STS CONSULTANTS

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Milwaukee, Wisconsin 53224-3025

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BRRTS 02-68-378488
FID # 268026220
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JAN 2 2003
By

December 17, 2002

Ms. Michelle Williams
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
2300 North Martin Luther King Drive
Milwaukee, WI 53212

RE: Subsurface Site Assessment
Property Located at N89 W16744-46 Appleton Avenue, Menomonee Falls, Wisconsin
STS Project No. 5-87210XA

Dear Ms. Williams:

On behalf of Bence Family Limited Partnership (Bence), STS Consultants Ltd. (STS) has prepared this report to document the methodology and results of a recently completed Subsurface Site Assessment of the referenced property located in Menomonee Falls, Wisconsin (Figure 1). The purpose of the Subsurface Site Assessment is to gain an understanding of soil quality, groundwater quality, and groundwater flow conditions at the site pursuant to STS' Wisconsin Administrative Code (WAC) Chapter NR 716 Work Plan dated October 4, 2002, and to request authorization from the Wisconsin Department of Natural Resources (WDNR) to complete additional subsurface site assessment tasks under the Dry Cleaner Environmental Response Program ("DERP"). The following sections provide information concerning project history, field investigation methodology, subsurface materials encountered at the site, analytical laboratory results associated with collected soil and groundwater samples, our interpretation of the investigation results, and recommendations for additional investigative activities.

Project History

A two-story commercial building at the subject property operated as a dry cleaning facility from approximately 1975 to June 2000. Maxim Technologies, Inc. (Maxim) was retained by Bence in 2001 to evaluate potential impacts associated with the former dry cleaning operations. As part of their investigation, Maxim advanced three hydraulic probes (identified as GP-1, GP-2 and GP-3) on the property. The hydraulic probes encountered dolomite bedrock at a depth of 1.5 to 7.5 feet below ground surface (bgs) at the site. A soil sample collected from Maxim hydraulic probe GP-1 (located on a loading dock ramp on the east side of the facility building) in December 2001 revealed 71,000 micrograms per kilogram (µg/kg) of tetrachloroethene (PCE), and lesser concentrations of other chlorinated and aromatic volatile organic compounds (VOCs). Soil samples collected from GP-2 (located in the northern portion of the property) and GP-3 (located in the eastern portion of the property) did not reveal detectable VOC concentrations. The WDNR was notified by Bence on December 19, 2001 that a release of hazardous substances on the property had occurred.

Approximately 7 cubic yards of impacted soil near GP-1 were excavated by Maxim in February 2002. Two soil samples collected from the base of the excavation revealed 99,000 and 11,000 µg/kg of PCE; however, additional excavation beyond 2 feet below grade was precluded by the bedrock surface. Soil samples collected from the walls of the excavation revealed 240 to 500 µg/kg of PCE. The excavated soil was removed from the property and disposed off-site by Onyx Environmental Services in March 2002.

Monitoring well MW-1 was installed in the northern portion of the property (at the location shown on Figure 1) by Maxim in March 2002; this well was screened from 15 to 35 feet bgs (this 20 foot screen length exceeds the maximum 15 feet screen length for water-table monitoring wells as specified in WAC Chapter NR141). The measured depth to groundwater in MW-1 was approximately 13 feet bgs. Groundwater samples were collected from MW-1 on two occasions in April 2002. These groundwater samples revealed a maximum PCE concentration of 780 micrograms per liter (µg/L), a maximum trichloroethene (TCE) concentration of 24 µg/L, a maximum cis-1,2-dichloroethene (cis-1,2-DCE) concentration of 12 µg/L, and a maximum vinyl chloride concentration of 0.27µg/L.

The major potential receptors to affected groundwater quality at the site are the Niagaran dolomite aquifer and the Menomonee River. The Maxim investigation revealed that dolomite bedrock was encountered at a depth of 1.5 feet to 7.5 feet bgs. The Menomonee River is located approximately 700 feet to the east of the subject site.

Investigation Methodology

This section describes the data collection activities completed as part of the STS Subsurface Site Assessment of the subject property. Data collection activities conducted as part of the investigation consisted of the following:

- Installation of two monitoring wells (identified as MW-2 and MW-3 on Figure 2), including collection of one soil sample from each monitoring well installation boring for laboratory analysis (October 7, 2002).
- Collection of groundwater samples from existing monitoring well MW-1 and new monitoring wells MW-2 and MW-3 for laboratory analysis (October 11, 2002);
- Location and elevation survey of new and existing monitoring wells MW-1, MW-2 and MW-3 (October 23, 2002).

The monitoring well installation services were provided by Boart Longyear Company of Schofield, Wisconsin. Quantitative chemical analyses of collected soil and groundwater samples were conducted by Great Lakes Analytical of Oak Creek, Wisconsin. Monitoring wells MW-2 and MW-3 were installed using 6.25-inch diameter hollow-stem augers (ASTM Method D1586) to the bedrock surface, followed by air rotary drilling. The wells were constructed with 2-inch diameter, flush-thread, schedule 40 polyvinyl chloride (PVC) riser pipe with 10-slot (0.010 inch) screen. Monitoring well MW-2 is screened from 5 to 15 feet bgs, and MW-3 is screened from 9.5 to 19.5 feet bgs. Coarse silica filter sand packs were placed to depths of 1 to 2 feet above the top of the monitoring well screens. Following placement of the coarse sand pack, a 1 foot fine sand pack was placed, followed by granular bentonite to 1.0 foot bgs and a concrete surface seal. The monitoring wells were completed with a locking, flush-mount protective casing. Monitoring well construction details (WDNR Form 4400-113A) are provided in Attachment A.

Soil samples were collected at 2.5 foot intervals to the bedrock surface from both new monitoring well installation borings using a two-inch diameter, two-foot long split-spoon sampler (ASTM Method D1587) and visually classified in the field by STS. The soil samples collected from the monitoring well installation borings were described in the field with respect to the soil types (Unified Soil Classification System code), grain size distribution, and color (or discoloration), odor, moisture content, consistency and photoionizable constituent content, as appropriate. The observations were recorded on soil boring logs (WDNR Form 4400-122) provided in Attachment A.

Duplicate soil samples collected from each sampling interval were field screened using a photoionization detector (PID). The PID yields a semi-quantitative headspace analysis of the concentration of the VOCs in the samples that have ionization potentials that are equal to or less than 10.6 electron volts (eV). The PID was calibrated in the field according to manufacturer's instructions, using 100 parts per million (ppm) isobutylene span gas and air (zero gas), and checked between each screening event for proper response. The peak instrument readings were recorded on the soil boring logs. PID readings from the duplicate samples were assumed to be similar to the primary samples. As such, the primary samples were not screened. This procedure reduces the potential escape of VOCs from the sample submitted for laboratory analysis. The duplicate soil samples were loosely placed in glass sample jars to allow sufficient headspace to optimize PID screening results. It is important to note that the PID does not allow for a differentiation of individual VOCs, and has a useful detection limit of approximately 0.1 ppm for select VOCs.

The soil and groundwater samples submitted to Great Lakes Analytical were at all times accompanied by a chain-of-custody form. When transferring samples, the individuals relinquishing and receiving the samples signed and dated the forms. The original chain-of-custody form accompanied the shipment. A copy was retained by the field sampler and filed immediately upon return to the office. The forms include the following information: sample identification, date collected, source of sample (including type of sample and site identification), and name of sampler. The forms were completed in a legible matter using waterproof ink and signed by the sampler. Similar information was provided on the sample labels, which were securely attached to the sample containers. The soil and groundwater samples submitted to Great Lakes Analytical were analyzed for VOCs, using USEPA Method 8021.

Upon completion of monitoring well installation, new monitoring wells MW-2 and MW-3 were developed in accordance with WAC NR141, as documented by the completed well development forms (WDNR Form 4400-113B) provided in Attachment A. Three 55-gallon drums of soil cuttings and one 55-gallon drum of well development water associated with installation of monitoring wells MW-2 and MW-3 are currently staged onsite.

Encountered Subsurface Materials

Data collection activities conducted as part of this Subsurface Site Assessment have provided information to characterize subsurface conditions at the subject property. The locations of monitoring wells installed as part of this investigation are shown on Figure 2, and their total depths, depths of soil samples retained for laboratory analysis and depth to Niagaran dolomite bedrock surface (in feet bgs) are summarized as follows:

Monitoring Well	Total Depth	Sample Depth	Depth to Bedrock
MW-2	15.5	0 to 1	1
MW-3	20	2.5 to 4.5	5

With respect to soils encountered, monitoring well installation boring MW-2 revealed the presence of approximately 1 foot of fill material that consists of gray gravel underlain by light brown dolomite bedrock, and MW-3 revealed the presence of approximately 5 feet of brown to dark brown silt and clayey silt (also underlain by light brown dolomite bedrock).

Inferred Groundwater Flow Direction

The results of STS' location and elevation survey (in feet relative to mean sea level) of the three new and existing wells are provided as follows:

Monitoring Well	Top of PVC Casing	Ground Surface
MW-1	859.50	860.03
MW-2	856.15	856.50
MW-3	858.63	858.89

The measured depth to the water table ranges from approximately 7 feet bgs to 12 feet bgs, such that the water table surface is situated within the bedrock at the site. An inferred potentiometric surface map is provided as Figure 3, which shows an inferred local groundwater flow direction to the northeast. The estimated horizontal hydraulic gradient is 0.072.

Laboratory Results of Collected Soil Samples

Soil sample results are reported in units of micrograms per kilogram (µg/kg), which is equivalent to parts per billion. Laboratory reports including chain-of-custody forms are provided in Attachment B. The only soil sample that revealed detectable concentrations of VOCs was the sample collected from monitoring well installation boring MW-2, at a depth of 0 to 1 foot bgs. The only VOC detected in this soil sample was 133 µg/kg of PCE. This soil sample was collected in the immediate vicinity of the area of soil excavated by Maxim in February 2002.

Laboratory Results of Collected Groundwater Samples

Groundwater sample results are reported in units of micrograms per liter (µg/L), which is approximately equivalent to parts per billion. Laboratory reports including chain-of-custody forms are provided in Attachment B. A comparison of detected VOC concentrations in groundwater samples collected from the monitoring wells with WAC NR140 enforcement standards (ES) and preventive action limits (PAL) is provided in Table 1.

As indicated in Table 1, the detected PCE and TCE concentrations in groundwater samples collected from all three new and existing monitoring wells exceed their respective ES values. In addition, cis-1,2-DCE concentrations in groundwater samples collected from monitoring wells MW-2 and MW-3 exceed the PAL for cis-1,2-DCE. The PAL for 1,1-DCE was also exceeded in the groundwater sample collected from monitoring well MW-2.

Conclusions

The field and laboratory information obtained as part of this Subsurface Site Assessment has provided a useful understanding of subsurface conditions at the subject property in Menomonee Falls, Wisconsin. With respect to soils encountered during the investigation, monitoring well installation boring MW-2 revealed the presence of approximately 1 foot of fill material that consists of gray gravel underlain by light brown dolomite bedrock, and MW-3 revealed the presence of approximately 5 feet of brown to dark brown silt and clayey silt (also underlain by light brown dolomite bedrock). The measured depth to the water table ranges from approximately 7 feet bgs to 12 feet bgs, such that the water table surface is situated within the bedrock at the site. The inferred local groundwater flow direction is to the northeast, at an estimated horizontal hydraulic gradient of 0.072.

The only soil sample that revealed detectable concentrations of VOCs was the sample collected from monitoring well installation boring MW-2, at a depth of 0 to 1 foot bgs. The only VOC detected in this soil sample was 133 µg/kg of PCE. This soil sample was collected in the immediate vicinity of the area of soil excavated by Maxim in February 2002. As indicated above, two soil samples collected from the base of the February 2002 excavation by Maxim revealed 99,000 and 11,000 µg/kg of PCE; however, additional excavation by Maxim beyond 2 feet below grade was precluded by the bedrock surface. Similarly, the depth to bedrock at the location of MW-2 is 1 foot bgs, such that additional excavation at the location of MW-2 would also be precluded by the bedrock surface.

As indicated in Table 1, the detected PCE and TCE concentrations in groundwater samples collected from all three new and existing monitoring wells exceed their respective ES values. In addition, cis-1,2-DCE concentrations in groundwater samples collected from monitoring wells MW-2 and MW-3 exceed the PAL for cis-1,2-DCE. The PAL for 1,1-DCE was also exceeded in the groundwater sample collected from monitoring well MW-2. Based on this information, STS concludes the following:

1. The maximum detected PCE concentration in site groundwater (3,600 µg/L) is greater than the previously identified maximum concentration (780 µg/L) detected as part of the Maxim investigation.
2. The maximum detected VOC concentrations in site groundwater are present at MW-3, which is not directly hydraulically downgradient (northeast) of the former vadose zone source area near monitoring well MW-2. This observation may be a consequence of bedrock fracture flow that is not parallel to the inferred direction of groundwater flow based on the measured horizontal hydraulic gradient.
3. The horizontal extent of affected groundwater quality has not been defined, such that migration of affected groundwater beyond the N89 W16744-46 Appleton Avenue property boundaries has likely occurred.
4. The vertical extent of affected groundwater quality has not been defined.

