>LOD</b>	<b>LOQ</b>	<b>EQL</b>	<b>Dil.</b>	<b>Units</b>	<b>Code</b>	<b>Anl Date</b>	<b>Prep Method</b>	<b>Anl Method</b>	
1-Methylnaphthalene	0.050	0.017	0.057		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
2-Methylnaphthalene	0.017	0.016	0.053		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
Acenaphthene	0.055	0.017	0.057		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
Acenaphthylene	< 0.018	0.018	0.060		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Anthracene	0.022	0.019	0.063		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
Benzo(a)anthracene	< 0.011	0.011	0.038		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Benzo(a)pyrene	< 0.013	0.013	0.044		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Benzo(b)fluoranthene	< 0.012	0.012	0.041		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Benzo(ghi)perylene	< 0.015	0.015	0.050		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Benzo(k)fluoranthene	< 0.018	0.018	0.060		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Chrysene	< 0.013	0.013	0.044		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Dibenz(a,h)anthracene	< 0.015	0.015	0.050		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Fluoranthene	0.014	0.012	0.041		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
Fluorene	0.018	0.016	0.053		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
Indeno(1,2,3-cd)pyrene	< 0.020	0.020	0.066		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Naphthalene	0.22	0.023	0.075		1	ug/L		05/26/04	SW846 3510C	8270C-SIM	
Phenanthrene	0.029	0.015	0.050		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
Pyrene	0.017	0.016	0.053		1	ug/L	Q	05/26/04	SW846 3510C	8270C-SIM	
Nitrobenzene-d5	83				1	%Recov		05/26/04	SW846 3510C	8270C-SIM	
2-Fluorobiphenyl	81				1	%Recov		05/26/04	SW846 3510C	8270C-SIM	
Terphenyl-d14	134				1	%Recov		05/26/04	SW846 3510C	8270C-SIM	

## Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
HF	Inorganic	This test is considered a field parameter, and the recommended holding time is 15 minutes from collection. The analysis was performed in the laboratory beyond the recommended holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
M	Organic	Sample pH was greater than 2
N	All	Spiked sample recovery not within control limits.
O	Organic	Sample received overweight.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

**En Chem Inc.**

**Analysis Summary by Laboratory**

1241 Bellevue Street  
Green Bay, WI 54302

1090 Kennedy Avenue  
Kimberly, WI 54136

Test Group Name

PAH/ PNA

846911-001

G

**Wisconsin Certification**

G = En Chem Green Bay      405132750 / DATCP: 105 000444

K = En Chem Kimberly      445134030

S = En Chem Superior      Not Applicable

C = Subcontracted Analysis

# En Chem, Inc. Cooler Receipt Log

Batch No. 846911

Project Name or ID Camp Marina No. of Coolers: 1 Temps: ROT

A. Receipt Phase: Date cooler was opened: 5/25/04 By: RJ

- |  |   |                                       |                        |
|--|---|---------------------------------------|------------------------|
| 1: Were samples received on ice? (Must be ≤ 6 C).....                    | <input checked="" type="radio"/> YES              | <input type="radio"/> NO <sup>2</sup> | NA                     |
| 2. Was there a Temperature Blank?.....                                   | <input type="radio"/> YES                         | <input checked="" type="radio"/> NO   |                        |
| 3: Were custody seals present and intact on cooler? (Record on COC)..... | <input type="radio"/> YES                         | <input checked="" type="radio"/> NO   |                        |
| 4: Are COC documents present?.....                                       | <input checked="" type="radio"/> YES              | <input type="radio"/> NO <sup>2</sup> |                        |
| 5: Does this Project require quick turn around analysis?.....            | <input type="radio"/> YES                         | <input checked="" type="radio"/> NO   |                        |
| 6: Is there any sub-work?.....   | <input type="radio"/> YES                         | <input checked="" type="radio"/> NO   |                        |
| 7: Are there any short hold time tests?.....                             | <input type="radio"/> YES                         | <input checked="" type="radio"/> NO   |                        |
| 8: Are any samples nearing expiration of hold-time? (Within 2 days)..... | <input type="radio"/> YES <sup>1</sup>            | <input checked="" type="radio"/> NO   | Contacted by/Who _____ |
| 9: Do any samples need to be Filtered or Preserved in the lab?.....      | <input checked="" type="radio"/> YES <sup>1</sup> | <input type="radio"/> NO              | Contacted by/Who _____ |

B. Check-in Phase: Date samples were Checked-in: 5-25-04 By: RJ

- |   |                                      |                                       |                                     |
|---|--------------------------------------|---------------------------------------|-------------------------------------|
| 1: Were all sample containers listed on the COC received and intact?.....   | <input checked="" type="radio"/> YES | <input type="radio"/> NO <sup>2</sup> | NA                                  |
| 2: Sign the COC as received by En Chem. Completed.....  | <input checked="" type="radio"/> YES | <input type="radio"/> NO              |                                     |
| 3: Do sample labels match the COC? .....  | <input checked="" type="radio"/> YES | <input type="radio"/> NO <sup>2</sup> |                                     |
| 4: Completed pH check on preserved samples.....<br><i>(This statement does not apply to water: VOC, O&amp;G, TOC, DRO, Total Rec. Phenolics)</i>        | <input type="radio"/> YES            | <input type="radio"/> NO              | <input checked="" type="radio"/> NA |
| 5: Do samples have correct chemical preservation?.....<br><i>(This statement does not apply to water: VOC, O&amp;G, TOC, DRO, Total Rec. Phenolics)</i> | <input type="radio"/> YES            | <input type="radio"/> NO <sup>2</sup> | <input checked="" type="radio"/> NA |
| 6: Are dissolved parameters field filtered?.....  | <input type="radio"/> YES            | <input type="radio"/> NO <sup>2</sup> | <input checked="" type="radio"/> NA |
| 7: Are sample volumes adequate for tests requested? .....   | <input type="radio"/> YES            | <input type="radio"/> NO <sup>2</sup> |                                     |
| 8: Are VOC samples free of bubbles >6mm .....   | <input type="radio"/> YES            | <input type="radio"/> NO <sup>2</sup> | <input checked="" type="radio"/> NA |
| 9: Enter samples into logbook. Completed.....   | <input checked="" type="radio"/> YES | <input type="radio"/> NO              |                                     |
| 10: Place laboratory sample number on all containers and COC. Completed.....  | <input checked="" type="radio"/> YES | <input type="radio"/> NO              |                                     |
| 11: Complete Laboratory Tracking Sheet (LTS). Completed.....  | <input type="radio"/> YES            | <input type="radio"/> NO              | <input checked="" type="radio"/> NA |
| 12: Start Nonconformance form. .....  | <input type="radio"/> YES            | <input type="radio"/> NO              | <input checked="" type="radio"/> NA |
| 13: Initiate Subcontracting procedure. Completed.....   | <input type="radio"/> YES            | <input type="radio"/> NO              | <input checked="" type="radio"/> NA |
| 14: Check laboratory sample number on all containers and COC. ....  | <u>KB</u>                            | <input checked="" type="radio"/> YES  | <input type="radio"/> NO            |

## Short Hold-time tests:

24 Hours or less	48 Hours	7 days	Footnotes
Coliform	BOD	Ash	1 Notify proper lab group immediately.
Corrosivity = pH	Color	Aqueous Extractable Organics- ALL	2 Complete nonconformance memo.
Dissolved Oxygen	Nitrite or Nitrate	Flashpoint	
Hexavalent Chromium	Ortho Phosphorus	Free Liquids	
HPC	Surfactants	Sulfide	
Ferrous Iron	Turbidity	TDS	
Eh	En Core Preservation	TSS	
Odor	Power stop preservation	Total Solids	
Residual Chlorine		TVS	
Sulfite		TVSS	
		Unpreserved VOC's	

Rev. 2/05/04, Attachment to 1-REC-5.  
Subject to QA Audit.

Reviewed by/date RJ 5/25/04

(Please Print Legibly)

Company Name **NRT**

Branch or Location: **Pewaukee WI**

Project Contact: **Sarah Ganswindt**

Telephone: **262-522-1202**

Project Number: **1313**

Project Name: **Camp Marina**

Project State: **WI**

Sampled By (Print): **Sarah Ganswindt**

Data Package Options - (please circle if requested)

Regulatory Program

Sample Results Only (no QC)

UST  
RCRA  
SDWA  
NPDES  
CERCLA

EPA Level II (Subject to Surcharge)

Matrix Codes

EPA Level III (Subject to Surcharge)

W=Water  
S=Soil  
A=Air  
C=Charcoal  
B=Biofa  
SI=Sludge

EPA Level IV (Subject to Surcharge)

LABORATORY ID  
(Lab Use Only)

FIELD ID

COLLECTION  
DATE

MATRIX  
TIME

ANALYSES REQUESTED  
TAT

## CHAIN OF CUSTODY

1241 Bellevue St., Suite 9  
Green Bay, WI 54302  
920-469-2436  
FAX 920-469-8827

A=None  
B=HCL  
C=H2SO4  
H = Sodium Bisulfate Solution

FILTERED? (YES/NO)

PRESERVATION (CODE)\*

\*Preservation Codes

D=HN03  
E=EnCore

I = Sodium Thiosulfate

J = Other

F=Methanol

G=NaOH

Page **1** of **1**

P.O. # **SP** Quote #

Mail Report To: **SP**

Company: **DOIT**

Address: **23713 W. Kildell Rd.**

**Pewaukee WI**

Invoice To: **SP**

Company: **SP**

Address:

Mail Invoice To:

CLIENT COMMENTS

LAB COMMENTS  
(Lab Use Only)

ANALYSES REQUESTED  
TAT

Rush Turnaround Time Requested (TAT) - Prelim  
(Rush TAT subject to approval/surcharge)

Date Needed: **5/21/04**

Transmit Prelim Rush Results by (circle):

Phone    Fax    E-Mail

Phone #:

Fax #:

E-Mail Address:

Samples on HOLD are subject to  
special pricing and release of liability

Relinquished By:

Date/Time:

Received By:

Date/Time:

En Chem Project No:

Relinquished By:

Date/Time:

Received By:

Date/Time:

Sample Receipt Temp:

Relinquished By:

Date/Time:

Received By:

Date/Time:

Sample Receipt pH  
(Wet/Metal)

Relinquished By:

Date/Time:

Received By:

Date/Time:

Cooler/Custody Seal

Relinquished By:

Date/Time:

Received By:

Date/Time:

Present / Not Present

Relinquished By:

Date/Time:

Received By:

Date/Time:

Intact / Not Intact



Corporate Office & Laboratory  
1241 Bellevue Street, Suite 9, Green Bay, WI 54302  
920-469-2436, Fax: 920-469-8827  
[www.enchem.com](http://www.enchem.com)

## Analytical Report Number: 850224

Client: NATURAL RESOURCE TECHNOLOGY, INC.

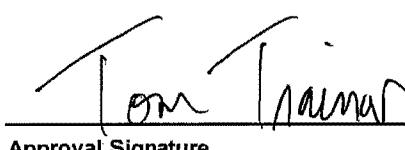
Lab Contact: Tom Trainor

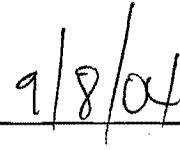
Project Name: CAMP MARINA

Project Number: 1313

Lab Sample Number	Field ID	Matrix	Collection Date
850224-001	PZ-703	WATER	08/24/04
850224-002	TRIP BLANK	WATER	08/24/04

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

  
\_\_\_\_\_  
Approval Signature

  
\_\_\_\_\_  
Date

**En Chem Inc.**
 1241 Bellevue Street  
 Green Bay, WI 54302  
 920-469-2436
**Analytical Report Number: 850224**

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : WATER

Project Name : CAMP MARINA

Collection Date : 08/24/04

Project Number : 1313

Report Date : 09/07/04

Field ID : PZ-703

Lab Sample Number : 850224-001

**INORGANICS**

Test	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Cyanide, Weak & Dissociable	< 0.011	0.011	0.035		1	mg/L	CN	09/03/04	SM 4500-CN	SM 4500-CN

**BTEX**

Prep Date: 08/30/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	3700	8.2	27		20	ug/L		08/30/04	SW846 5030B	SW846 8260B
Ethylbenzene	2800	11	36		20	ug/L		08/30/04	SW846 5030B	SW846 8260B
Toluene	110	13	45		20	ug/L		08/30/04	SW846 5030B	SW846 8260B
Xylene, o	640	17	55		20	ug/L		08/30/04	SW846 5030B	SW846 8260B
Xylenes, m + p	540	36	120		20	ug/L		08/30/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	109				20	%Recov		08/30/04	SW846 5030B	SW846 8260B
Toluene-d8	112				20	%Recov		08/30/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	110				20	%Recov		08/30/04	SW846 5030B	SW846 8260B

**PAH/ PNA**

Prep Date: 08/25/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	45	8.0	27		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	42	9.1	30		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Acenaphthene	21	7.8	26		400	ug/L	Q	08/27/04	SW846 3510C	8270C-SIM
Acenaphthylene	< 7.7	7.7	26		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Anthracene	< 7.1	7.1	24		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	< 7.8	7.8	26		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	< 7.2	7.2	24		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	< 7.2	7.2	24		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	< 8.3	8.3	28		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	< 7.7	7.7	26		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Chrysene	< 6.6	6.6	22		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	< 8.8	8.8	29		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Fluoranthene	< 6.6	6.6	22		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Fluorene	< 8.7	8.7	29		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	< 6.8	6.8	23		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Naphthalene	1600	180	600		8000	ug/L	D	08/28/04	SW846 3510C	8270C-SIM
Phenanthrene	< 8.2	8.2	27		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Pyrene	< 6.5	6.5	22		400	ug/L		08/27/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	0				400	%Recov	D	08/27/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	0				400	%Recov	D	08/27/04	SW846 3510C	8270C-SIM
Terphenyl-d14	0				400	%Recov	D	08/27/04	SW846 3510C	8270C-SIM

En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Analytical Report Number: 850224

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Project Name : CAMP MARINA

Project Number : 1313

Field ID : TRIP BLANK

Matrix Type : WATER

Collection Date : 08/24/04

Report Date : 09/07/04

Lab Sample Number : 850224-002

BTEX								Prep Date: 08/30/04		
Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.41	0.41	1.4		1	ug/L		08/30/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.54	0.54	1.8		1	ug/L		08/30/04	SW846 5030B	SW846 8260B
Toluene	< 0.67	0.67	2.2		1	ug/L		08/30/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.83	0.83	2.8		1	ug/L		08/30/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 1.8	1.8	6.0		1	ug/L		08/30/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	106				1	%Recov		08/30/04	SW846 5030B	SW846 8260B
Toluene-d8	116				1	%Recov		08/30/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	107				1	%Recov		08/30/04	SW846 5030B	SW846 8260B

# En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436  
Fax: 920-469-8827

Lab Number	TestGroupID	Field ID	Comment
850224-001	W-CNWD-W	PZ-703	C - Elevated detection limit due to matrix effect. Samples was diluted 1:2.

## Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
HF	Inorganic	This test is considered a field parameter, and the recommended holding time is 15 minutes from collection. The analysis was performed in the laboratory beyond the recommended holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
M	Organic	Sample pH was greater than 2
N	All	Spiked sample recovery not within control limits.
O	Organic	Sample received overweight.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

**En Chem Inc.**

**Analysis Summary by Laboratory**

1241 Bellevue Street  
Green Bay, WI 54302

1090 Kennedy Avenue  
Kimberly, WI 54136

850224-002  
850224-001

**Test Group Name**

BTEX	G G
CYANIDE, WEAK & DISSOCIABLE	G
PAH/ PNA	G

**Wisconsin Certification**

G = En Chem Green Bay 405132750 / DATCP: 105 000444

K = En Chem Kimberly 445134030

S = En Chem Superior Not Applicable

C = Subcontracted Analysis

# En Chem, Inc. Cooler Receipt Log

Batch No. 850224

Project Name or ID Camp Marina

No. of Coolers: 1 Temps: R01

A. Receipt Phase: Date cooler was opened: 8-24-04 By: SFalk

- |   |  |                                       |                        |
|---|--|---------------------------------------|------------------------|
| 1: Were samples received on ice? (Must be $\leq 6$ C)               | <input checked="" type="radio"/> YES   | <input type="radio"/> NO <sup>2</sup> | NA                     |
| 2. Was there a Temperature Blank?                                   | <input type="radio"/> YES              | <input checked="" type="radio"/> NO   |                        |
| 3: Were custody seals present and intact on cooler? (Record on COC) | <input type="radio"/> YES              | <input checked="" type="radio"/> NO   |                        |
| 4: Are COC documents present?                                       | <input checked="" type="radio"/> YES   | <input type="radio"/> NO <sup>2</sup> |                        |
| 5: Does this Project require quick turn around analysis?            | <input type="radio"/> YES              | <input checked="" type="radio"/> NO   |                        |
| 6: Is there any sub-work?   | <input type="radio"/> YES              | <input checked="" type="radio"/> NO   |                        |
| 7: Are there any short hold time tests?                             | <input type="radio"/> YES              | <input checked="" type="radio"/> NO   |                        |
| 8: Are any samples nearing expiration of hold-time? (Within 2 days) | <input type="radio"/> YES <sup>1</sup> | <input checked="" type="radio"/> NO   | Contacted by/Who _____ |
| 9: Do any samples need to be Filtered or Preserved in the lab?      | <input type="radio"/> YES <sup>1</sup> | <input checked="" type="radio"/> NO   | Contacted by/Who _____ |