Recommendations

STS' recommended approach to completing this investigation is to gain a better understanding of the horizontal and vertical distribution of VOCs at the site, prior to investigation of groundwater quality beyond the property boundaries. In order to better define the extent of affected groundwater quality at the N89 W16744-46 Appleton Avenue property, STS recommends the installation of monitoring wells MW-3A and MW-4 at the locations shown on Figure 5. Monitoring well MW-3A would be installed to a depth of 40 feet bgs and screened from 35 to 40 feet bgs, to evaluate the vertical extent of affected groundwater at the location of maximum detected VOC concentrations in shallow groundwater (based on data from MW-3, which is screened from 9.5 to 19.5 feet bgs). An off-site monitoring well will probably need to be subsequently installed downgradient (northeast) of MW-3/MW-3A within the public right-of-way on the east side of Church Street, to evaluate the downgradient extent of affected groundwater quality. The screened depth interval of this probable future monitoring well would be based on the laboratory results of groundwater samples collected from monitoring wells MW-3 and MW-3A. Monitoring well MW-4 would be installed as a water-table monitoring well to an approximate depth of 20 feet bgs and screened from approximately 10 to 20 feet bgs, to evaluate the southern extent affected shallow groundwater quality at the N89 W16744-46 Appleton Avenue property.

In-situ hydraulic conductivity testing will be conducted on all five new and existing monitoring wells, in order to obtain an understanding of groundwater flow velocities at the site. One soil sample would be collected from each of the two monitoring well installation borings and submitted for laboratory analysis of VOCs, and groundwater samples collected from all five new and existing monitoring wells would also be submitted for laboratory analysis of VOCs. Upon receipt of all laboratory results, the methodology and results of these additional investigative activities would be documented in a Phase II Subsurface Assessment Report for submittal to the WDNR.

The estimated costs to complete this recommended scope of work are summarized as follows:

Task	STS	Subcontractor	Total
Monitoring Well Installation	$1,900	$4,500	$6,400
In-situ Hydraulic Conductivity Testing	$1,600	$0	$1,600
Groundwater Sampling	$600	$0	$600
Soil/Groundwater Sample Analysis	$0	$500	$500
Well Location/Elevation Survey	$300	$0	$300
Phase II Report	$3,500	$0	$3,500
Project Totals	$7,900	$5,000	$12,900

STS is prepared to initiate the recommended field investigation activities within approximately two weeks from authorization to proceed, dependent upon the timely availability of a qualified monitoring well installation subcontractor. The monitoring well installation and development activities can be completed within two working days, and the in-situ hydraulic conductivity testing and groundwater sampling activities can be conducted several days thereafter. Laboratory

results of the collected soil and groundwater samples will be available within two to three weeks of sample collection. Approximately two weeks will be required to complete the Phase II Subsurface Assessment Report, such that the report would be completed within approximately eight weeks from receipt of Dry Cleaner Environmental Response Program (DERP) approval to proceed with this investigation.

Based on the foregoing, STS requests DERP approval to conduct the investigative activities identified above. As indicated, the estimated total cost to complete these activities is $12,900. If the terms of the request for approval contained herein are acceptable to you, please provide your signature in the space provided below and return one copy to the undersigned. If you have any questions, please do not hesitate to contact us. Thank you very much for your assistance with this project.

Respectfully,

STS CONSULTANTS, LTD.

Mark M. Mejac, P.G., CGWP
Senior Hydrogeologist

Thomas W. Kroeger, P.H.
Principal Hydrologist

Attachments

ACCEPTED AND APPROVED:

BY:_____

TITLE:_____

DATE:_____

Table 1
Detected VOC Concentrations (µg/L) in Collected Groundwater Samples
N89 W1644-46 Appleton Avenue Site
STS Project No. 87210XA

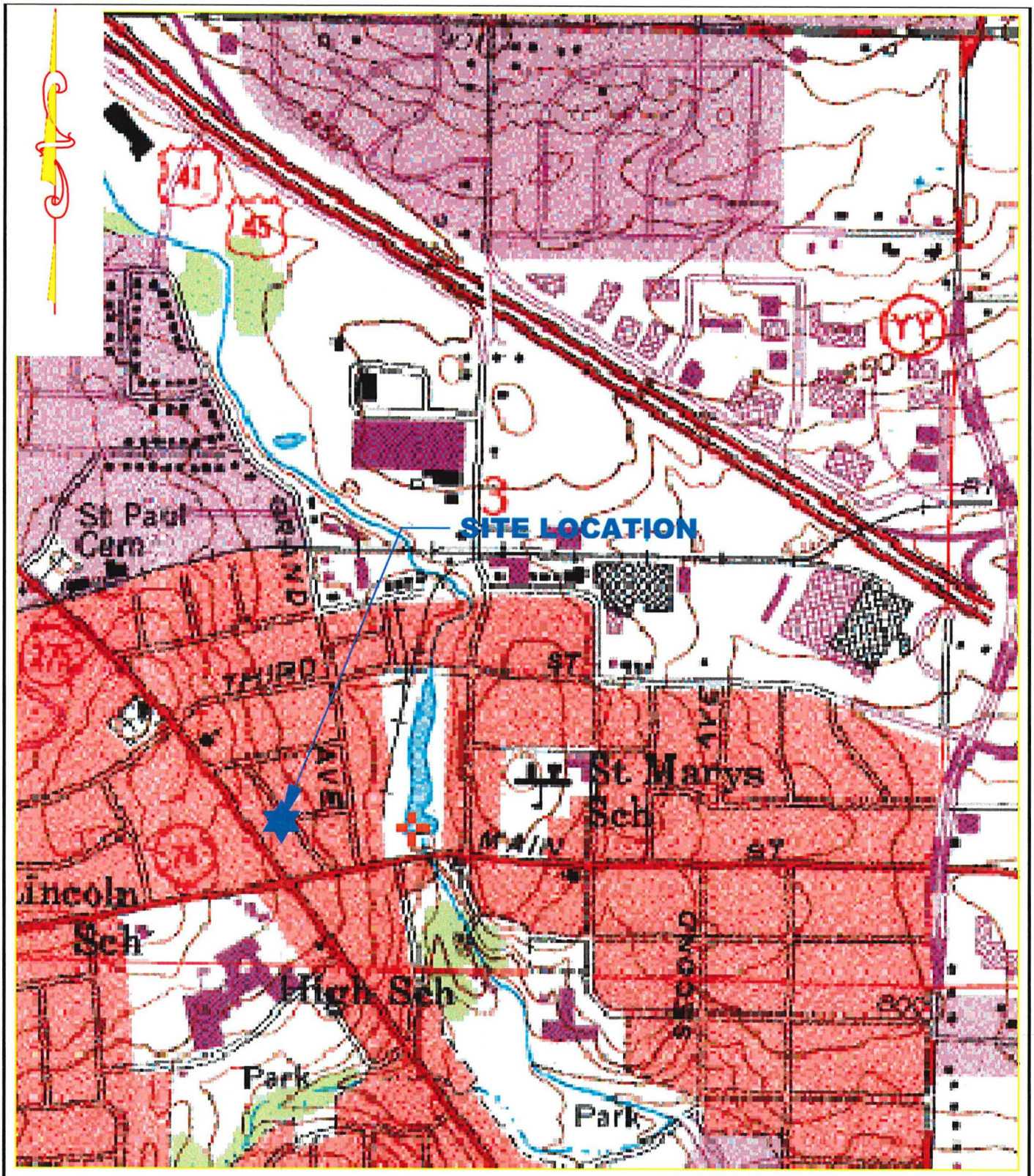
Parameter	ES	*PAL*	Monitoring Well Identifier		
			MW-1	MW-2	MW-3
VOCs (µg/l)					
1,1,1-Trichloroethane	**200**	**40**	--	0.728	1.04
1,1-Dichloroethene	**7**	**0.7**	--	*1.22*	--
Chloroform	**6**	**0.6**	--	0.208	0.295
cis-1,2-Dichloroethene	**70**	**7**	1.16	*37.8*	*25.3*
Methyl Tert Butyl Ether	**60**	**12**	--	1.52	1.37
Tetrachloroethene	**5**	**0.5**	***124***	***1,990***	***3,600***
trans-1,2-Dichloroethene	**100**	**20**	--	1.08	--
Trichloroethene	**5**	**0.5**	***8.01***	***132***	***40.2***

Notes:

VOCs = Volatile Organic Compounds

Italics indicates NR140 Preventive Action Limit (PAL) exceedance

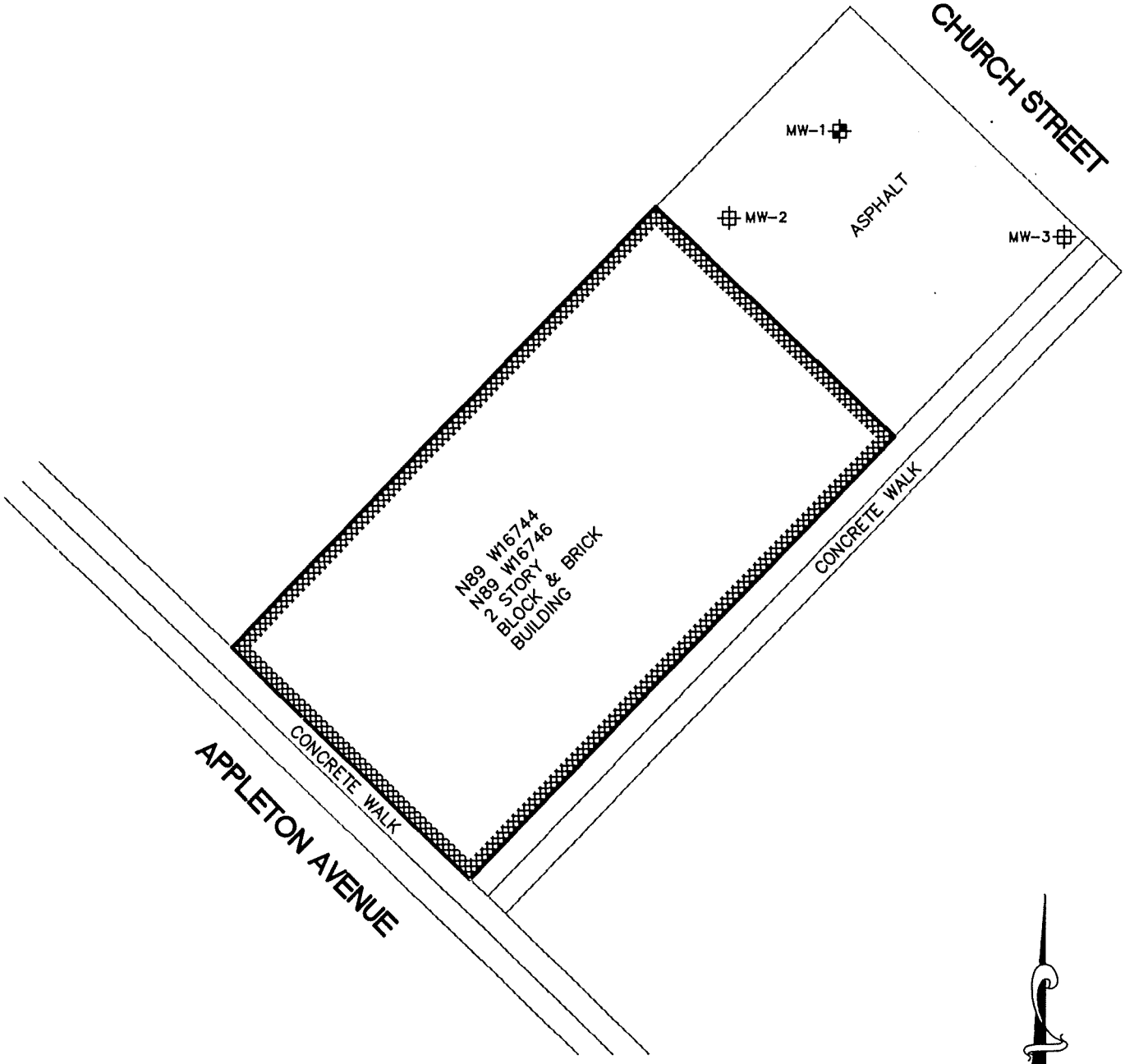
Bold indicates NR140 Enforcement Standard (ES) exceedance



STS Consultants Ltd.
Consulting Engineers
11425 W. Lake Park Dr.
Milwaukee, WI 53224
414.359.3030

SITE LOCATION
N89 W1644–46 APPLETON AVENUE SITE
MENOMONEE FALLS, WISCONSIN

DESIGNED BY	MOM	10/1/02
DRAWN BY	WDB	10/1/02
APPROVED BY	MOM	10/1/02
CADFILE 0587210XA	SCALE N. T. S.	
STS PROJECT NO. 87210	FIGURE NO. 1	



LEGEND

- MW-1 PREVIOUS MONITORING WELL
- MW-2 NEW MONITORING WELL

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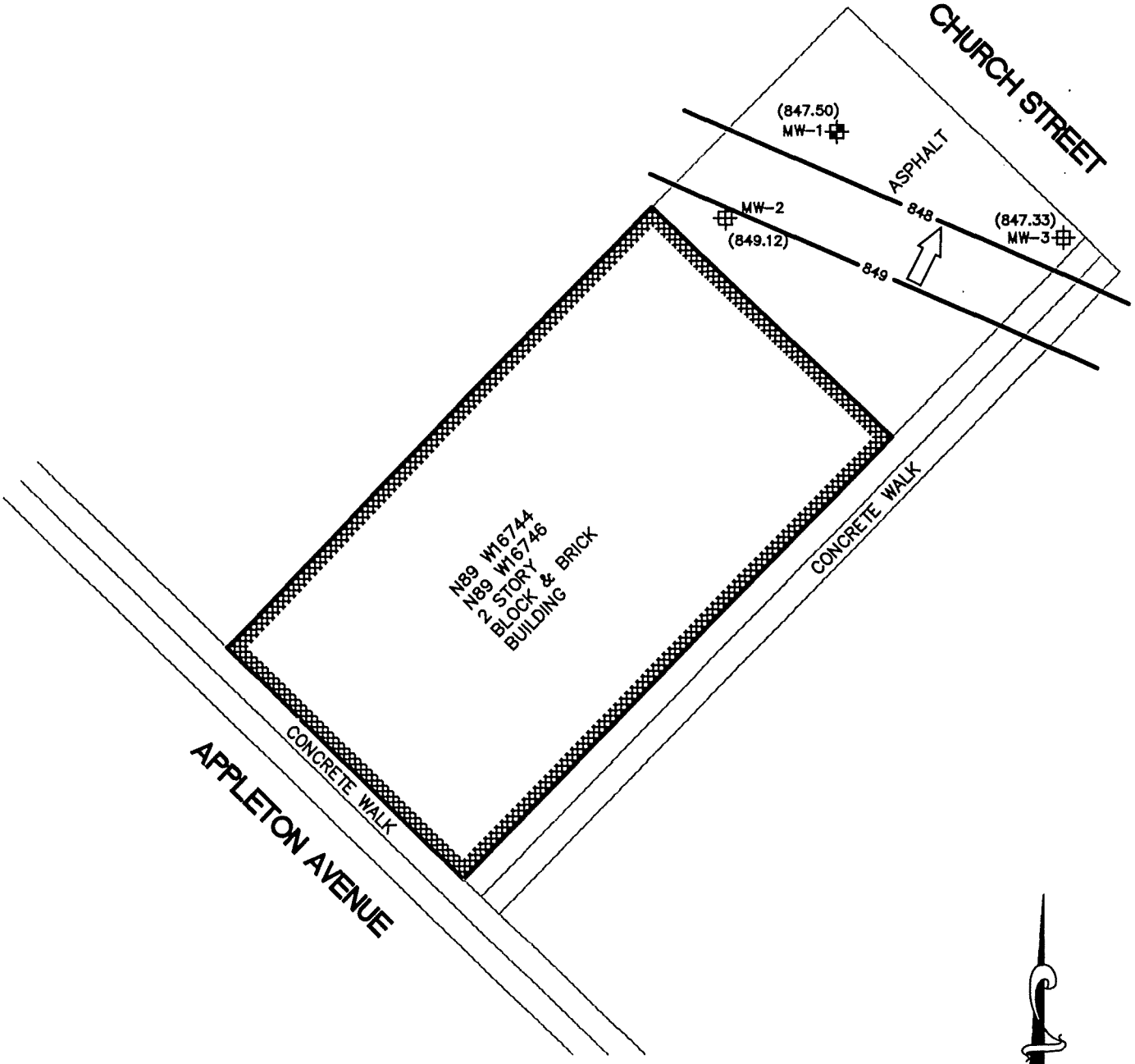
11425 W. Lake Park Dr.
Milwaukee, WI 53224
414.359.3030

MONITORING WELL LOCATIONS
N89 W1644-46 APPLETON AVENUE SITE
MENOMONEE FALLS, WISCONSIN

DESIGNED BY	MOM	10/1/02
DRAWN BY	WDB	10/1/02
APPROVED BY	MOM	10/1/02
CADFILE 0587210XA	SCALE N. T. S.	
STS PROJECT NO. 87210	FIGURE NO. 2	



LEGEND

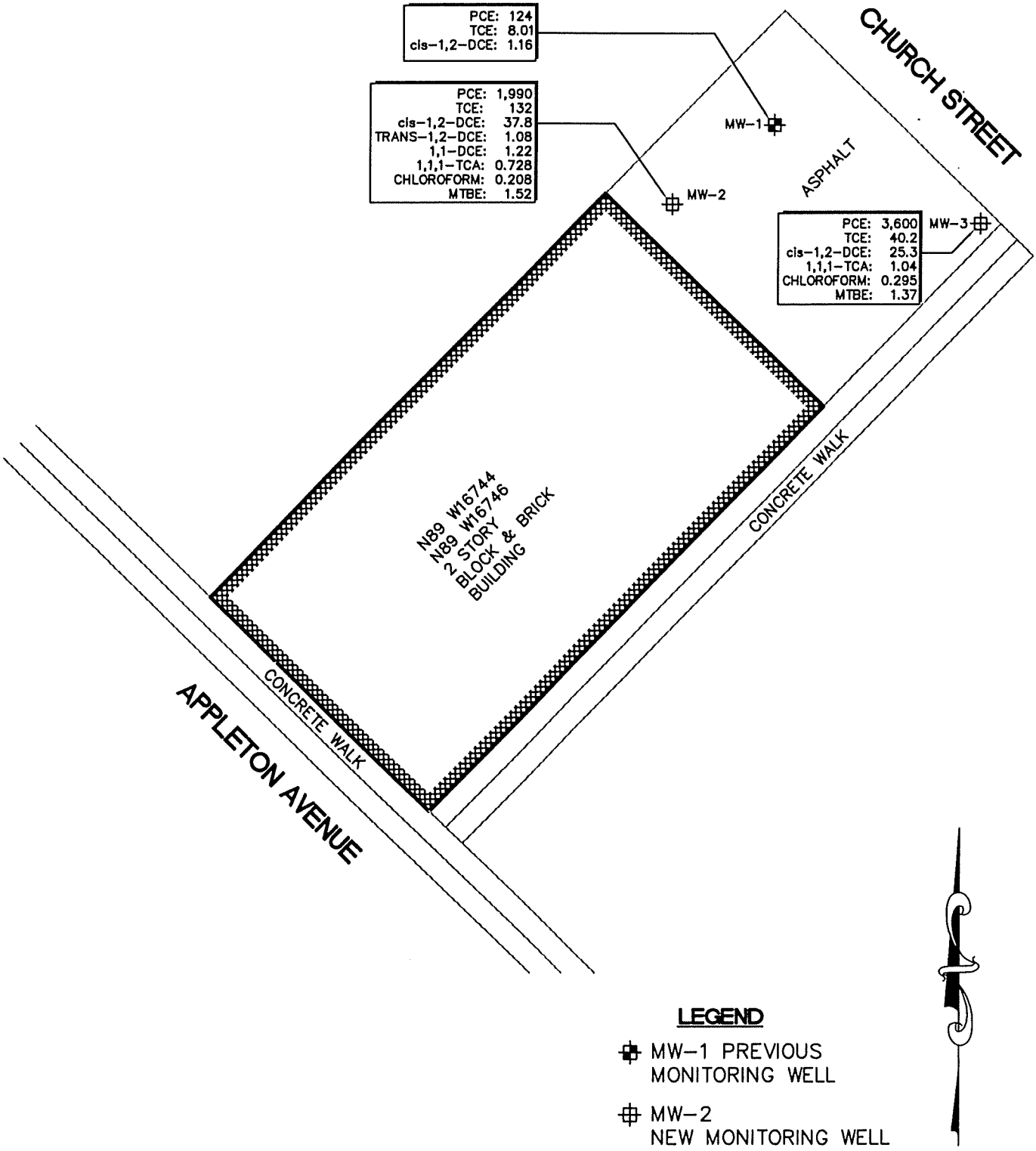
- MW-1 PREVIOUS MONITORING WELL
- MW-2 NEW MONITORING WELL
- (847.50) POTENTIOMETRIC SURFACE (FEET ABOVE MEAN SEA LEVEL)
- —848— POTENTIOMETRIC SURFACE CONTOUR
- INFERRED GROUNDWATER FLOW DIRECTION

STS Consultants Ltd.
Consulting Engineers
11425 W. Lake Park Dr.
Milwaukee, WI 53224
414.359.3030

POTENTIOMETRIC SURFACE
OCTOBER 11, 2002
N89 W1644-46 APPLETON AVENUE SITE
MENOMONEE FALLS, WISCONSIN

DESIGNED BY	MOM	11/4/02
DRAWN BY	WDB	11/4/02
APPROVED BY	MOM	11/4/02
CADFILE 0587210XA	SCALE N. T. S.	
STS PROJECT NO. 87210	FIGURE NO. 3	

W:\0587210XA\dwg\0587210XAFIG-3.dwg, FIG 3, 12/03/2002 09:07:03 AM, BARNES, \\05main\WP_8150DN, Letter, 1:1



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Milwaukee, WI 53224
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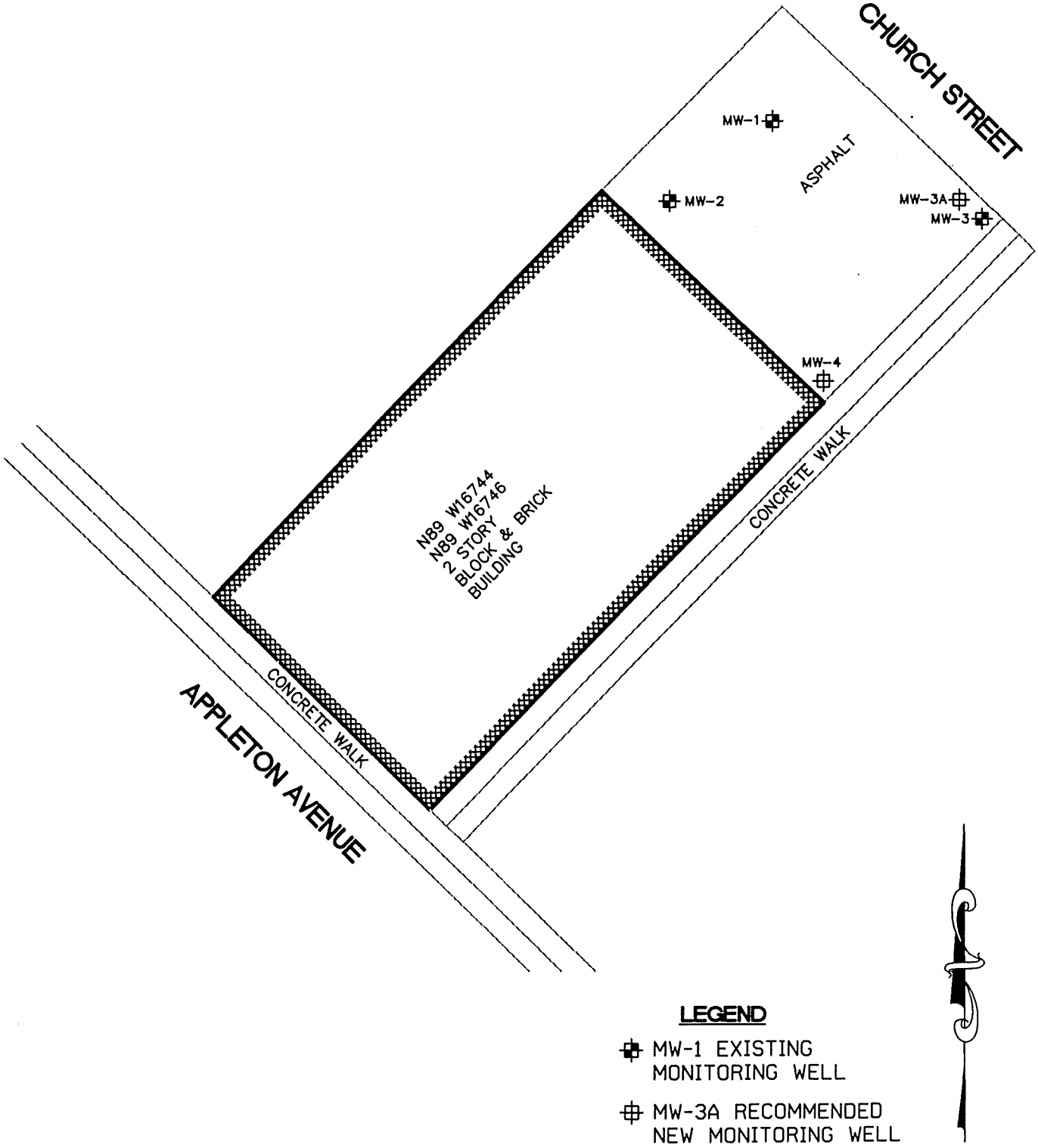
DETECTED VOC CONCENTRATIONS (µg/L) IN COLLECTED GROUNDWATER SAMPLES N89 W1644-46 APPLETON AVENUE SITE MENOMONEE FALLS, WISCONSIN