B. Check-in Phase: Date samples were Checked-in: 8-24-04 By: SFalk

- |   |                                      |                                       |                                     |
|---|--------------------------------------|---------------------------------------|-------------------------------------|
| 1: Were all sample containers listed on the COC received and intact?  | <input checked="" type="radio"/> YES | <input type="radio"/> NO <sup>2</sup> | NA                                  |
| 2: Sign the COC as received by En Chem. Completed   | <input checked="" type="radio"/> YES | <input type="radio"/> NO              |                                     |
| 3: Do sample labels match the COC?  | <input checked="" type="radio"/> YES | <input type="radio"/> NO <sup>2</sup> |                                     |
| 4: Completed pH check on preserved samples. ....<br><small>(This statement does not apply to water: VOC, O&amp;G, TOC, DRO, Total Rec. Phenolics)</small> | <input checked="" type="radio"/> YES | <input type="radio"/> NO              | NA                                  |
| 5: Do samples have correct chemical preservation?   | <input checked="" type="radio"/> YES | <input type="radio"/> NO <sup>2</sup> | <input checked="" type="radio"/> NA |
| 6: Are dissolved parameters field filtered?   | <input type="radio"/> YES            | <input type="radio"/> NO <sup>2</sup> | <input checked="" type="radio"/> NA |
| 7: Are sample volumes adequate for tests requested?   | <input checked="" type="radio"/> YES | <input type="radio"/> NO <sup>2</sup> |                                     |
| 8: Are VOC samples free of bubbles >6mm   | <input checked="" type="radio"/> YES | <input type="radio"/> NO <sup>2</sup> | NA                                  |
| 9: Enter samples into logbook. Completed  | <input checked="" type="radio"/> YES | <input type="radio"/> NO              |                                     |
| 10: Place laboratory sample number on all containers and COC. Completed   | <input checked="" type="radio"/> YES | <input type="radio"/> NO              |                                     |
| 11: Complete Laboratory Tracking Sheet (LTS). Completed   | <input type="radio"/> YES            | <input type="radio"/> NO              | <input checked="" type="radio"/> NA |
| 12: Start Nonconformance form.  | <input type="radio"/> YES            | <input type="radio"/> NO              | <input checked="" type="radio"/> NA |
| 13: Initiate Subcontracting procedure. Completed  | <input type="radio"/> YES            | <input type="radio"/> NO              | <input checked="" type="radio"/> NA |
| 14: Check laboratory sample number on all containers and COC.   | <input checked="" type="radio"/> YES | <input type="radio"/> NO              | NA                                  |

## Short Hold-time tests:

24 Hours or less	48 Hours	7 days	Footnotes
Coliform	BOD	Ash	1 Notify proper lab group immediately.
Corrosivity = pH	Color	Aqueous Extractable Organics- ALL	2 Complete nonconformance memo.
Dissolved Oxygen	Nitrite or Nitrate	Flashpoint	
Hexavalent Chromium	Ortho Phosphorus	Free Liquids	
HPC	Surfactants	Sulfide	
Ferrous Iron	Turbidity	TDS	
Eh	En Core Preservation	TSS	
Odor	Power stop preservation	Total Solids	
Residual Chlorine		TVS	
Sulfite		TVSS	
		Unpreserved VOC's	

Rev. 2/05/04, Attachment to 1-REC-5.  
Subject to QA Audit.

Reviewed by/date TM 8/29/04

(Please Print Legibly)  
Company Name: WIS. Public Service  
Branch of Location: Green Bay  
Project Contact: Mike Plason  
Telephone: 433-1397  
Project Number: 1313  
Project Name: Camp Marquette  
Project State: WI  
Sampled By (Print): Mike Plason



1241 Bellevue St., Suite 9  
Green Bay, WI 54302  
920-469-2436  
Fax 920-469-8827

Page \_\_\_\_\_ of \_\_\_\_\_

Quote #: \_\_\_\_\_

## **CHAIN OF CUSTODY**

11834

**\*Preservation Codes**

A=None	B=HCl	C=H2S04	D=HN03	E=EnCore	F=Methanol	G=NaO
H=Sodium Bisulfate	Bisulfite Solution	I=Sodium Thiosulfate	J=Other			

FILTERED? (YES/NO)

## PRESERVATION (CODE)

**ANALYSES REQUESTED**

61 week (Aug 6 1982)  
61 week (Aug 6 1982)  
61 week (Aug 6 1982)  
61 week (Aug 6 1982)

**Week 61: Social**  
**Gran: 2e** (GA 45)

**TOTAL # OF BOTTLES SENT**  
Add  
**61**  
Mail Invoice

Re: Payee, Inc. (S)

Ice To: Accounts Payable  
My: Wis. Public Service  
P.O. Box 190002  
Madison, WI 54307-9700

**Rush Turnaround Time Requested (TAT) - Prelim**  
(Rush TAT subject to approval/surcharge)

Date Needed:

Transmit Prelim Rush Results by (circle)

Phone      Fax      E-Mail

Phone #:

**Fax #:**

E-Mail Address

**Samples on HOLD are subject to  
special pricing and release of liability.**

Relinquished By: <i>Mike Mean</i>	Date/Time: 8/24/04 13:15	Received By: <i>A. Williams</i>	Date/Time: 8/24/04 13:15	En Chem Project No. 850224
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt Temp. 105
Relinquished By:	Date/Time:	Received By:	Date/Time:	Sample Receipt pH (Wet/Metals) OK
Relinquished By:	Date/Time:	Received By:	Date/Time:	Cooler Custody Seal
Relinquished By:	Date/Time:	Received By:	Date/Time:	Present / Not Present
				Intact / Not Intact

FIELD FORMS

APPENDIX G

# FIELD NOTE SUMMARY

Project Number	<u>1313 Task 4.0</u>
Project Name	<u>WPSC Campmarina, Sheboygan WI</u>

**Date/Time Onsite/** August 24, 2004, 8:30 to 9:30 AM  
**Time Offsite:**

**Work Scope:** Containment System Condition Inspection

**NRT Representatives:** Roy E. Wittenberg

**Weather:** Partly Cloudy, low 80's (°F)

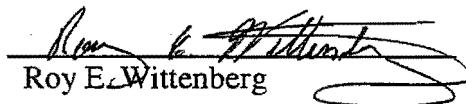
**Equipment:** None

**Field Comments:**

1. **Monitoring Wells and Cleanouts:** Surface covers for the monitoring wells, cleanouts and biosparge wells that were visible on the surface appeared to be intact.
2. **Biosparge System and Building:** Biosparge building exterior and interior appeared to be in good condition. The system was not operating at the time of the inspection pending adjustments to be made to the compressor by WPSC.
3. **Cover Stability:** The cover above the geosynthetic cap has remained stable and has not shown any problems due to erosion or instability. There were no indications of cracking, sloughing or erosion. Steep slopes within the Center Avenue Right-of-Way showed no indication of instability.
4. **Riverbank Stability:** Riprap and concreter river walk along the riverbank appeared to be in good condition. Toe stones for the riprap showed no indications of erosion or damage. Nor cracking was noted in the concrete walkway. Non-woven geotextile used for stabilization of filter gravel for the riprap was noticeably exposed at several locations along the top of the riverbank
5. **Surface Water Drainage:** No drainage was noted to the river from the exterior perimeter drainage system for the cover. No areas of ponding water were noted on the cover. Wood chips in the playground area were noticeably spongy and underlying wood chips a few inches below grade were noticeably moist. No free water was evident and this condition may be more related to the ability of the wood chips to retain moisture for extended periods of time then drainage related problems for the cover. No MGP related odors were identified within the wood chips.

6. Summary Conditions: Overall, the site appeared in good condition. No surface erosion is evident. Grass or pavement covers the entire site. Park structures are also in good condition with no indication of settling or cracking. A small portion of surface drainage geonetting was exposed in the south central portion of the grassy area for the park but this does not appear to be affecting overall surface water drainage for the cover. No settling of the cover or ponding of surface water was evident. Riprap appeared to be in good condition along the river.

SIGNATURE:

  
Roy E. Wittenberg

DATE:

August 24, 2004

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park  
 Project/Task Number: 1313/4.3  
 Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? Y upon departure N  
 If no, which alarm is signalled?

### BIOSPARGE COMPRESSOR

Compressor Temperature: 113 deg. F.  
 Compressor Outlet Pressure: Zone 1 3.0 psi  
                                  Zone 2 4.25 psi  
                                  Zone 3 6 psi  
 Compressor Bleed Pressure: Zone 1 0 psi  
                                  Zone 2 0 psi  
                                  Zone 3 2.5 psi

Air Bleed valve status: (Closed / Partially open / Full open)  
 Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 218.9 hours  
 Valve 2 215.8 hours  
 Valve 3 210.4 hours  
 Compressor: 645.1 hours

### GENERAL MAINTENANCE

Electric Meter reading:    Kw-hrs  
 Check Operation of Heaters/Fans: OK  
 Noticable Odors Outside Building: None

NOTES: REPLACED FILTER 7-21-03 BACK  
DH-LINE

ATTENTION - GLENN LUKE

Operator: JEFF WUNSCH  
 Date of Site Visit: 12-2-03  
 Arrival Time: 12:30  
 Departure Time: 13:50

Signature: Jeff Wunsch

### HDPE SUMP

Water Level: 2 1/2 in. (Depth in Inches)  
 High Level Float Switch Setting: (Full Depth / Raised    ft)  
 Slice Gate Valve Setting: (Closed / Partially open / Full open)  
 Noticable Odor: (Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	<u>OPEN</u>	<u>3.5</u>
Zone 1	BW-06		<u>4.0</u>
Zone 1	BW-09		<u>4.0</u>
Zone 1	BW-12		<u>4.5</u>
Zone 1	BW-15		<u>4.5</u>
Zone 1	BW-18		<u>4.5</u>
Zone 2	BW-02		<u>4.75</u>
Zone 2	BW-05		<u>5.0</u>
Zone 2	BW-08		<u>5.0</u>
Zone 2	BW-11		<u>5.0</u>
Zone 2	BW-14		<u>5.0</u>
Zone 2	BW-17		<u>5.0</u>
Zone 3	BW-10		<u>6.5</u>
Zone 3	BW-13		<u>6.25</u>
Zone 3	BW-16		<u>6.5</u>
Zone 3	BW-19		<u>6.5</u>
Zone 3	BW-22		<u>6.5</u>
Zone 3	BW-25		<u>6.5</u>
Zone 3	BW-28		<u>6.5</u>
Zone 3	BW-31		<u>6.5</u>

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Steel Park

Project/Task Number: 1313/4.3

Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? No upon departure \_\_\_\_\_

If no, which alarm is signalled? \_\_\_\_\_

### BIOSPARGE COMPRESSOR

Compressor Temperature: 114 deg. F.

Compressor Outlet Pressure: Zone 1 4.25 psi

Zone 2 5.0 psi

Zone 3 6.5 psi

Compressor Bleed Pressure: Zone 1 4.25 psi

Zone 2 5.0 psi

Zone 3 6.0 psi

Air Bleed valve status: (Closed / Partially open / Full open)

Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 241.4 hours

Valve 2 238.3 hours

Valve 3 232.6 hours

Compressor: 712.3 hours

### GENERAL MAINTENANCE

Electric Meter reading: 16751 Kw-hrs

Check Operation of Heaters/Fans: yes

Noticable Odors Outside Building: No

NOTES: New outlet + BLEED GAUGES

ATTENTION - SPIROS FAFALIOS

Operator: Jeff Wunsch

Date of Site Visit: 12/18/03

Arrival Time: 11:10

Departure Time: 11:45

### HDPE SUMP

Water Level: 21.25 in. (Depth in Inches)

High Level Float Switch Setting: (Full Depth / Raised ft)

Slice Gate Valve Setting: (Closed / Partially open / Full open)

Noticable Odor: (Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	O	3.5
Zone 1	BW-06		4.0
Zone 1	BW-09		4.0
Zone 1	BW-12		4.5
Zone 1	BW-15		4.5
Zone 1	BW-18		4.5
Zone 2	BW-02		5.0
Zone 2	BW-05		5.5
Zone 2	BW-08		5.5
Zone 2	BW-11		5.25
Zone 2	BW-14		5.5
Zone 2	BW-17		5.0
			6.75
			6.5
			6.5
			6.75
			6.75
			6.75





OPERATIONS LOG

Site Name: Campma  
Project/Task Number:  
Site Location: 732 W

Is System operating u  
If no, which alarm is s

BIOSPARG  
Compressor Tempera  
Compressor Outlet Pi

Compressor Bleed Pr

Air Bleed valve status  
Air Outlet valve status

COMPRESSOR  
Cumulative Run Hour

GENERAL  
Electric Meter reading  
Check Operation of H  
Noticable Odors Outs

NOTES: Biosparg  
ATTENTION

ker's Winter Steel Park  
3  
St, Sheboygan, WI

al? \_\_\_\_\_ upon departure \_\_\_\_\_

RESSOR

Zone 1	110	deg. F.
Zone 2	4.0	psi
Zone 3	4.5	psi
Zone 1	6.25	psi
Zone 2	4.0	psi
Zone 3	4.5	psi
Zone 1	6.25	psi

( / Partially open / Full open)  
( / Partially open / Full open)

VIEW

Valve 1	317.7	hours
Valve 2	313.6	hours
Valve 3	307.5	hours
Compressor:	938.9	hours

ANCE

ns:	19612	Kw-hrs
ng:	Good	
ng:	NONE	

SSOR IS OFF - A week prior to  
STATALOTS Water level  
ATHER SIMONS Collection.

Operator: Jeff Wunsch  
Date of Site Visit: 2-9-04  
Arrival Time: 12:45  
Departure Time: 13:25

HDPE SUMP

Water Level: 20 3/4 in. (Depth in Inches)

High Level Float Switch Setting: (Full Depth / ~~Half~~ ft)

Slice Gate Valve Setting: (~~Closed~~ / Partially open / Full open)

Noticable Odor: (~~Yes~~ No)

BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	OPEN	3.0
Zone 1	BW-06	—	3.5
Zone 1	BW-09	CLOSED	—
Zone 1	BW-12	OPEN	4.0
Zone 1	BW-15	—	4.0
Zone 1	BW-18	—	4.0
Zone 2	BW-02	—	4.25
Zone 2	BW-05	—	4.5
Zone 2	BW-08	—	4.5
Zone 2	BW-11	—	4.5
Zone 2	BW-14	—	4.5
Zone 2	BW-17	—	4.5
		6.25	6.0
		6.0	6.5
		6.5	6.25
		6.25	6.25

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park  
 Project/Task Number: 1313/4.3  
 Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? NO upon departure YES  
 If no, which alarm is signalled? HIGH SUMP ALARM

### BIOSPARGE COMPRESSOR

Compressor Temperature: 114 deg. F.  
 Compressor Outlet Pressure: Zone 1 4.5 psi  
                                  Zone 2 5.0 psi  
                                  Zone 3 6.0 psi  
 Compressor Bleed Pressure: Zone 1 4.5 psi  
                                  Zone 2 5.0 psi  
                                  Zone 3 6.0 psi

Air Bleed valve status: (Closed / Partially open / Full open)  
 Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 336.2 hours  
                                  Valve 2 331.9 hours  
                                  Valve 3 325.4 hours  
                                  Compressor: 993.6 hours

### GENERAL MAINTENANCE

Electric Meter reading: 20618 Kw-hrs  
 Check Operation of Heaters/Fans: GOOD  
 Noticable Odors Outside Building: NO

NOTES: RAISED SUMP FLOAT 6 INCHES  
ATTENTION - HEATHER SIMON

Operator: JEFF WUHSCH  
 Date of Site Visit: 3-2-04  
 Arrival Time: 09:15  
 Departure Time: 10:00

### HDPE SUMP

Water Level: 29 1/4 in. (Depth in Inches)  
 High Level Float Switch Setting: (Full Depth / Raised 1/2 ft)  
 Slice Gate Valve Setting: (Closed / Partially open / Full open)  
 Noticiable Odor: (Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	OPEN	<u>3.5</u>
Zone 1	BW-06	/	<u>4.0</u>
Zone 1	BW-09	CLOSED	—
Zone 1	BW-12		<u>4.5</u>
Zone 1	BW-15		<u>4.75</u>
Zone 1	BW-18		<u>4.5</u>
Zone 2	BW-02		<u>4.5</u>
Zone 2	BW-05		<u>5.0</u>
Zone 2	BW-08		<u>5.0</u>
Zone 2	BW-11		<u>4.75</u>
Zone 2	BW-14		<u>5.0</u>
Zone 2	BW-17		<u>4.5</u>
Zone 3	BW-01		<u>6.5</u>
Zone 3	BW-04		<u>6.0</u>
Zone 3	BW-07		<u>6.25</u>
Zone 3	BW-10		<u>6.5</u>
Zone 3	BW-13		<u>6.25</u>
Zone 3	BW-16		<u>6.5</u>

OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park

Project/Task Number: 1313/4.3

Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? Yes upon departure Yes  
If no, which alarm is signalled?BIOSPARGE COMPRESSORCompressor Temperature: 118 deg. F.Compressor Outlet Pressure: Zone 1 4.0 psiZone 2 5.0 psiZone 3 6.0 psiCompressor Bleed Pressure: Zone 1 4.0 psiZone 2 5.0 psiZone 3 6.0 psiAir Bleed valve status: (Closed / Partially open / Full open)Air Outlet valve status: (Closed / Partially open / Full open)COMPRESSOR OVERVIEWCumulative Run Hours: Valve 1 365 hoursValve 2 360 hoursValve 3 354 hoursCompressor: 79.6 hoursGENERAL MAINTENANCEElectric Meter reading: 21602 Kw-hrsCheck Operation of Heaters/Fans: GoodNoticable Odors Outside Building: NONE

NOTES:

ATTENTION - HEATHER SIMONOperator: JEFF WUNSCH  
Date of Site Visit: 3-26-04  
Arrival Time: 13:45  
Departure Time: 14:10HDPE SUMPWater Level: 23 3/4 in. (Depth in Inches)High Level Float Switch Setting: (Full Depth / Raised 1/2 ft)Slice Gate Valve Setting: (Closed / Partially open / Full open)Noticable Odor: (Yes / No)BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	OPEN	3.0
Zone 1	BW-06	1	3.5
Zone 1	BW-09	CLOSED	—
Zone 1	BW-12	OPEN	4.0
Zone 1	BW-15	—	4.0
Zone 1	BW-18	—	4.0
Zone 2	BW-02	—	4.75
Zone 2	BW-05	—	5.0
Zone 2	BW-08	—	5.0
Zone 2	BW-11	—	5.0
Zone 2	BW-14	—	5.0
Zone 2	BW-17	—	4.75
Zone 3	BW-01	—	6.0
Zone 3	BW-04	—	6.0
Zone 3	BW-07	—	6.0
Zone 3	BW-10	—	6.0
Zone 3	BW-13	—	6.0
Zone 3	BW-16	—	6.0

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park

Project/Task Number: 1313/4.3

Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? N upon departure N  
If no, which alarm is signalled?

### BIOSPARGE COMPRESSOR

Compressor Temperature: \_\_\_\_\_ deg. F.