DESIGNED BY	MOM	11/4/02
DRAWN BY	WDB	11/4/02
APPROVED BY	MOM	11/4/02
CADFILE 0587210XA	SCALE N. T. S.	
STS PROJECT NO. 87210	FIGURE NO. 4	



LEGEND

- MW-1 EXISTING MONITORING WELL
- MW-3A RECOMMENDED NEW MONITORING WELL

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11425 W. Lake Park Dr.
Milwaukee, WI 53224
414.359.3030

RECOMMENDED NEW MONITORING WELL LOCATIONS
N89 W1644–46 APPLETON AVENUE SITE
MENOMONEE FALLS, WISCONSIN

DESIGNED BY	MOM	11/4/02
DRAWN BY	WDB	11/4/02
APPROVED BY	MOM	11/4/02
CADFILE 0587210XA	SCALE N. T. S.	
STS PROJECT NO. 87210	FIGURE NO. 5	

W:\0587210XA\dwg\0587210XAFIG-5.dwg, FIG 5, 11/04/2002 10:50:05 AM, BARNES, Letter, 1:1

ATTACHMENT A

Soil Boring Logs

Monitoring Well Construction Forms

Monitoring Well Development Forms

Department of Natural Resources | Form 4400-122 | Rev. 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Bence Property 87210XA		MW-2

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Boart Longyear - Paul	10/7/2002	10/7/2002	Air Rotary

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
PK 658		MW-2		Feet	8.3 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐) | Lat. ° ' " | Local Grid Location (If applicable)

State Plane S/C/N | Long. ° ' " | ☐ N ☐ E Feet ☐ S Feet ☐ W

1/4 of SW 1/4 of Section 3, T 8 N, R 20 E

Facility ID	County	County Code	Civil Town/City/ or Village
	Waukesha	68	Menomonee Falls

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
SS ☒	12 / 3	8 / 50/1"	2.5	Fill: Gravel - gray - moist				0.8						
			5.0	Dolomite Bedrock - light brown										
			7.5											
			10.0											
			12.5											
			15.0											
				END OF BORING										
				Began drilling with air rotary at 1 ft.										
				Boring advanced to 15.5 ft. by Air Rotary.										
				Groundwater monitoring well installed to 15.0 feet on 10/7/02.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
Bryan Berg	STS Consultants, Ltd. 11425 W. Lake Park Drive, Milwaukee, WI. 53224	Tel: (414) 359-3030 Fax: (414) 359-0822

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form ma result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Department of Natural Resources | Form 4400-122 | Rev. 5-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopmen ☐ Other ☐

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Bence Property 87210XA		MW-3

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Boart Longyear - Paul	10/7/2002	10/7/2002	Air Rotary

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
PK 659		MW-3		Feet	8.3 Inches

Boring Location or Local Grid Origin (Check if estimated: ☐) | Lat. ° ' " | Local Grid Location (If applicable)

State Plane S/C/N | Long. ° ' " | ☐ N ☐ E Feet ☐ S Feet ☐ W

1/4 of SW 1/4 of Section 3, T 8 N, R 20 E

Facility ID	County	County Code	Civil Town/City/ or Village
	Waukesha	68	Menomonee Falls

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
SS	24 / 15	1 / 6 / 9	0	Asphalt Silt, little clay - dark brown - moist	ML			0.8						
SS	24 / 12	8 / 7 / 7	2.5	Clayey Silt - brown - moist	ML			1.0						
SS	24 / 6	8 / 7 / 50/1"	5.0	Casing set at 5', switched over to air rotary Dolomite Bedrock - light brown				0.2						
			7.5											
			10.0											
			12.5											
			15.0											
			17.5											
			20.0	END OF BORING Boring advanced to 20 ft. by Air Rotary. Groundwater monitoring well installed to 19.5 feet on 10/7/02.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm	
	STS Consultants, Ltd. 11425 W. Lake Park Drive, Milwaukee, WI. 53224	Tel: (414) 359-3030 Fax: (414) 359-0822

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Department of Natural Resources Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTIC
Form 4400-113A Rev. 6-97

Facility/Project Name: Bence Property 87210XA	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-2
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or	Wis. Unique Well No: PK 658 DNR Well Number:
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 10/07/2002
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of SW 1/4 of Sec. 3, T. 8 N, R. 20 ☒ E ☐ W	Well Installed By: (Person's Name and Fir: Paul, Dave, Corey
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Boart Longyear

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☒

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☒ 5 0
Hollow Stem Auger ☐ 4 1
____ Other ☐ __

15. Drilling fluid used: Water ☐ 0 2 Air ☒ 0 1
Drilling Mud ☐ 0 3 None ☐ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis):

E. Bentonite seal, top ____ ft. MSL or 1.0 ft.

F. Fine sand, top ____ ft. MSL or 3.0 ft.

G. Filter pack, top ____ ft. MSL or 4.0 ft.

H. Screen joint, top ____ ft. MSL or 5.0 ft.

I. Well bottom ____ ft. MSL or 15.0 ft.

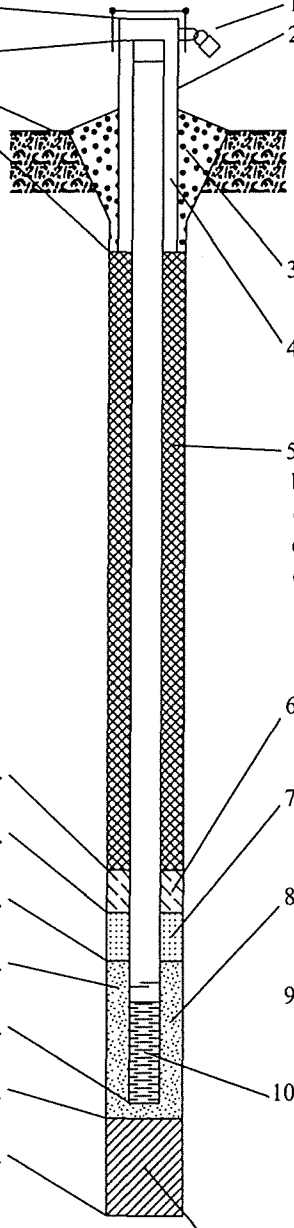
J. Filter pack, bottom ____ ft. MSL or 15.5 ft.

K. Borehole, bottom ____ ft. MSL or 15.5 ft.

L. Borehole, diameter 8.3 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 0 4
____ Other ☐ __
d. Additional protection? ☐ Yes ☒ No
If yes, describe: ____

3. Surface seal: Bentonite ☐ 3 0
Concrete ☒ 0 1
____ Other ☐ __

4. Material between well casing and protective pipe:
Bentonite ☐ 3 0
Sand Other ☒ __

5. Annular space seal: a. Granular Bentonite ☒ 3 3
b. ____ Lbs/gal mud weight . Bentonite-sand slurry ☐ 3 5
c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 3 1
d. ____ % Bentonite . . . Bentonite-cement grout ☐ 5 0
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 0 1
Tremie pumped ☐ 0 2
Gravity ☒ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 3 2
c. ____ Other ☐ __

7. Fine sand material: Manufacturer, product name and mesh siz
a. Red Flint BB #7 __
b. Volume added ____ ft^3

8. Filter pack material: Manufacturer, product name and mesh si
a. Red Flint #40 __
b. Volume added ____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3
Flush threaded PVC schedule 80 ☐ 2 4
____ Other ☐ __

10. Screen material: PVC Schedule 40 __
a. Screen Type: Factory cut ☒ 1 1
Continuous slot ☐ 0 1
____ Other ☐ __
b. Manufacturer Boart Longyear/Northernaire
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): None ☒ 1 4
____ Other ☐ __

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Firm: STS Consultants Ltd. Tel: Fax:

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file thes forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should b sent.

State of Wisconsin
Department of Natural Resources

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTIO

Form 4400-113A Rev. 6-97

Facility/Project Name: Bence Property 87210XA	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: MW-3
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: ☐) Lat. ° ' " Long. ° ' " or	Wis. Unique Well No: PK 659 / DNR Well Number
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 10/07/2002
Type of Well: Well Code 11/mw	Section Location of Waste/Source: ____ 1/4 of SW 1/4 of Sec. 3, T. 8 N, R. 20 ☒ E ☐ W	Well Installed By: (Person's Name and Firm) Paul, Dave, Corey / Boart Longyear
Distance Well Is From Waste/Source Boundary ____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation ____ ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☒

13. Sieve analysis attached? ☐ Yes ☒ No

14. Drilling method used: Rotary ☒ 50 / Hollow Stem Auger ☐ 41 / ____ Other ☐ __

15. Drilling fluid used: Water ☐ 02 Air ☒ 01 Drilling Mud ☐ 03 None ☐ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe ____

17. Source of water (attach analysis): ____

E. Bentonite seal, top ____ ft. MSL or 1.0 ft.

F. Fine sand, top ____ ft. MSL or 6.5 ft.

G. Filter pack, top ____ ft. MSL or 7.5 ft.

H. Screen joint, top ____ ft. MSL or 9.5 ft.

I. Well bottom ____ ft. MSL or 19.5 ft.

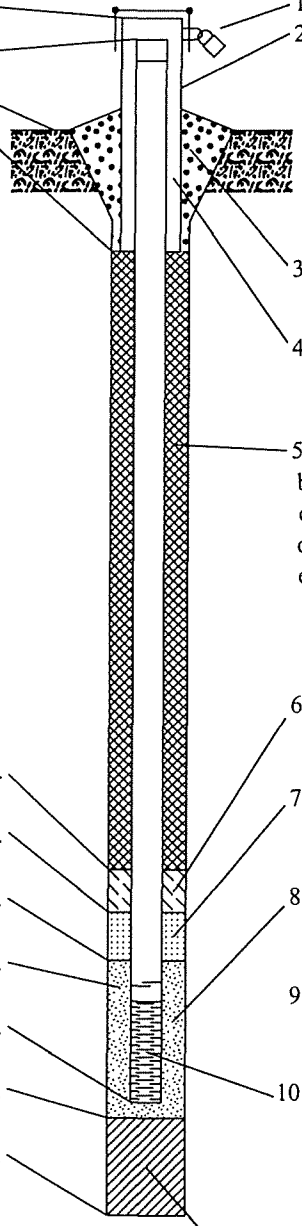
J. Filter pack, bottom ____ ft. MSL or 20.0 ft.

K. Borehole, bottom ____ ft. MSL or 20.0 ft.

L. Borehole, diameter 8.3 in.

M. O.D. well casing 2.38 in.

N. I.D. well casing 2.07 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
   a. Inside diameter: 9.0 in.
   b. Length: 1.0 ft.
   c. Material: Steel ☒ 04 / ____ Other ☐ __
   d. Additional protection? ☐ Yes ☒ No
   If yes, describe: ____
3. Surface seal: Bentonite ☐ 30 / Concrete ☒ 01 / ____ Other ☐ __
4. Material between well casing and protective pipe: Bentonite ☐ 30 / Sand Other ☒ __
5. Annular space seal: a. Granular Bentonite ☒ 33
   b. ____ Lbs/gal mud weight . Bentonite-sand slurry ☐ 35
   c. ____ Lbs/gal mud weight . . . Bentonite slurry ☐ 31
   d. ____ % Bentonite . . . Bentonite-cement grout ☐ 50
   e. ____ Ft^3 volume added for any of the above
   f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
   b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☒ 32
   c. ____ Other ☐ __
7. Fine sand material: Manufacturer, product name and mesh siz
   a. Red Flint BB #7
   b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name and mesh s
   a. Red Flint #40
   b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / ____ Other ☐ __
10. Screen material: PVC Schedule 40
    a. Screen Type: Factory cut ☒ 11 / Continuous slot ☐ 01 / ____ Other ☐ __
    b. Manufacturer Boart Longyear/Northernaire
    c. Slot size: 0.010 in.
    d. Slotted length: 10.0 ft.
11. Backfill material (below filter pack): None ☒ 14 / ____ Other ☐ __

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Bry Berg | Firm: STS Consultants Ltd. | Tel: | Fax:

Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should b sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐ Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Menomonee Falls Project	Waukesha	MW-2

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	68		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☒	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	__

3. Time spent developing well: 60 min.

4. Depth of well (from top of well casing): 15.0 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 18.0 gal.

7. Volume of water removed from well: gal.

8. Volume of water added (if any): gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	6.50 ft.	Dry ft.
Date b.	10/07/2002	10/07/2002
Time c.	06:00 pm	07:00 pm
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Light Brown	Clear ☐ 20 Turbid ☒ 25 (Describe) Slightly Cloudy

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm

D. Morris

Boart Longyear

17. Additional comments on development:

Pumped dry 3 times.