Compressor Outlet Pressure: Zone 1 0 psi

Zone 2 0 psi

Zone 3 0 psi

Compressor Bleed Pressure: Zone 1 0 psi

Zone 2 0 psi

Zone 3 0 psi

Air Bleed valve status: (Closed / Partially open / Full open)

Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 400.2 hours

Valve 2 395.6 hours

Valve 3 389.7 hours

Compressor: 105.0 hours

### GENERAL MAINTENANCE

Electric Meter reading: \_\_\_\_\_ Kw-hrs

Check Operation of Heaters/Fans: \_\_\_\_\_

Noticable Odors Outside Building: \_\_\_\_\_

NOTES: \_\_\_\_\_

**ATTENTION - HEATHER SIMON**

Operator: Heather

Date of Site Visit:

4/20/04

Arrival Time:

10:00 am

Departure Time:

\_\_\_\_\_

### HDPE SUMP

Water Level: \_\_\_\_\_ in. (Depth in Inches)

High Level Float Switch Setting: (Full Depth / Raised \_\_\_\_\_ ft)

Slice Gate Valve Setting: (Closed / Partially open / Full open)

Noticable Odor: (Yes Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	O	0
Zone 1	BW-06	O	0
Zone 1	BW-09	CLOSED	0
Zone 1	BW-12	O	0
Zone 1	BW-15	O	1.0
Zone 1	BW-18	O	0
Zone 2	BW-02	O	0
Zone 2	BW-05	O	0
Zone 2	BW-08	O	0
Zone 2	BW-11	O	0
Zone 2	BW-14	O	0
Zone 2	BW-17	O	0
Zone 3	BW-01	O	1.7
Zone 3	BW-04	O	1.5
Zone 3	BW-07	O	1.5
Zone 3	BW-10	O	1.5
Zone 3	BW-13	O	1.3
Zone 3	BW-16	O	1.5

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park  
 Project/Task Number: 1313/4.3  
 Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? YES upon departure YES  
 If no, which alarm is signalled?

### BIOSPARGE COMPRESSOR

Compressor Temperature: 119° deg. F.  
 Compressor Outlet Pressure: Zone 1 3.5 psi  
                                  Zone 2 5.0 psi  
                                  Zone 3 6.0 psi  
 Compressor Bleed Pressure: Zone 1 3.5 psi  
                                  Zone 2 5.0 psi  
                                  Zone 3 6.0 psi

Air Bleed valve status: Closed / Partially open / Full open  
 Air Outlet valve status: Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 409.1 hours  
 Valve 2 404.7 hours  
 Valve 3 397.9 hours  
 Compressor: 211.8 hours

### GENERAL MAINTENANCE

Electric Meter reading: 22542 Kw-hrs  
 Check Operation of Heaters/Fans: YES  
 Noticable Odors Outside Building: NO

NOTES: LOWERED SUMP FLOAT TO FULL DEPTH.

**ATTENTION - HEATHER SIMON**

Operator: JEFF WUNSCH  
 Date of Site Visit: 4-26-04  
 Arrival Time: 13:30  
 Departure Time: 13:55

### HDPE SUMP

Water Level: 22 3/4 in. (Depth in Inches)  
 High Level Float Switch Setting: (Full Depth / Partial ft)  
 Slice Gate Valve Setting: (Closed / Partially open / Full open)  
 Noticiable Odor: (Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	OPEN	<u>3.5</u>
Zone 1	BW-06	1	<u>3.75</u>
Zone 1	BW-09	CLOSED	—
Zone 1	BW-12	OPEN	<u>4.5</u>
Zone 1	BW-15	1	<u>4.5</u>
Zone 1	BW-18	1	<u>4.5</u>
Zone 2	BW-02	1	<u>5.0</u>
Zone 2	BW-05	1	<u>5.0</u>
Zone 2	BW-08	1	<u>5.0</u>
Zone 2	BW-11	1	<u>5.0</u>
Zone 2	BW-14	1	<u>5.0</u>
Zone 2	BW-17	1	<u>5.0</u>
Zone 3	BW-01	1	<u>6.0</u>
Zone 3	BW-04	1	<u>6.0</u>
Zone 3	BW-07	1	<u>6.0</u>
Zone 3	BW-10	1	<u>6.0</u>
Zone 3	BW-13	1	<u>6.0</u>
Zone 3	BW-16	1	<u>6.0</u>

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park  
 Project/Task Number: 1313/4.3  
 Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? NO upon departure YES  
 If no, which alarm is signalled? Sump High Level

### BIOSPARGE COMPRESSOR

Compressor Temperature: 114° deg. F.  
 Compressor Outlet Pressure: Zone 1 4.5 psi  
                                     Zone 2 5.0 psi  
                                     Zone 3 6.0 psi  
 Compressor Bleed Pressure: Zone 1 4.5 psi  
                                     Zone 2 5.0 psi  
                                     Zone 3 6.0 psi

Air Bleed valve status: (~~Closed~~ / Partially open / ~~Full open~~)  
 Air Outlet valve status: (~~Closed~~ / ~~Partially open~~ / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 432.3 hours  
                                     Valve 2 427.9 hours  
                                     Valve 3 421.1 hours  
                                     Compressor: 281.4 hours

### GENERAL MAINTENANCE

Electric Meter reading: 23033 Kw-hrs  
 Check Operation of Heaters/Fans: OK  
 Noticable Odors Outside Building: NONE

NOTES: INSTALLED DOOR CLOSERS  
ATTENTION - HEATHER SIMON

Operator: Jeff Wunsch  
 Date of Site Visit: 5-19-04  
 Arrival Time: 08:30  
 Departure Time: 09:30

### HDPE SUMP

Water Level: 3 1/4 in. (Depth in Inches)  
 High Level Float Switch Setting: (~~Flood Depth~~ / Raised 1/2 ft)  
 Slice Gate Valve Setting: (~~Closed~~ / ~~Partially open~~ / Full open)  
 Noticiable Odor: (~~Yes~~ / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	OPEN	<u>3.5</u>
Zone 1	BW-06		<u>4.0</u>
Zone 1	BW-09	CLOSED	—
Zone 1	BW-12	OPEN	<u>4.5</u>
Zone 1	BW-15		<u>4.75</u>
Zone 1	BW-18		<u>4.5</u>
Zone 2	BW-02		<u>4.75</u>
Zone 2	BW-05		<u>5.0</u>
Zone 2	BW-08		<u>5.25</u>
Zone 2	BW-11		<u>5.0</u>
Zone 2	BW-14		<u>5.0</u>
Zone 2	BW-17		<u>5.0</u>
Zone 3	BW-01		<u>6.0</u>
Zone 3	BW-04		<u>6.0</u>
Zone 3	BW-07		<u>6.0</u>
Zone 3	BW-10		<u>6.0</u>
Zone 3	BW-13		<u>6.0</u>
Zone 3	BW-16		<u>6.0</u>

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Steel Park  
 Project/Task Number: 1313/4.3  
 Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? Yes upon departure Yes  
 If no, which alarm is signalled?

### BIOSPARGE COMPRESSOR

Compressor Temperature: 125 deg. F.  
 Compressor Outlet Pressure:  
     Zone 1 4.0 psi  
     Zone 2 5.0 psi  
     Zone 3 6.0 psi  
 Compressor Bleed Pressure:  
     Zone 1 4.0 psi  
     Zone 2 5.0 psi  
     Zone 3 6.0 psi

Air Bleed valve status: (Closed / Partially open / Full open)  
 Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours:                   Valve 1 445.9 hours  
   Valve 2 440.9 hours  
   Valve 3 434.7 hours  
   Compressor: 321.6 hours

### GENERAL MAINTENANCE

Electric Meter reading: 23386 Kw-hrs  
 Check Operation of Heaters/Fans: Good  
 Noticable Odors Outside Building: None

NOTES: SUPP LEVEL WAS 41 1/2" ON 6-1-04

ATTENTION - HEATHER SIMON

Operator: JEFF WUNSCH  
 Date of Site Visit: 6-7-04  
 Arrival Time: 11:40  
 Departure Time: 12:00

### HDPE SUMP

Water Level: 37 1/4 in. (Depth in Inches)  
 High Level Float Switch Setting: (Full Depth / Raised 1 ft)  
 Slice Gate Valve Setting: (Closed / Partially open / Full open)  
 Noticiable Odor: (Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	O	<u>3.0</u>
Zone 1	BW-06	I	<u>3.5</u>
Zone 1	BW-09	CLOSED	—
Zone 1	BW-12	O	<u>4.0</u>
Zone 1	BW-15		<u>4.25</u>
Zone 1	BW-18		<u>4.0</u>
Zone 2	BW-02		<u>5.25</u>
Zone 2	BW-05		<u>5.5</u>
Zone 2	BW-08		<u>5.75</u>
Zone 2	BW-11		<u>5.5</u>
Zone 2	BW-14		<u>5.5</u>
Zone 2	BW-17		<u>5.5</u>
Zone 3	BW-01		<u>6.0</u>
Zone 3	BW-04		<u>6.0</u>
Zone 3	BW-07		<u>6.0</u>
Zone 3	BW-10		<u>6.0</u>
Zone 3	BW-13		<u>6.0</u>
Zone 3	BW-16		<u>6.0</u>

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park

Project/Task Number: 1313/4.3

Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? No upon departure YES  
If no, which alarm is signalled? High Sump Alarm

### BIOSPARGE COMPRESSOR

Compressor Temperature: 117 deg. F.