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: RON THALACKER

Firm: Boart Longyear Company

NOTE: See instructions for more information including a list of county codes and well type codes.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 6-97

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	County	Well Name
Menomonee Falls Project	Waukesha	MW-3

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
	68		

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method:

surged with bailer and bailed	☐	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☒	62
surged with block, bailed, and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
other _____	☐	__

3. Time spent developing well: 44 min.

4. Depth of well (from top of well casing): 20.0 ft.

5. Inside diameter of well: 2.06 in.

6. Volume of water in filter pack and well casing: 35.0 gal.

7. Volume of water removed from well: gal.

8. Volume of water added (if any): gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	9.50 ft.	13.70 ft.
Date b.	10/07/2002	10/07/2002
Time c.	05:00 pm	05:44 pm
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Light Gray	Clear ☐ 20 Turbid ☒ 25 (Describe) Slightly Cloudy

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	mg/l	mg/l
15. COD	mg/l	mg/l

16. Well developed by: Person's Name and Firm
D. Morris
Boart Longyear

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: _____

Firm: _____

Street: _____

City/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: _____

Print Name: RON THALACKER

Firm: Boart Longyear Company

NOTE: See instructions for more information including a list of county codes and well type codes.

ATTACHMENT B

Laboratory Results of Collected Soil and Groundwater Samples

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

25 October 2002

Mark Mejac
STS Consultants
11425 S. Lake Park Dr.
Milwaukee, WI 53224
RE: 87210XA

Enclosed are the results of analyses for samples received by the laboratory on 10/08/02. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Great Lakes Analytical

Andrea Stathas
Project Manager

State of Wisconsin Certification Numbers:
Great Lakes Analytical--Oak Creek, WI: 341000330
Great Lakes Analytical--Buffalo Grove, IL: 999917160

GREAT LAKES ANALYTICAL

140 East Ryan Road
Oak Creek, Wisconsin 53154

Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2-0-1'	W210098-01	Soil	10/07/02 00:00	10/08/02 09:50
MW-3-2.5-4.5'	W210098-02	Soil	10/07/02 00:00	10/08/02 09:50
Methanol Blank	W210098-03	MeOH Blank	10/07/02 00:00	10/08/02 09:50

Great Lakes Analytical--Oak Creek

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2-0-1' (W210098-01) Soil	**Sampled: 10/07/02 00:00**	**Received: 10/08/02 09:50**							**QC**
Benzene	ND	25.0	ug/kg dry	50	2100082	10/11/02	10/23/02	EPA 8021B	
Bromobenzene	ND	25.0	"	"	"	"	"	"	
Bromodichloromethane	ND	25.0	"	"	"	"	"	"	
n-Butylbenzene	ND	25.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	25.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	25.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	25.0	"	"	"	"	"	"	
Chlorobenzene	ND	25.0	"	"	"	"	"	"	
Chloroethane	ND	25.0	"	"	"	"	"	"	
Chloroform	ND	25.0	"	"	"	"	"	"	
Chloromethane	ND	25.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	25.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	25.0	"	"	"	"	"	"	
Dibromochloromethane	ND	25.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	25.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	25.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	25.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	25.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	25.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	25.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	25.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	25.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	25.0	"	"	"	"	"	"	
Ethylbenzene	ND	25.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	25.0	"	"	"	"	"	"	
Isopropylbenzene	ND	25.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	25.0	"	"	"	"	"	"	
Methylene chloride	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	25.0	"	"	"	"	"	"	
n-Propylbenzene	ND	25.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	25.0	"	"	"	"	"	"	
Tetrachloroethene	**133**	25.0	"	"	"	"	"	"	
Toluene	ND	25.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	25.0	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
140 East Ryan Road
Oak Creek, Wisconsin 53154
Email: info@glalabs.com
(414) 570-9460 FAX (414) 570-9461

STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2-0-1' (W210098-01) Soil Sampled: 10/07/02 00:00 Received: 10/08/02 09:50									**QC**
1,2,4-Trichlorobenzene	ND	25.0	ug/kg dry	50	2100082	10/11/02	10/23/02	EPA 8021B	
1,1,1-Trichloroethane	ND	25.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	25.0	"	"	"	"	"	"	
Trichloroethene	ND	25.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	25.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	25.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	25.0	"	"	"	"	"	"	
Vinyl chloride	ND	25.0	"	"	"	"	"	"	
Total Xylenes	ND	25.0	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*96.9 %*	*80-120*		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		*96.4 %*	*80-120*		"	"	"	"	
MW-3-2.5-4.5' (W210098-02) Soil Sampled: 10/07/02 00:00 Received: 10/08/02 09:50									**QC**
Benzene	ND	25.0	ug/kg dry	50	2100082	10/11/02	10/23/02	EPA 8021B	
Bromobenzene	ND	25.0	"	"	"	"	"	"	
Bromodichloromethane	ND	25.0	"	"	"	"	"	"	
n-Butylbenzene	ND	25.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	25.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	25.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	25.0	"	"	"	"	"	"	
Chlorobenzene	ND	25.0	"	"	"	"	"	"	
Chloroethane	ND	25.0	"	"	"	"	"	"	
Chloroform	ND	25.0	"	"	"	"	"	"	
Chloromethane	ND	25.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	25.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	25.0	"	"	"	"	"	"	
Dibromochloromethane	ND	25.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	25.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	25.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	25.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	25.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	25.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	25.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	25.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	25.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-2.5-4.5' (W210098-02) Soil	**Sampled: 10/07/02 00:00**	**Received: 10/08/02 09:50**							**QC**
Di-isopropyl ether	ND	25.0	ug/kg dry	50	2100082	10/11/02	10/23/02	EPA 8021B	
Ethylbenzene	ND	25.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	25.0	"	"	"	"	"	"	
Isopropylbenzene	ND	25.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	25.0	"	"	"	"	"	"	
Methylene chloride	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	25.0	"	"	"	"	"	"	
n-Propylbenzene	ND	25.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	25.0	"	"	"	"	"	"	
Tetrachloroethene	ND	25.0	"	"	"	"	"	"	
Toluene	ND	25.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	25.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	25.0	"	"	"	"	"	"	
Trichloroethene	ND	25.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	25.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	25.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	25.0	"	"	"	"	"	"	
Vinyl chloride	ND	25.0	"	"	"	"	"	"	
Total Xylenes	ND	25.0	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*86.4 %*	*80-120*		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		*80.8 %*	*80-120*		"	"	"	"	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021 (Blanks)

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methanol Blank (W210098-03) MeOH Blank	**Sampled: 10/07/02 00:00 Received: 10/08/02 09:50**								
Benzene	ND	25.0	ug/l	50	2100083	10/11/02	10/23/02	EPA 8021B	
Bromobenzene	ND	25.0	"	"	"	"	"	"	
Bromodichloromethane	ND	25.0	"	"	"	"	"	"	
n-Butylbenzene	ND	25.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	25.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	25.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	25.0	"	"	"	"	"	"	
Chlorobenzene	ND	25.0	"	"	"	"	"	"	
Chloroethane	ND	25.0	"	"	"	"	"	"	
Chloroform	ND	25.0	"	"	"	"	"	"	
Chloromethane	ND	25.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	25.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	25.0	"	"	"	"	"	"	
Dibromochloromethane	ND	25.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	25.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	25.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	25.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	25.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	25.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	25.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	25.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	25.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	25.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	25.0	"	"	"	"	"	"	
Ethylbenzene	**30.0**	25.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	25.0	"	"	"	"	"	"	
Isopropylbenzene	ND	25.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	25.0	"	"	"	"	"	"	
Methylene chloride	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	25.0	"	"	"	"	"	"	
n-Propylbenzene	ND	25.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	25.0	"	"	"	"	"	"	
Tetrachloroethene	ND	25.0	"	"	"	"	"	"	
Toluene	ND	25.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	25.0	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021 (Blanks)

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methanol Blank (W210098-03) MeOH Blank	**Sampled: 10/07/02 00:00**		**Received: 10/08/02 09:50**						
1,2,4-Trichlorobenzene	ND	25.0	ug/l	50	2100083	10/11/02	10/23/02	EPA 8021B	
1,1,1-Trichloroethane	ND	25.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	25.0	"	"	"	"	"	"	
Trichloroethene	ND	25.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	25.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	25.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	25.0	"	"	"	"	"	"	
Vinyl chloride	ND	25.0	"	"	"	"	"	"	
Total Xylenes	ND	25.0	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*127 %*		*80-120*	"	"	"	"	H
Surrogate: 1-Cl-4-FB (PID)		*118 %*		*80-120*	"	"	"	"	

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

Percent Solids

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2-0-1' (W210098-01) Soil Sampled: 10/07/02 00:00 Received: 10/08/02 09:50									
% Solids	**95.8**	0.0100	%	1	2100074	10/10/02	10/11/02	5035 7.5	
MW-3-2.5-4.5' (W210098-02) Soil Sampled: 10/07/02 00:00 Received: 10/08/02 09:50									
% Solids	**79.5**	0.0100	%	1	2100074	10/10/02	10/11/02	5035 7.5	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100082 - EPA 5030B [MeOH]										
Blank (2100082-BLK1)				Prepared: 10/11/02 Analyzed: 10/15/02						
Benzene	ND	25.0	ug/kg wet							
Bromobenzene	ND	25.0	"							
Bromodichloromethane	ND	25.0	"							
n-Butylbenzene	ND	25.0	"							
sec-Butylbenzene	ND	25.0	"							
tert-Butylbenzene	ND	25.0	"							
Carbon tetrachloride	ND	25.0	"							
Chlorobenzene	ND	25.0	"							
Chloroethane	ND	25.0	"							
Chloroform	ND	25.0	"							
Chloromethane	ND	25.0	"							
2-Chlorotoluene	ND	25.0	"							
4-Chlorotoluene	ND	25.0	"							
Dibromochloromethane	ND	25.0	"							
1,2-Dibromo-3-chloropropane	ND	25.0	"							
1,2-Dibromoethane	ND	25.0	"							
1,2-Dichlorobenzene	ND	25.0	"							
1,3-Dichlorobenzene	ND	25.0	"							
1,4-Dichlorobenzene	ND	25.0	"							
Dichlorodifluoromethane	ND	25.0	"							
1,1-Dichloroethane	ND	25.0	"							
1,2-Dichloroethane	ND	25.0	"							
1,1-Dichloroethene	ND	25.0	"							
cis-1,2-Dichloroethene	ND	25.0	"							
trans-1,2-Dichloroethene	ND	25.0	"							
1,2-Dichloropropane	ND	25.0	"							
1,3-Dichloropropane	ND	25.0	"							
2,2-Dichloropropane	ND	25.0	"							
Di-isopropyl ether	ND	25.0	"							
Ethylbenzene	ND	25.0	"							
Hexachlorobutadiene	ND	25.0	"							
Isopropylbenzene	ND	25.0	"							
p-Isopropyltoluene	ND	25.0	"							
Methylene chloride	ND	100	"							

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100082 - EPA 5030B [MeOH]										
Blank (2100082-BLK1)				Prepared: 10/11/02 Analyzed: 10/15/02						
Methyl tert-butyl ether	ND	25.0	ug/kg wet							
Naphthalene	ND	25.0	"							
n-Propylbenzene	ND	25.0	"							
1,1,2,2-Tetrachloroethane	ND	25.0	"							
Tetrachloroethene	ND	25.0	"							
Toluene	ND	25.0	"							
1,2,3-Trichlorobenzene	ND	25.0	"							
1,2,4-Trichlorobenzene	ND	25.0	"							
1,1,1-Trichloroethane	ND	25.0	"							
1,1,2-Trichloroethane	ND	25.0	"							
Trichloroethene	ND	25.0	"							
Trichlorofluoromethane	ND	25.0	"							
1,2,4-Trimethylbenzene	ND	25.0	"							
1,3,5-Trimethylbenzene	ND	25.0	"							
Vinyl chloride	ND	25.0	"							
Total Xylenes	ND	25.0	"							
Surrogate: 1-Cl-4-FB (ELCD)	*1060*		"	*1000*		*106*	*80-120*			
Surrogate: 1-Cl-4-FB (PID)	*998*		"	*1000*		*99.8*	*80-120*			
LCS (2100082-BS1)				Prepared: 10/11/02 Analyzed: 10/15/02						
Benzene	1020	25.0	ug/kg wet	1000		102	80-120			
Bromobenzene	1100	25.0	"	1000		110	80-120			
Bromodichloromethane	986	25.0	"	1000		98.6	80-120			
n-Butylbenzene	1070	25.0	"	1000		107	80-120			
sec-Butylbenzene	1070	25.0	"	1000		107	80-120			
tert-Butylbenzene	1070	25.0	"	1000		107	80-120			
Carbon tetrachloride	1020	25.0	"	1000		102	80-120			
Chlorobenzene	1060	25.0	"	1000		106	80-120			
Chloroethane	1970	25.0	"	1000		197	80-120			H
Chloroform	1020	25.0	"	1000		102	80-120			
Chloromethane	1810	25.0	"	1000		181	80-120			H
2-Chlorotoluene	1040	25.0	"	1000		104	80-120			
4-Chlorotoluene	1110	25.0	"	1000		111	80-120			
Dibromochloromethane	1130	25.0	"	1000		113	80-120			

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100082 - EPA 5030B [MeOH]										
LCS (2100082-BS1)				Prepared: 10/11/02 Analyzed: 10/15/02						
1,2-Dibromo-3-chloropropane	1140	25.0	ug/kg wet	1000		114	80-120			
1,2-Dibromoethane	1150	25.0	"	1000		115	80-120			
1,2-Dichlorobenzene	1110	25.0	"	1000		111	80-120			
1,3-Dichlorobenzene	1090	25.0	"	1000		109	80-120			
1,4-Dichlorobenzene	1110	25.0	"	1000		111	80-120			
Dichlorodifluoromethane	1340	25.0	"	1000		134	80-120			H
1,1-Dichloroethane	1120	25.0	"	1000		112	80-120			
1,2-Dichloroethane	981	25.0	"	1000		98.1	80-120			
1,1-Dichloroethene	1260	25.0	"	1000		126	80-120			H
cis-1,2-Dichloroethene	1200	25.0	"	1000		120	80-120			
trans-1,2-Dichloroethene	1210	25.0	"	1000		121	80-120			H
1,2-Dichloropropane	989	25.0	"	1000		98.9	80-120			
1,3-Dichloropropane	1000	25.0	"	1000		100	80-120			
2,2-Dichloropropane	1000	25.0	"	1000		100	80-120			
Di-isopropyl ether	910	25.0	"	1000		91.0	80-120			
Ethylbenzene	1020	25.0	"	1000		102	80-120			
Hexachlorobutadiene	970	25.0	"	1000		97.0	80-120			
Isopropylbenzene	1070	25.0	"	1000		107	80-120			
p-Isopropyltoluene	1050	25.0	"	1000		105	80-120			
Methylene chloride	1180	100	"	1000		118	80-120			
Methyl tert-butyl ether	1050	25.0	"	1000		105	80-120			
Naphthalene	1170	25.0	"	1000		117	80-120			
n-Propylbenzene	1110	25.0	"	1000		111	80-120			
1,1,2,2-Tetrachloroethane	998	25.0	"	1000		99.8	80-120			
Tetrachloroethene	1040	25.0	"	1000		104	80-120			
Toluene	1050	25.0	"	1000		105	80-120			
1,2,3-Trichlorobenzene	1080	25.0	"	1000		108	80-120			
1,2,4-Trichlorobenzene	1110	25.0	"	1000		111	80-120			
1,1,1-Trichloroethane	1020	25.0	"	1000		102	80-120			
1,1,2-Trichloroethane	953	25.0	"	1000		95.3	80-120			
Trichloroethene	990	25.0	"	1000		99.0	80-120			
Trichlorofluoromethane	754	25.0	"	1000		75.4	80-120			L
1,2,4-Trimethylbenzene	1100	25.0	"	1000		110	80-120			
1,3,5-Trimethylbenzene	1090	25.0	"	1000		109	80-120			

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100082 - EPA 5030B [MeOH]										
LCS (2100082-BS1)				Prepared: 10/11/02 Analyzed: 10/15/02						
Vinyl chloride	876	25.0	ug/kg wet	1000		87.6	80-120			
Total Xylenes	3280	25.0	"	3000		109	80-120			
Surrogate: 1-Cl-4-FB (ELCD)	*954*		"	*1000*		*95.4*	*80-120*			
Surrogate: 1-Cl-4-FB (PID)	*996*		"	*1000*		*99.6*	*80-120*			
LCS Dup (2100082-BSD1)				Prepared: 10/11/02 Analyzed: 10/15/02						
Benzene	1070	25.0	ug/kg wet	1000		107	80-120	4.78	20	
Bromobenzene	1150	25.0	"	1000		115	80-120	4.44	20	
Bromodichloromethane	1200	25.0	"	1000		120	80-120	19.6	20	
n-Butylbenzene	1140	25.0	"	1000		114	80-120	6.33	20	
sec-Butylbenzene	1120	25.0	"	1000		112	80-120	4.57	20	
tert-Butylbenzene	1120	25.0	"	1000		112	80-120	4.57	20	
Carbon tetrachloride	1230	25.0	"	1000		123	80-120	18.7	20	H
Chlorobenzene	1090	25.0	"	1000		109	80-120	2.79	20	
Chloroethane	3360	25.0	"	1000		336	80-120	52.2	20	HH
Chloroform	1240	25.0	"	1000		124	80-120	19.5	20	H
Chloromethane	2940	25.0	"	1000		294	80-120	47.6	20	HH
2-Chlorotoluene	1080	25.0	"	1000		108	80-120	3.77	20	
4-Chlorotoluene	1140	25.0	"	1000		114	80-120	2.67	20	
Dibromochloromethane	1360	25.0	"	1000		136	80-120	18.5	20	H
1,2-Dibromo-3-chloropropane	1370	25.0	"	1000		137	80-120	18.3	20	H
1,2-Dibromoethane	1380	25.0	"	1000		138	80-120	18.2	20	H
1,2-Dichlorobenzene	1150	25.0	"	1000		115	80-120	3.54	20	
1,3-Dichlorobenzene	1140	25.0	"	1000		114	80-120	4.48	20	
1,4-Dichlorobenzene	1150	25.0	"	1000		115	80-120	3.54	20	
Dichlorodifluoromethane	1550	25.0	"	1000		155	80-120	14.5	20	H
1,1-Dichloroethane	1380	25.0	"	1000		138	80-120	20.8	20	HH
1,2-Dichloroethane	1200	25.0	"	1000		120	80-120	20.1	20	H
1,1-Dichloroethene	1290	25.0	"	1000		129	80-120	2.35	20	H
cis-1,2-Dichloroethene	1180	25.0	"	1000		118	80-120	1.68	20	
trans-1,2-Dichloroethene	1250	25.0	"	1000		125	80-120	3.25	20	H
1,2-Dichloropropane	1220	25.0	"	1000		122	80-120	20.9	20	HH
1,3-Dichloropropane	1200	25.0	"	1000		120	80-120	18.2	20	
2,2-Dichloropropane	1210	25.0	"	1000		121	80-120	19.0	20	H

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100082 - EPA 5030B [MeOH]										
LCS Dup (2100082-BSD1)				Prepared: 10/11/02 Analyzed: 10/15/02						
Di-isopropyl ether	926	25.0	ug/kg wet	1000		92.6	80-120	1.74	20	
Ethylbenzene	1050	25.0	"	1000		105	80-120	2.90	20	
Hexachlorobutadiene	1040	25.0	"	1000		104	80-120	6.97	20	
Isopropylbenzene	1120	25.0	"	1000		112	80-120	4.57	20	
p-Isopropyltoluene	1100	25.0	"	1000		110	80-120	4.65	20	
Methylene chloride	1430	100	"	1000		143	80-120	19.2	20	H
Methyl tert-butyl ether	1110	25.0	"	1000		111	80-120	5.56	20	
Naphthalene	1250	25.0	"	1000		125	80-120	6.61	20	H
n-Propylbenzene	1150	25.0	"	1000		115	80-120	3.54	20	
1,1,2,2-Tetrachloroethane	1210	25.0	"	1000		121	80-120	19.2	20	H
Tetrachloroethene	1060	25.0	"	1000		106	80-120	1.90	20	
Toluene	1080	25.0	"	1000		108	80-120	2.82	20	
1,2,3-Trichlorobenzene	1200	25.0	"	1000		120	80-120	10.5	20	
1,2,4-Trichlorobenzene	1200	25.0	"	1000		120	80-120	7.79	20	
1,1,1-Trichloroethane	1250	25.0	"	1000		125	80-120	20.3	20	HH
1,1,2-Trichloroethane	1140	25.0	"	1000		114	80-120	17.9	20	
Trichloroethene	1030	25.0	"	1000		103	80-120	3.96	20	
Trichlorofluoromethane	959	25.0	"	1000		95.9	80-120	23.9	20	H
1,2,4-Trimethylbenzene	1150	25.0	"	1000		115	80-120	4.44	20	
1,3,5-Trimethylbenzene	1140	25.0	"	1000		114	80-120	4.48	20	
Vinyl chloride	822	25.0	"	1000		82.2	80-120	6.36	20	
Total Xylenes	3380	25.0	"	3000		113	80-120	3.00	20	
Surrogate: 1-Cl-4-FB (ELCD)	*1120*		"	*1000*		*112*	*80-120*			
Surrogate: 1-Cl-4-FB (PID)	*1030*		"	*1000*		*103*	*80-120*			

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

Percent Solids - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100074 - Percent Solids										
Blank (2100074-BLK1)				Prepared: 10/10/02 Analyzed: 10/11/02						
% Solids	ND	0.0100	%							
Duplicate (2100074-DUP1)		**Source: W210098-01**		Prepared: 10/10/02 Analyzed: 10/11/02						
% Solids	94.8	0.0100	%		95.8			1.05	20	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 16:27

Notes and Definitions

QC	The result for one or more quality control measurements associated with this sample did not meet the laboratory and/or source method acceptance criteria.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
L	This quality control measurement is below the laboratory established limit.
H	This quality control measurement is above the laboratory established limit.

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Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL

CHAIN OF CUSTODY REPORT

38 Bus Pa vay
Buffalo Grove, IL 60089-4505
(847) 808-7766
FAX (847) 808-7772

) E yar loa
Oak Creek, WI 53154
(414) 570-9460
FAX (414) 570-9461

Client: STS Consultants, Ltd.
Address: 11425 W. Lake Park Dr.
Milwaukee, WI 53224
Report to: Mark Mejac
E-mail:
Phone #: (414) 359-3030
Fax #: (414) 359-0822

Bill To:
Address:
State & Program:
Phone #: ( )
Fax #: ( )

TAT: (STD) 4 DAY 3 DAY 2 DAY 1 DAY < 24 HRS.
☐ YES - TAT is critical
☐ NO - TAT is not critical
DATE RESULTS NEEDED:
Received: ☒ ice ☐ ambient ☐ refrigerator
Temp. Upon Receipt:
Deliverable Package: ☐ STD ☐ Other
Delivery Method: GLA ☐ Client ☐ Shipped ☐ Courier ☐

Project Name:
Project #/PO#: 87210XA
Sampler: Bryan Bergman

FIELD ID, LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	# of Bottles Preservative Used: MeOH	NaHSO4	HCl	HNO3	H2SO4	NaOH	NONE	TOTAL # OF BOTTLES	DO NOT DRY-WEIGHT CORRECT RESULTS	SAMPLES FIELD FILTERED ☐YES ☐NO	VOC	ANALYSIS REQUESTED	SAMPLE CONTROL: CRACKED-BROKEN	SAMPLE CONTROL: IMPROPERLY SEALED	LABORATORY ID NUMBER
1 MW-2 0-1' PID:	10-7-02		Soil	1						1	2			X				W210098-01
2 MW-3 2.5-4.5' PID: 1.0	↓		↓	1						1	2			X				-02
3 Meoh Blank PID:	↓			1										X				-03
4 PID:																		
5 PID:																		
6 PID:																		
7 PID:																		
8 PID:																		
9 PID:																		
10 PID:																		

RELINQUISHED	RECEIVED	RELINQUISHED	RECEIVED
10-8-02	10/8 0950		
RELINQUISHED 10/8 0950	RECEIVED 10/8/02 1400	RELINQUISHED	RECEIVED

COMMENTS:

PAGE OF

GREAT LAKES ANALYTICAL

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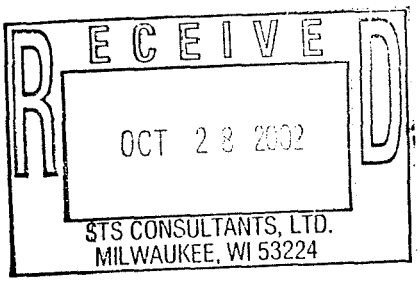
25 October 2002



Mark Mejac
STS Consultants
11425 S. Lake Park Dr.
Milwaukee, WI 53224
RE: 87210XA

Enclosed are the results of analyses for samples received by the laboratory on 10/11/02. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Great Lakes Analytical

Andrea Stathas
Project Manager

State of Wisconsin Certification Numbers:
Great Lakes Analytical--Oak Creek, WI: 341000330
Great Lakes Analytical--Buffalo Grove, IL: 999917160

GREAT LAKES ANALYTICAL

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3	W210148-01	Water	10/11/02 00:00	10/11/02 14:02
MW-1	W210148-02	Water	10/11/02 00:00	10/11/02 14:02
MW-1D	W210148-03	Water	10/11/02 00:00	10/11/02 14:02
MW-2	W210148-04	Water	10/11/02 00:00	10/11/02 14:02
Trip Blank	W210148-05	Water	10/11/02 00:00	10/11/02 14:02