Compressor Outlet Pressure: Zone 1 4.0 psi

Zone 2 5.0 psi

Zone 3 6.0 psi

Compressor Bleed Pressure: Zone 1 4.0 psi

Zone 2 5.0 psi

Zone 3 6.0 psi

Air Bleed valve status: (Closed / Partially open / Full open)

Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 451.3 hours

Valve 2 446.0 hours

Valve 3 440.0 hours

Compressor: 1337.3 hours

### GENERAL MAINTENANCE

Electric Meter reading: 23489 Kw-hrs

Check Operation of Heaters/Fans: Good

Noticable Odors Outside Building: NONE

NOTES: COMPRESSORS BACK ON  
ATTENTION - HEATHER SIMON

Operator: JEFF WUNSCH  
Date of Site Visit: 6-28-04  
Arrival Time: 12:20  
Departure Time: 12:50

### HDPE SUMP

Water Level: 36 in. (Depth in Inches)

High Level Float Switch Setting: (Fall Depth / Raised 1 ft)

Slice Gate Valve Setting: (Closed / Partially open / Full open)

Noticable Odor: (Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	OPEN	3.5
Zone 1	BW-06	1	4.0
Zone 1	BW-09	CLOSED	—
Zone 1	BW-12	OPEN	4.5
Zone 1	BW-15	1	4.5
Zone 1	BW-18	1	4.5
Zone 2	BW-02		5.0
Zone 2	BW-05		5.5
Zone 2	BW-08		5.5
Zone 2	BW-11		5.25
Zone 2	BW-14		5.5
Zone 2	BW-17		5.25
Zone 3	BW-20		6.25
Zone 3	BW-23		6.0
Zone 3	BW-26		6.0
Zone 3	BW-29		6.25
Zone 3	BW-32		6.0
Zone 3	BW-35		6.0

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Street Park

Project/Task Number: 1313/4.3

Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? YES upon departure YES  
If no, which alarm is signalled? \_\_\_\_\_

### BIOSPARGE COMPRESSOR

Compressor Temperature: 130 deg. F.

Compressor Outlet Pressure: Zone 1 3.0 psi

Zone 2 5.5 psi

Zone 3 5.0 psi

Compressor Bleed Pressure: Zone 1 3.0 psi

Zone 2 5.5 psi

Zone 3 5.0 psi

Air Bleed valve status: (Closed / Partially open / Full open)

Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 501.0 hours

Valve 2 495.6 hours

Valve 3 489.4 hours

Compressor: 1486.1 hours

### GENERAL MAINTENANCE

Electric Meter reading: 24156 Kw-hrs

Check Operation of Heaters/Fans: YES

Noticable Odors Outside Building: NONE

NOTES: \_\_\_\_\_

**ATTENTION - HEATHER SIMON**

Operator: JEFF WUNSCH  
Date of Site Visit: 8-2-04  
Arrival Time: 12:15  
Departure Time: 1:17

### HDPE SUMP

Water Level: 33 in. (Depth in Inches)

High Level Float Switch Setting: (Full Depth / Raised ONE ft)

Slice Gate Valve Setting: (Closed / Partially open / Full open)

Noticiable Odor: (YES / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	OPEN	3.0
Zone 1	BW-06	1	3.5
Zone 1	BW-09	CLOSED	←
Zone 1	BW-12	OPEN	4.0
Zone 1	BW-15	1	4.25
Zone 1	BW-18	1	4.0
Zone 2	BW-02	1	5.0
Zone 2	BW-05	1	5.5
Zone 2	BW-08	1	5.5
Zone 2	BW-11	1	5.25
Zone 2	BW-14	1	5.5
Zone 2	BW-17	1	5.25
Zone 3	BW-20	1	6.0
Zone 3	BW-23	1	6.0
Zone 3	BW-26	1	6.0
Zone 3	BW-29	1	6.0
Zone 3	BW-32	1	6.0
Zone 3	BW-35	1	6.0

## OPERATIONS LOG

Site Name: Campmarina / Worker's Water Steel Park -

Project/Task Number: 1313/4.3

Site Location: 732 Water Street, Sheboygan, WI

Is System operating upon arrival? YES upon departure \_\_\_\_\_

If no, which alarm is signalled? \_\_\_\_\_

### BIOSPARGE COMPRESSOR

Compressor Temperature: 120 deg. F.

Compressor Outlet Pressure: Zone 1 3.5 psi

Zone 2 5.0 psi

Zone 3 5.5 psi

Compressor Bleed Pressure: Zone 1 3.5 psi

Zone 2 5.0 psi

Zone 3 5.5 psi

Air Bleed valve status: (Closed / Partially open / Full open)

Air Outlet valve status: (Closed / Partially open / Full open)

### COMPRESSOR OVERVIEW

Cumulative Run Hours: Valve 1 572.2 hours

Valve 2 666.4 hours

Valve 3 559.6 hours

Compressor: 698.3 hours

### GENERAL MAINTENANCE

Electric Meter reading: 25098 Kw-hrs

Check Operation of Heaters/Fans: GOOD

Noticable Odors Outside Building: NOKE

NOTES: OPENED BW-09'S VALVE AND STILL

ATTENTION - HEATHER SIMON

WORKING ON STOOP.

Operator: JEFF WUNSCH

Date of Site Visit: 9-21-04

Arrival Time: 11:20

Departure Time: 11:45

### HDPE SUMP

Water Level: 24 1/2 in. (Depth in Inches)

High Level Float Switch Setting: (Fall Depth / Raised ONE ft)

Slice Gate Valve Setting: (Closed / Partially open / Full open)

Noticable Odor: (Yes / No)

### BIOSPARGE WELLS

Operation Zone	Well #	Valve Status (O,P,C)	Pressure (psi) In Building
Zone 1	BW-03	<u>OPEN</u>	<u>3.0</u>
Zone 1	BW-06	<u>/</u>	<u>3.0</u>
Zone 1	BW-09	<u>CLOSED OPEN</u>	<u>3.25</u>
Zone 1	BW-12		<u>3.75</u>
Zone 1	BW-15		<u>4.0</u>
Zone 1	BW-18		<u>3.75</u>
Zone 2	BW-02		<u>5.0</u>
Zone 2	BW-05		<u>5.25</u>
Zone 2	BW-08		<u>5.5</u>
Zone 2	BW-11		<u>5.0</u>
Zone 2	BW-14		<u>5.25</u>
Zone 2	BW-17		<u>5.0</u>
Zone 3	BW-01		<u>5.75</u>
Zone 3	BW-04		<u>5.5</u>
Zone 3	BW-07		<u>5.5</u>
Zone 3	BW-10		<u>6.0</u>
Zone 3	BW-13		<u>5.75</u>
Zone 3	BW-16		<u>6.0</u>



AIR SAMPLING ANALYTICAL REPORTS  
APPENDIX D



Corporate Office & Laboratory  
1241 Bellevue Street, Suite 9, Green Bay, WI 54302  
920-469-2436, Fax: 920-469-8827  
[www.enchem.com](http://www.enchem.com)

## Analytical Report Number: 843659

Client: NATURAL RESOURCE TECH

Lab Contact: Tom Trainor

Project Name: WPSC - CAMP MARINA

Project Number: 1313

Lab Sample Number	Field ID	Matrix	Collection Date
843659-001	VENT	AIR	02/17/04

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

Approval Signature

Date

**En Chem Inc.**

**Analytical Report Number: 843659**

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Client : NATURAL RESOURCE TECH

Project Name : WPSC - CAMP MARINA

Project Number : 1313

Field ID : VENT

Matrix Type : AIR

Collection Date : 02/17/04

Report Date : 02/25/04

Lab Sample Number : 843659-001

BTEX										Prep Date: 02/24/04
Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.22	0.22	0.72		50	ug		02/24/04	SW846 5030B	SW846 8260B
Ethylbenzene	< 0.22	0.22	0.75		50	ug		02/24/04	SW846 5030B	SW846 8260B
Toluene	< 0.13	0.13	0.42		50	ug		02/24/04	SW846 5030B	SW846 8260B
Xylene, o	< 0.22	0.22	0.75		50	ug		02/24/04	SW846 5030B	SW846 8260B
Xylenes, m + p	< 0.32	0.32	1.1		50	ug		02/24/04	SW846 5030B	SW846 8260B
4-Bromofluorobenzene	100				1	%Recov		02/24/04	SW846 5030B	SW846 8260B
Toluene-d8	104				1	%Recov		02/24/04	SW846 5030B	SW846 8260B
Dibromofluoromethane	109				1	%Recov		02/24/04	SW846 5030B	SW846 8260B

**En Chem Inc.**

**Analysis Summary by Laboratory**

1241 Bellevue Street  
Green Bay, WI 54302

1090 Kennedy Avenue  
Kimberly, WI 54136

Test Group Name

BTEX G

**Wisconsin Certification**

G = En Chem Green Bay	405132750 / DATCP: 105 000444
K = En Chem Kimberly	445134030
S = En Chem Superior	Not Applicable
C = Subcontracted Analysis	