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Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (W210148-01) Water	**Sampled: 10/11/02 00:00**	**Received: 10/11/02 14:02**							**QC**
Benzene	ND	0.500	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromodichloromethane	ND	0.500	"	"	"	"	"	"	
n-Butylbenzene	ND	0.500	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.500	"	"	"	"	"	"	
Chlorobenzene	ND	0.500	"	"	"	"	"	"	
Chloroethane	ND	0.500	"	"	"	"	"	"	
Chloroform	**0.295**	0.140	"	"	"	"	"	"	
Chloromethane	ND	0.600	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.390	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.380	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.500	"	"	"	"	"	"	
cis-1,2-Dichloroethene	**25.3**	0.500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.500	"	"	"	"	"	"	
Methylene chloride	ND	0.530	"	"	"	"	"	"	
Methyl tert-butyl ether	**1.37**	0.500	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.350	"	"	"	"	"	"	
Tetrachloroethene	**3660**	125	"	250	"	"	10/23/02	"	
Toluene	ND	0.500	"	1	"	"	10/22/02	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

GREAT LAKES ANALYTICAL
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Oak Creek, Wisconsin 53154
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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (W210148-01) Water Sampled: 10/11/02 00:00 Received: 10/11/02 14:02									**QC**
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
1,1,1-Trichloroethane	**1.04**	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.160	"	"	"	"	"	"	
Trichloroethene	**40.2**	0.500	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
Vinyl chloride	ND	0.170	"	"	"	"	"	"	
Total Xylenes	ND	0.500	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*127 %*		*80-120*	"	"	"	"	H
Surrogate: 1-Cl-4-FB (PID)		*94.7 %*		*80-120*	"	"	"	"	
MW-1 (W210148-02) Water Sampled: 10/11/02 00:00 Received: 10/11/02 14:02									**QC**
Benzene	ND	0.500	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromodichloromethane	ND	0.500	"	"	"	"	"	"	
n-Butylbenzene	ND	0.500	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.500	"	"	"	"	"	"	
Chlorobenzene	ND	0.500	"	"	"	"	"	"	
Chloroethane	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.140	"	"	"	"	"	"	
Chloromethane	ND	0.600	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.390	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.380	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.500	"	"	"	"	"	"	
cis-1,2-Dichloroethene	**1.16**	0.500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (W210148-02) Water	**Sampled: 10/11/02 00:00**	**Received: 10/11/02 14:02**							**QC**
Di-isopropyl ether	ND	5.00	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.500	"	"	"	"	"	"	
Methylene chloride	ND	0.530	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.350	"	"	"	"	"	"	
Tetrachloroethene	**124**	5.00	"	10	"	"	10/23/02	"	
Toluene	ND	0.500	"	1	"	"	10/22/02	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.160	"	"	"	"	"	"	
Trichloroethene	**8.01**	0.500	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
Vinyl chloride	ND	0.170	"	"	"	"	"	"	
Total Xylenes	ND	0.500	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*127 %*	*80-120*		"	"	"	"	H
Surrogate: 1-Cl-4-FB (PID)		*98.4 %*	*80-120*		"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1D (W210148-03) Water Sampled: 10/11/02 00:00 Received: 10/11/02 14:02									**QC**
Benzene	ND	0.500	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromodichloromethane	ND	0.500	"	"	"	"	"	"	
n-Butylbenzene	ND	0.500	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.500	"	"	"	"	"	"	
Chlorobenzene	ND	0.500	"	"	"	"	"	"	
Chloroethane	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.140	"	"	"	"	"	"	
Chloromethane	ND	0.600	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.390	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.380	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.500	"	"	"	"	"	"	
cis-1,2-Dichloroethene	**1.47**	0.500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.500	"	"	"	"	"	"	
Methylene chloride	ND	0.530	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.350	"	"	"	"	"	"	
Tetrachloroethene	**104**	5.00	"	10	"	"	10/23/02	"	
Toluene	ND	0.500	"	1	"	"	10/22/02	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1D (W210148-03) Water Sampled: 10/11/02 00:00 Received: 10/11/02 14:02									**QC**
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
1,1,1-Trichloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.160	"	"	"	"	"	"	
Trichloroethene	**6.08**	0.500	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
Vinyl chloride	ND	0.170	"	"	"	"	"	"	
Total Xylenes	ND	0.500	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*112 %*	*80-120*		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		*86.2 %*	*80-120*		"	"	"	"	
MW-2 (W210148-04) Water Sampled: 10/11/02 00:00 Received: 10/11/02 14:02									**QC**
Benzene	ND	0.500	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromodichloromethane	ND	0.500	"	"	"	"	"	"	
n-Butylbenzene	ND	0.500	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.500	"	"	"	"	"	"	
Chlorobenzene	ND	0.500	"	"	"	"	"	"	
Chloroethane	ND	0.500	"	"	"	"	"	"	
Chloroform	**0.208**	0.140	"	"	"	"	"	"	
Chloromethane	ND	0.600	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.390	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.380	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethene	**1.22**	0.500	"	"	"	"	"	"	
cis-1,2-Dichloroethene	**37.8**	0.500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	**1.08**	0.500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2 (W210148-04) Water	**Sampled: 10/11/02 00:00**	**Received: 10/11/02 14:02**							**QC**
Di-isopropyl ether	ND	5.00	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.500	"	"	"	"	"	"	
Methylene chloride	ND	0.530	"	"	"	"	"	"	
Methyl tert-butyl ether	**1.52**	0.500	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.350	"	"	"	"	"	"	
Tetrachloroethene	**1990**	50.0	"	100	"	"	10/23/02	"	
Toluene	ND	0.500	"	1	"	"	10/22/02	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	**0.728**	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.160	"	"	"	"	"	"	
Trichloroethene	**132**	50.0	"	100	"	"	10/23/02	"	
Trichlorofluoromethane	ND	0.500	"	1	"	"	10/22/02	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
Vinyl chloride	ND	0.170	"	"	"	"	"	"	
Total Xylenes	ND	0.500	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*135 %*	*80-120*		"	"	"	"	H
Surrogate: 1-Cl-4-FB (PID)		*89.9 %*	*80-120*		"	"	"	"	

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 (Blanks)

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Trip Blank (W210148-05) Water	**Sampled: 10/11/02 00:00**	**Received: 10/11/02 14:02**							**QC**
Benzene	ND	0.500	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromodichloromethane	ND	0.500	"	"	"	"	"	"	
n-Butylbenzene	ND	0.500	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.500	"	"	"	"	"	"	
Chlorobenzene	ND	0.500	"	"	"	"	"	"	
Chloroethane	ND	0.500	"	"	"	"	"	"	
Chloroform	ND	0.140	"	"	"	"	"	"	
Chloromethane	ND	0.600	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
Dibromochloromethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.390	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.380	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.500	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.500	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.500	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
Di-isopropyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.500	"	"	"	"	"	"	
Methylene chloride	ND	0.530	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.350	"	"	"	"	"	"	
Tetrachloroethene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 (Blanks)

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Trip Blank (W210148-05) Water	**Sampled: 10/11/02 00:00**	**Received: 10/11/02 14:02**							**QC**
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	2100132	10/19/02	10/22/02	EPA 8021B	
1,1,1-Trichloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.160	"	"	"	"	"	"	
Trichloroethene	ND	0.500	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
Vinyl chloride	ND	0.170	"	"	"	"	"	"	
Total Xylenes	ND	0.500	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		*119 %*	*80-120*		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		*94.8 %*	*80-120*		"	"	"	"	

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100132 - EPA 5030B (P/T)										
Blank (2100132-BLK1)				Prepared: 10/19/02 Analyzed: 10/21/02						
Benzene	ND	0.500	ug/l							
Bromobenzene	ND	0.500	"							
Bromodichloromethane	ND	0.500	"							
n-Butylbenzene	ND	0.500	"							
sec-Butylbenzene	ND	0.500	"							
tert-Butylbenzene	ND	0.500	"							
Carbon tetrachloride	ND	0.500	"							
Chlorobenzene	ND	0.500	"							
Chloroethane	ND	0.500	"							
Chloroform	ND	0.140	"							
Chloromethane	ND	0.600	"							
2-Chlorotoluene	ND	0.500	"							
4-Chlorotoluene	ND	0.500	"							
Dibromochloromethane	ND	0.500	"							
1,2-Dibromo-3-chloropropane	ND	0.390	"							
1,2-Dibromoethane	ND	0.380	"							
1,2-Dichlorobenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.500	"							
1,4-Dichlorobenzene	ND	0.500	"							
Dichlorodifluoromethane	ND	0.500	"							
1,1-Dichloroethane	ND	0.500	"							
1,2-Dichloroethane	ND	0.500	"							
1,1-Dichloroethene	ND	0.500	"							
cis-1,2-Dichloroethene	ND	0.500	"							
trans-1,2-Dichloroethene	ND	0.500	"							
1,2-Dichloropropane	ND	0.500	"							
1,3-Dichloropropane	ND	0.500	"							
2,2-Dichloropropane	ND	0.500	"							
Di-isopropyl ether	ND	5.00	"							
Ethylbenzene	ND	0.500	"							
Hexachlorobutadiene	ND	5.00	"							
Isopropylbenzene	ND	0.500	"							
p-Isopropyltoluene	ND	0.500	"							
Methylene chloride	ND	0.530	"							

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100132 - EPA 5030B (P/T)										
Blank (2100132-BLK1)				Prepared: 10/19/02 Analyzed: 10/21/02						
Methyl tert-butyl ether	ND	0.500	ug/l							
Naphthalene	ND	2.00	"							
n-Propylbenzene	ND	0.500	"							
1,1,2,2-Tetrachloroethane	ND	0.350	"							
Tetrachloroethene	ND	0.500	"							
Toluene	ND	0.500	"							
1,2,3-Trichlorobenzene	ND	2.00	"							
1,2,4-Trichlorobenzene	ND	2.00	"							
1,1,1-Trichloroethane	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.160	"							
Trichloroethene	ND	0.500	"							
Trichlorofluoromethane	ND	0.500	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	0.170	"							
Total Xylenes	ND	0.500	"							
Surrogate: 1-Cl-4-FB (ELCD)	*10.8*		"	*10.0*		*108*	*80-120*			
Surrogate: 1-Cl-4-FB (PID)	*10.2*		"	*10.0*		*102*	*80-120*			
LCS (2100132-BS1)				Prepared: 10/19/02 Analyzed: 10/21/02						
Benzene	11.3	0.500	ug/l	10.0		113	85-115			
Bromobenzene	9.92	0.500	"	10.0		99.2	85-115			
Bromodichloromethane	14.4	0.500	"	10.0		144	85-115			H
n-Butylbenzene	9.73	0.500	"	10.0		97.3	85-115			
sec-Butylbenzene	9.68	0.500	"	10.0		96.8	85-115			
tert-Butylbenzene	10.1	0.500	"	10.0		101	85-115			
Carbon tetrachloride	12.5	0.500	"	10.0		125	85-115			H
Chlorobenzene	10.1	0.500	"	10.0		101	85-115			
Chloroethane	23.7	0.500	"	10.0		237	85-115			H
Chloroform	13.2	0.140	"	10.0		132	85-115			H
Chloromethane	16.6	0.600	"	10.0		166	85-115			H
2-Chlorotoluene	9.48	0.500	"	10.0		94.8	85-115			
4-Chlorotoluene	9.70	0.500	"	10.0		97.0	85-115			
Dibromochloromethane	14.3	0.500	"	10.0		143	85-115			H

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 - Quality Control

Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100132 - EPA 5030B (P/T)										
LCS (2100132-BS1)				Prepared: 10/19/02 Analyzed: 10/21/02						
1,2-Dibromo-3-chloropropane	11.2	0.390	ug/l	10.0		112	85-115			
1,2-Dibromoethane	16.1	0.380	"	10.0		161	85-115			H
1,2-Dichlorobenzene	9.56	0.500	"	10.0		95.6	85-115			
1,3-Dichlorobenzene	9.48	0.500	"	10.0		94.8	85-115			
1,4-Dichlorobenzene	9.46	0.500	"	10.0		94.6	85-115			
Dichlorodifluoromethane	8.83	0.500	"	10.0		88.3	85-115			
1,1-Dichloroethane	12.1	0.500	"	10.0		121	85-115			H
1,2-Dichloroethane	11.4	0.500	"	10.0		114	85-115			
1,1-Dichloroethene	11.1	0.500	"	10.0		111	85-115			
cis-1,2-Dichloroethene	11.4	0.500	"	10.0		114	85-115			
trans-1,2-Dichloroethene	11.4	0.500	"	10.0		114	85-115			
1,2-Dichloropropane	12.9	0.500	"	10.0		129	85-115			H
1,3-Dichloropropane	11.5	0.500	"	10.0		115	85-115			
2,2-Dichloropropane	12.8	0.500	"	10.0		128	85-115			H
Di-isopropyl ether	10.8	5.00	"	10.0		108	85-115			
Ethylbenzene	9.53	0.500	"	10.0		95.3	85-115			
Hexachlorobutadiene	9.03	5.00	"	10.0		90.3	85-115			
Isopropylbenzene	10.0	0.500	"	10.0		100	85-115			
p-Isopropyltoluene	9.89	0.500	"	10.0		98.9	85-115			
Methylene chloride	11.2	0.530	"	10.0		112	85-115			
Methyl tert-butyl ether	11.4	0.500	"	10.0		114	85-115			
Naphthalene	8.69	2.00	"	10.0		86.9	85-115			
n-Propylbenzene	9.68	0.500	"	10.0		96.8	85-115			
1,1,2,2-Tetrachloroethane	11.0	0.350	"	10.0		110	85-115			
Tetrachloroethene	10.5	0.500	"	10.0		105	85-115			
Toluene	10.4	0.500	"	10.0		104	85-115			
1,2,3-Trichlorobenzene	8.64	2.00	"	10.0		86.4	85-115			
1,2,4-Trichlorobenzene	8.61	2.00	"	10.0		86.1	85-115			
1,1,1-Trichloroethane	12.6	0.500	"	10.0		126	85-115			H
1,1,2-Trichloroethane	11.2	0.160	"	10.0		112	85-115			
Trichloroethene	10.9	0.500	"	10.0		109	85-115			
Trichlorofluoromethane	11.9	0.500	"	10.0		119	85-115			H
1,2,4-Trimethylbenzene	9.84	1.00	"	10.0		98.4	85-115			
1,3,5-Trimethylbenzene	10.1	1.00	"	10.0		101	85-115			