843659-001

# En Chem, Inc. Cooler Receipt Log

Batch No. 843659

Project Name or ID 1313

No. of Coolers: 1 Temps: ROI

A. Receipt Phase: Date cooler was opened: 2-19-04 By: GD

- 1: Were samples received on ice? (Must be ≤ 6 C) ..... YES NO<sup>2</sup> NA
2. Was there a Temperature Blank? ..... YES NO
- 3: Were custody seals present and intact on cooler? (Record on COC) ..... YES NO
- 4: Are COC documents present? ..... YES NO<sup>2</sup>
- 5: Does this Project require quick turn around analysis? ..... YES NO
- 6: Is there any sub-work? ..... YES NO
- 7: Are there any short hold time tests? ..... YES NO
- 8: Are any samples nearing expiration of hold-time? (Within 2 days) ..... YES<sup>1</sup> NO Contacted by/Who \_\_\_\_\_
- 9: Do any samples need to be Filtered or Preserved in the lab? ..... YES<sup>1</sup> NO Contacted by/Who \_\_\_\_\_

B. Check-in Phase: Date samples were Checked-in: 2-19-04 By: GD

- 1: Were all sample containers listed on the COC received and intact? ..... YES NO<sup>2</sup> NA
- 2: Sign the COC as received by En Chem. Completed ..... YES NO
- 3: Do sample labels match the COC? ..... YES NO<sup>2</sup>
- 4: Completed pH check on preserved samples. .... YES  
*(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*
- 5: Do samples have correct chemical preservation? ..... YES  
*(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*
- 6: Are dissolved parameters field filtered? ..... YES NO<sup>2</sup>
- 7: Are sample volumes adequate for tests requested? ..... YES NO<sup>2</sup>
- 8: Are VOC samples free of bubbles >6mm ..... YES NO<sup>2</sup>
- 9: Enter samples into logbook. Completed ..... YES NO
- 10: Place laboratory sample number on all containers and COC. Completed ..... YES NO
- 11: Complete Laboratory Tracking Sheet (LTS). Completed ..... YES NO
- 12: Start Nonconformance form. ..... YES NO
- 13: Initiate Subcontracting procedure. Completed ..... YES NO
- 14: Check laboratory sample number on all containers and COC. ..... KD YES NO

## Short Hold-time tests:

24 Hours or less	48 Hours	7 days	Footnotes 1 Notify proper lab group immediately. 2 Complete nonconformance memo.
Coliform	BOD	Ash	
Corrosivity = pH	Color	Aqueous Extractable Organics- ALL	
Dissolved Oxygen	Nitrite or Nitrate	Flashpoint	
Hexavalent Chromium	Ortho Phosphorus	Free Liquids	
HPC	Surfactants	Sulfide	
Ferrous Iron	Turbidity	TDS	
Eh	En Core Preservation	TSS	
Odor	Power stop preservation	Total Solids	
Residual Chlorine		TVS	
Sulfite		TVSS	
		Unpreserved VOC's	

Rev. 2/05/04, Attachment to 1-REC-5.  
Subject to QA Audit.

Reviewed by/date TJT 2/20/04





Corporate Office & Laboratory  
1241 Bellevue Street, Suite 9, Green Bay, WI 54302  
920-469-2436, Fax: 920-469-8827  
[www.enchem.com](http://www.enchem.com)

## Analytical Report Number: 850401

Client: NATURAL RESOURCE TECHNOLOGY, INC.

Lab Contact: Tom Trainor

Project Name: WPSC - CAMP MARINA

Project Number: 1313

Lab Sample Number	Field ID	Matrix	Collection Date
850401-001	1103 REP-1	GW	08/26/04
850401-002	VENT	IMP	08/26/04
850401-003	TRIP BLANK	METH	08/26/04

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample comments. Release of this final report is authorized by Laboratory management, as is verified by the following signature. Reported results shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested.

A handwritten signature in black ink that reads "Tom Trainor".

Approval Signature

A handwritten date stamp in black ink that reads "9/3/04".

Date

**En Chem Inc.**1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436**Analytical Report Number: 850401**

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : GROUNDWATER

Project Name : WPSC - CAMP MARINA

Collection Date : 08/26/04

Report Date : 09/02/04

Lab Sample Number : 850401-001

Project Number : 1313  
Field ID : 1103 REP-1

<b>BTEX</b>										Prep Date: 09/01/04
Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 0.14	0.14	0.46		1	ug/L		09/01/04	SW846 5030B	SW846 M8021
Ethylbenzene	< 0.40	0.40	1.3		1	ug/L		09/01/04	SW846 5030B	SW846 M8021
Toluene	< 0.36	0.36	1.2		1	ug/L		09/01/04	SW846 5030B	SW846 M8021
Xylene, o	< 0.36	0.36	1.2		1	ug/L		09/01/04	SW846 5030B	SW846 M8021
Xylenes, m + p	< 0.74	0.74	2.5		1	ug/L		09/01/04	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	103				1	%Recov		09/01/04	SW846 5030B	SW846 M8021

<b>PAH/ PNA</b>										Prep Date: 08/31/04
Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
1-Methylnaphthalene	2.2	0.40	1.3		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
2-Methylnaphthalene	1.7	0.45	1.5		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
Acenaphthene	1.6	0.39	1.3		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
Acenaphthylene	9.3	3.1	10		160	ug/L	QD	09/01/04	SW846 3510C	8270C-SIM
Anthracene	8.5	2.8	9.4		160	ug/L	QD	09/01/04	SW846 3510C	8270C-SIM
Benzo(a)anthracene	11	3.1	10		160	ug/L	D	09/01/04	SW846 3510C	8270C-SIM
Benzo(a)pyrene	11	2.9	9.7		160	ug/L	D	09/01/04	SW846 3510C	8270C-SIM
Benzo(b)fluoranthene	4.8	0.36	1.2		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
Benzo(ghi)perylene	5.3	0.41	1.4		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
Benzo(k)fluoranthene	7.0	0.39	1.3		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
Chrysene	12	2.6	8.7		160	ug/L	D	09/01/04	SW846 3510C	8270C-SIM
Dibenz(a,h)anthracene	1.3	0.44	1.5		20	ug/L	Q	08/31/04	SW846 3510C	8270C-SIM
Fluoranthene	19	2.6	8.8		160	ug/L	D	09/01/04	SW846 3510C	8270C-SIM
Fluorene	3.6	0.44	1.5		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
Indeno(1,2,3-cd)pyrene	3.8	0.34	1.1		20	ug/L		08/31/04	SW846 3510C	8270C-SIM
Naphthalene	0.60	0.45	1.5		20	ug/L	Q	08/31/04	SW846 3510C	8270C-SIM
Phenanthrene	24	3.3	11		160	ug/L	D	09/01/04	SW846 3510C	8270C-SIM
Pyrene	35	2.6	8.7		160	ug/L	D	09/01/04	SW846 3510C	8270C-SIM
Nitrobenzene-d5	0				20	%Recov	D	08/31/04	SW846 3510C	8270C-SIM
2-Fluorobiphenyl	0				20	%Recov	D	08/31/04	SW846 3510C	8270C-SIM
Terphenyl-d14	0				20	%Recov	D	08/31/04	SW846 3510C	8270C-SIM

En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Analytical Report Number: 850401

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Project Name : WPSC - CAMP MARINA

Project Number : 1313

Field ID : VENT

Matrix Type : IMPINGER

Collection Date : 08/26/04

Report Date : 09/02/04

Lab Sample Number : 850401-002

BTEX										Prep Date: 09/01/04	
Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method	
Benzene	< 0.38	0.38	1.2		50	ug		09/01/04	SW846 5030B	SW846 M8021	
Ethylbenzene	< 0.38	0.38	1.2		50	ug		09/01/04	SW846 5030B	SW846 M8021	
Toluene	< 0.38	0.38	1.2		50	ug		09/01/04	SW846 5030B	SW846 M8021	
Xylene, o	< 0.38	0.38	1.2		50	ug		09/01/04	SW846 5030B	SW846 M8021	
Xylenes, m + p	< 0.38	0.38	1.2		50	ug		09/01/04	SW846 5030B	SW846 M8021	
a,a,a-Trifluorotoluene	102				1	%Recov		09/01/04	SW846 5030B	SW846 M8021	

En Chem Inc.

1241 Bellevue Street  
Green Bay, WI 54302  
920-469-2436

Analytical Report Number: 850401

Client : NATURAL RESOURCE TECHNOLOGY, INC.

Matrix Type : METHANOL

Project Name : WPSC - CAMP MARINA

Collection Date : 08/26/04

Project Number : 1313

Report Date : 09/02/04

Field ID : TRIP BLANK

Lab Sample Number : 850401-003

**BTEX**

Prep Date: 09/01/04

Analyte	Result	LOD	LOQ	EQL	Dil.	Units	Code	Anl Date	Prep Method	Anl Method
Benzene	< 25	25	60		50	ug/L		09/02/04	SW846 5030B	SW846 M8021
Ethylbenzene	< 25	25	60		50	ug/L		09/02/04	SW846 5030B	SW846 M8021
Toluene	< 25	25	60		50	ug/L		09/02/04	SW846 5030B	SW846 M8021
Xylene, o	< 25	25	60		50	ug/L		09/02/04	SW846 5030B	SW846 M8021
Xylenes, m + p	< 25	25	60		50	ug/L		09/02/04	SW846 5030B	SW846 M8021
a,a,a-Trifluorotoluene	101				1	%Recov		09/02/04	SW846 5030B	SW846 M8021

## Qualifier Codes

Flag	Applies To	Explanation
A	Inorganic	Analyte is detected in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
B	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
B	Organic	Analyte is present in the method blank. Method blank criteria is evaluated to the laboratory method detection limit. Additionally, method blank acceptance may be based on project specific criteria or determined from analyte concentrations in the sample and are evaluated on a sample by sample basis.
C	All	Elevated detection limit.
D	All	Analyte value from diluted analysis or surrogate result not applicable due to sample dilution.
E	Inorganic	Estimated concentration due to matrix interferences. During the metals analysis the serial dilution failed to meet the established control limits of 0-10%. The sample concentration is greater than 50 times the IDL for analysis done on the ICP or 100 times the IDL for analysis done on the ICP-MS. The result was flagged with the E qualifier to indicate that a physical interference was observed.
E	Organic	Analyte concentration exceeds calibration range.
F	Inorganic	Due to potential interferences for this analysis by Inductively Coupled Plasma techniques (SW-846 Method 6010), this analyte has been confirmed by and reported from an alternate method.
F	Organic	Surrogate results outside control criteria.
H	All	Preservation, extraction or analysis performed past holding time.
HF	Inorganic	This test is considered a field parameter, and the recommended holding time is 15 minutes from collection. The analysis was performed in the laboratory beyond the recommended holding time.
J	Inorganic	The analyte has been detected between the method detection limit and the reporting limit.
J	Organic	Concentration detected is greater than the method detection limit but less than the reporting limit.
K	Inorganic	Sample received unpreserved. Sample was either preserved at the time of receipt or at the time of sample preparation.
K	Organic	Detection limit may be elevated due to the presence of an unrequested analyte.
L	All	Elevated detection limit due to low sample volume.
M	Organic	Sample pH was greater than 2
N	All	Spiked sample recovery not within control limits.
O	Organic	Sample received overweight.
P	Organic	The relative percent difference between the two columns for detected concentrations was greater than 40%.
Q	All	The analyte has been detected between the limit of detection (LOD) and limit of quantitation (LOQ). The results are qualified due to the uncertainty of analyte concentrations within this range.
S	Organic	The relative percent difference between quantitation and confirmation columns exceeds internal quality control criteria. Because the result is unconfirmed, it has been reported as a non-detect with an elevated detection limit.
U	All	The analyte was not detected at or above the reporting limit.
V	All	Sample received with headspace.
W	All	A second aliquot of sample was analyzed from a container with headspace.
X	All	See Sample Narrative.
&	All	Laboratory Control Spike recovery not within control limits.
*	All	Precision not within control limits.
<	All	The analyte was not detected at or above the reporting limit.
1	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses passed QC based on precision criteria.
2	Inorganic	Dissolved analyte or filtered analyte greater than total analyte; analyses failed QC based on precision criteria.
3	Inorganic	BOD result is estimated due to the BOD blank exceeding the allowable oxygen depletion.
4	Inorganic	BOD duplicate precision not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
5	Inorganic	BOD result is estimated due to insufficient oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
6	Inorganic	BOD laboratory control sample not within control limits. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.
7	Inorganic	BOD result is estimated due to complete oxygen depletion. Due to the 48 hour holding time for this test, it is not practical to reanalyze and try to correct the deficiency.

**En Chem Inc.**

**Analysis Summary by Laboratory**

1241 Bellevue Street  
Green Bay, WI 54302

1090 Kennedy Avenue  
Kimberly, WI 54136

Test Group Name

850401-001  
850401-002  
850401-003

BTEX	G G G
PAH/ PNA	G

**Wisconsin Certification**

G = En Chem Green Bay	405132750 / DATCP: 105 000444
K = En Chem Kimberly	445134030
S = En Chem Superior	Not Applicable
C = Subcontracted Analysis	

# En Chem, Inc. Cooler Receipt Log

Batch No. 850401

Project Name or ID NRT-Sheboygan

No. of Coolers: 1 Temps: R01

A. Receipt Phase: Date cooler was opened: 8-30-04

By: S Falk

- 1: Were samples received on ice? (Must be ≤ 6 C)..... YES NO<sup>2</sup> NA
- 2: Was there a Temperature Blank?..... YES NO
- 3: Were custody seals present and intact on cooler? (Record on COC)..... YES NO
- 4: Are COC documents present?..... YES NO<sup>2</sup>
- 5: Does this Project require quick turn around analysis?..... YES NO
- 6: Is there any sub-work?..... YES NO
- 7: Are there any short hold time tests?..... YES NO
- 8: Are any samples nearing expiration of hold-time? (Within 2 days)..... YES<sup>1</sup> NO Contacted by/Who \_\_\_\_\_
- 9: Do any samples need to be Filtered or Preserved in the lab?..... YES<sup>1</sup> NO Contacted by/Who \_\_\_\_\_

B. Check-in Phase: Date samples were Checked-in: 8-30-04

By: S Falk

- 1: Were all sample containers listed on the COC received and intact?..... YES NO<sup>2</sup> NA
- 2: Sign the COC as received by En Chem. Completed..... YES NO
- 3: Do sample labels match the COC? ..... YES NO<sup>2</sup>
- 4: Completed pH check on preserved samples..... YES NO (NA)  
*(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*
- 5: Do samples have correct chemical preservation?..... YES NO<sup>2</sup> (NA)  
*(This statement does not apply to water: VOC, O&G, TOC, DRO, Total Rec. Phenolics)*
- 6: Are dissolved parameters field filtered?..... YES NO<sup>2</sup> (NA)
- 7: Are sample volumes adequate for tests requested? ..... YES NO<sup>2</sup>
- 8: Are VOC samples free of bubbles >6mm ..... YES NO<sup>2</sup> NA
- 9: Enter samples into logbook. Completed..... YES NO
- 10: Place laboratory sample number on all containers and COC. Completed..... YES NO
- 11: Complete Laboratory Tracking Sheet (LTS). Completed..... YES NO (NA)
- 12: Start Nonconformance form. ..... YES NO (NA)
- 13: Initiate Subcontracting procedure. Completed..... YES NO (NA)
- 14: Check laboratory sample number on all containers and COC. ..... 8/30/04 YES NO NA

## Short Hold-time tests:

24 Hours or less	48 Hours	7 days	Footnotes
Coliform	BOD	Ash	1 Notify proper lab group immediately.
Corrosivity = pH	Color	Aqueous Extractable Organics- ALL	2 Complete nonconformance memo.
Dissolved Oxygen	Nitrite or Nitrate	Flashpoint	
Hexavalent Chromium	Ortho Phosphorus	Free Liquids	
HPC	Surfactants	Sulfide	
Ferrous Iron	Turbidity	TDS	
Eh	En Core Preservation	TSS	
Odor	Power stop preservation	Total Solids	
Residual Chlorine		TVS	
Sulfite		TVSS	
		Unpreserved VOC's	

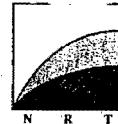
Rev. 2/05/04, Attachment to 1-REC-5.

Subject to QA Audit.

Reviewed by/date

TJ 8/31/04

## **CHAIN OF CUSTODY RECORD**



Natural  
Resource  
Technology

Sample Collectors(s)/Signature(s) <i>Eric P. Kowalek / Eric P. Kowalek</i>			NATURAL RESOURCE TECHNOLOGY, INC. PEWAKEE, WISCONSIN			Laboratory Samples are Being Submitted To: <u>Eric Chene</u> Quote Number/Addendum Number _____					
Site Name: <u>1313 Camp Marine</u> Site Address: <u>Sheboygan</u>			Send Report To: Project Manager: <u>Heather Simon</u> Project Number: <u>1313</u> Natural Resource Technology, Inc. 23713 W. Paul Road Pewaukee, WI 53072 Telephone (414) 523-9000 Fax (414) 523-9001			Temperature of temperature blank _____ If sample(s) were received on ice and there was ice remaining, you may report the temperature as "received on ice". If all of the ice was melted, the temperature of the melt may be substituted for a temperature blank.					
I hereby certify that I received, properly handled, and maintained custody of these samples as noted below:											
Relinquished By (Signature) <i>Eric P. Kowalek</i>			Date/Time <u>8/27/04 180</u>		Received By (Signature) <i>J. R.</i>		Date/Time		Analytical Method / Numbers <i>PATH/STL</i>	Lab Use Only	
Relinquished By (Signature) <u>D. D. Wittenauer</u>			Date/Time <u>8/30/04 1145</u>		Received By (Signature) <i>J. R.</i>		Date/Time <u>8/30/04 1145</u>				
Relinquished By (Signature) <i>J. R.</i>			Date/Time <u>8-30-04 1330</u>		Received By (Signature) <i>J. R.</i>		Date/Time <u>8-30-04 1330</u>				
Field ID Number	Date Collected	Time Collected	Sample		PID Reading	Field Comments	Preserv. Type	# of Cont.	Lab ID Number	Sample Conditions @ Laboratory	
			Media	Device							Location / Description
1103 Rep-1	8/26/04		BLW Ring	Drum Water		Treated	H2O/Air	4	13	001	
Vent	8/26/04		Air Pump	Air Vent on Stack		Meth-	1	1	002	1-1041	
Leep lidemic									003	1-1042	
SPECIAL INSTRUCTIONS			Laboratory shall retain samples for 30 days after issuing analytical report unless indicated otherwise below: Return _____ Other _____								
# 850401											