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100132 - EPA 5030B (P/T)										
LCS (2100132-BS1)				Prepared: 10/19/02 Analyzed: 10/21/02						
Vinyl chloride	11.3	0.170	ug/l	10.0		113	85-115			
Total Xylenes	30.4	0.500	"	30.0		101	85-115			
Surrogate: 1-Cl-4-FB (ELCD)	*8.19*		"	*10.0*		*81.9*	*80-120*			
Surrogate: 1-Cl-4-FB (PID)	*10.0*		"	*10.0*		*100*	*80-120*			
Matrix Spike (2100132-MS1)		**Source: W210137-06**		Prepared: 10/19/02 Analyzed: 10/22/02						
Benzene	11.0	0.500	ug/l	10.0	ND	110	75-125			
Bromobenzene	9.79	0.500	"	10.0	ND	97.9	75-125			
Bromodichloromethane	14.4	0.500	"	10.0	ND	144	75-125			H
n-Butylbenzene	8.95	0.500	"	10.0	ND	89.5	75-125			
sec-Butylbenzene	9.07	0.500	"	10.0	ND	90.7	75-125			
tert-Butylbenzene	9.90	0.500	"	10.0	ND	99.0	75-125			
Carbon tetrachloride	11.7	0.500	"	10.0	ND	117	75-125			
Chlorobenzene	10.2	0.500	"	10.0	ND	102	75-125			
Chloroethane	21.7	0.500	"	10.0	ND	217	75-125			H
Chloroform	11.8	0.140	"	10.0	ND	118	75-125			
Chloromethane	17.9	0.600	"	10.0	ND	179	75-125			H
2-Chlorotoluene	10.0	0.500	"	10.0	ND	100	75-125			
4-Chlorotoluene	9.30	0.500	"	10.0	ND	93.0	75-125			
Dibromochloromethane	14.1	0.500	"	10.0	ND	141	75-125			H
1,2-Dibromo-3-chloropropane	11.7	0.390	"	10.0	ND	117	75-125			
1,2-Dibromoethane	14.7	0.380	"	10.0	ND	147	75-125			H
1,2-Dichlorobenzene	9.07	0.500	"	10.0	ND	90.7	75-125			
1,3-Dichlorobenzene	9.02	0.500	"	10.0	ND	90.2	75-125			
1,4-Dichlorobenzene	8.93	0.500	"	10.0	ND	89.3	75-125			
Dichlorodifluoromethane	8.65	0.500	"	10.0	ND	86.5	75-125			
1,1-Dichloroethane	11.6	0.500	"	10.0	ND	116	75-125			
1,2-Dichloroethane	10.5	0.500	"	10.0	ND	105	75-125			
1,1-Dichloroethene	11.4	0.500	"	10.0	ND	114	75-125			
cis-1,2-Dichloroethene	11.3	0.500	"	10.0	ND	113	75-125			
trans-1,2-Dichloroethene	11.5	0.500	"	10.0	ND	115	75-125			
1,2-Dichloropropane	11.9	0.500	"	10.0	ND	119	75-125			
1,3-Dichloropropane	11.3	0.500	"	10.0	ND	113	75-125			
2,2-Dichloropropane	11.3	0.500	"	10.0	ND	113	75-125			

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100132 - EPA 5030B (P/T)										
Matrix Spike (2100132-MS1)	**Source: W210137-06**			Prepared: 10/19/02		Analyzed: 10/22/02				
Di-isopropyl ether	10.8	5.00	ug/l	10.0	ND	108	75-125			
Ethylbenzene	9.52	0.500	"	10.0	ND	95.2	75-125			
Hexachlorobutadiene	8.44	5.00	"	10.0	ND	84.4	75-125			
Isopropylbenzene	9.85	0.500	"	10.0	ND	98.5	75-125			
p-Isopropyltoluene	9.23	0.500	"	10.0	ND	92.3	75-125			
Methylene chloride	10.8	0.530	"	10.0	ND	108	75-125			
Methyl tert-butyl ether	11.3	0.500	"	10.0	ND	113	75-125			
Naphthalene	7.61	2.00	"	10.0	ND	76.1	75-125			
n-Propylbenzene	9.20	0.500	"	10.0	ND	92.0	75-125			
1,1,2,2-Tetrachloroethane	10.5	0.350	"	10.0	ND	105	75-125			
Tetrachloroethene	10.5	0.500	"	10.0	ND	105	75-125			
Toluene	10.5	0.500	"	10.0	ND	105	75-125			
1,2,3-Trichlorobenzene	8.30	2.00	"	10.0	ND	83.0	75-125			
1,2,4-Trichlorobenzene	8.01	2.00	"	10.0	ND	80.1	75-125			
1,1,1-Trichloroethane	11.5	0.500	"	10.0	ND	115	75-125			
1,1,2-Trichloroethane	10.8	0.160	"	10.0	ND	108	75-125			
Trichloroethene	11.6	0.500	"	10.0	ND	116	75-125			
Trichlorofluoromethane	10.9	0.500	"	10.0	ND	109	75-125			
1,2,4-Trimethylbenzene	9.33	1.00	"	10.0	ND	93.3	75-125			
1,3,5-Trimethylbenzene	9.80	1.00	"	10.0	ND	98.0	75-125			
Vinyl chloride	10.4	0.170	"	10.0	ND	104	75-125			
Total Xylenes	30.0	0.500	"	30.0	ND	100	75-125			
Surrogate: 1-Cl-4-FB (ELCD)	*9.10*		"	*10.0*		*91.0*	*80-120*			
Surrogate: 1-Cl-4-FB (PID)	*10.1*		"	*10.0*		*101*	*80-120*			
Matrix Spike Dup (2100132-MSD1)	**Source: W210137-06**			Prepared: 10/19/02		Analyzed: 10/22/02				
Benzene	11.7	0.500	ug/l	10.0	ND	117	75-125	6.17	20	
Bromobenzene	10.6	0.500	"	10.0	ND	106	75-125	7.95	20	
Bromodichloromethane	14.9	0.500	"	10.0	ND	149	75-125	3.41	20	H
n-Butylbenzene	9.83	0.500	"	10.0	ND	98.3	75-125	9.37	20	
sec-Butylbenzene	9.90	0.500	"	10.0	ND	99.0	75-125	8.75	20	
tert-Butylbenzene	10.8	0.500	"	10.0	ND	108	75-125	8.70	20	
Carbon tetrachloride	12.5	0.500	"	10.0	ND	125	75-125	6.61	20	
Chlorobenzene	11.0	0.500	"	10.0	ND	110	75-125	7.55	20	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100132 - EPA 5030B (P/T)										
Matrix Spike Dup (2100132-MSD1)	**Source: W210137-06**			Prepared: 10/19/02		Analyzed: 10/22/02				
Chloroethane	26.6	0.500	ug/l	10.0	ND	266	75-125	20.3	20	HH
Chloroform	12.2	0.140	"	10.0	ND	122	75-125	3.33	20	
Chloromethane	21.5	0.600	"	10.0	ND	215	75-125	18.3	20	H
2-Chlorotoluene	10.9	0.500	"	10.0	ND	109	75-125	8.61	20	
4-Chlorotoluene	10.2	0.500	"	10.0	ND	102	75-125	9.23	20	
Dibromochloromethane	15.1	0.500	"	10.0	ND	151	75-125	6.85	20	H
1,2-Dibromo-3-chloropropane	11.3	0.390	"	10.0	ND	113	75-125	3.48	20	
1,2-Dibromoethane	15.8	0.380	"	10.0	ND	158	75-125	7.21	20	H
1,2-Dichlorobenzene	9.97	0.500	"	10.0	ND	99.7	75-125	9.45	20	
1,3-Dichlorobenzene	9.85	0.500	"	10.0	ND	98.5	75-125	8.80	20	
1,4-Dichlorobenzene	9.78	0.500	"	10.0	ND	97.8	75-125	9.09	20	
Dichlorodifluoromethane	10.2	0.500	"	10.0	ND	102	75-125	16.4	20	
1,1-Dichloroethane	11.8	0.500	"	10.0	ND	118	75-125	1.71	20	
1,2-Dichloroethane	12.4	0.500	"	10.0	ND	124	75-125	16.6	20	
1,1-Dichloroethene	12.0	0.500	"	10.0	ND	120	75-125	5.13	20	
cis-1,2-Dichloroethene	12.2	0.500	"	10.0	ND	122	75-125	7.66	20	
trans-1,2-Dichloroethene	12.3	0.500	"	10.0	ND	123	75-125	6.72	20	
1,2-Dichloropropane	13.1	0.500	"	10.0	ND	131	75-125	9.60	20	H
1,3-Dichloropropane	12.4	0.500	"	10.0	ND	124	75-125	9.28	20	
2,2-Dichloropropane	12.4	0.500	"	10.0	ND	124	75-125	9.28	20	
Di-isopropyl ether	11.9	5.00	"	10.0	ND	119	75-125	9.69	20	
Ethylbenzene	10.2	0.500	"	10.0	ND	102	75-125	6.90	20	
Hexachlorobutadiene	9.37	5.00	"	10.0	ND	93.7	75-125	10.4	20	
Isopropylbenzene	10.7	0.500	"	10.0	ND	107	75-125	8.27	20	
p-Isopropyltoluene	10.1	0.500	"	10.0	ND	101	75-125	9.00	20	
Methylene chloride	12.1	0.530	"	10.0	ND	121	75-125	11.4	20	
Methyl tert-butyl ether	11.9	0.500	"	10.0	ND	119	75-125	5.17	20	
Naphthalene	8.64	2.00	"	10.0	ND	86.4	75-125	12.7	20	
n-Propylbenzene	10.0	0.500	"	10.0	ND	100	75-125	8.33	20	
1,1,2,2-Tetrachloroethane	11.5	0.350	"	10.0	ND	115	75-125	9.09	20	
Tetrachloroethene	11.5	0.500	"	10.0	ND	115	75-125	9.09	20	
Toluene	11.4	0.500	"	10.0	ND	114	75-125	8.22	20	
1,2,3-Trichlorobenzene	9.27	2.00	"	10.0	ND	92.7	75-125	11.0	20	
1,2,4-Trichlorobenzene	8.95	2.00	"	10.0	ND	89.5	75-125	11.1	20	

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

WDNR Volatile Organic Compounds by Method 8021 - Quality Control
Great Lakes Analytical--Oak Creek

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2100132 - EPA 5030B (P/T)										
Matrix Spike Dup (2100132-MSD1)		**Source: W210137-06**		Prepared: 10/19/02		Analyzed: 10/22/02				
1,1,1-Trichloroethane	12.3	0.500	ug/l	10.0	ND	123	75-125	6.72	20	
1,1,2-Trichloroethane	12.1	0.160	"	10.0	ND	121	75-125	11.4	20	
Trichloroethene	12.2	0.500	"	10.0	ND	122	75-125	5.04	20	
Trichlorofluoromethane	12.0	0.500	"	10.0	ND	120	75-125	9.61	20	
1,2,4-Trimethylbenzene	9.99	1.00	"	10.0	ND	99.9	75-125	6.83	20	
1,3,5-Trimethylbenzene	10.5	1.00	"	10.0	ND	105	75-125	6.90	20	
Vinyl chloride	10.7	0.170	"	10.0	ND	107	75-125	2.84	20	
Total Xylenes	32.3	0.500	"	30.0	ND	108	75-125	7.38	20	
Surrogate: 1-Cl-4-FB (ELCD)	*9.01*		"	*10.0*		*90.1*	*80-120*			
Surrogate: 1-Cl-4-FB (PID)	*10.2*		"	*10.0*		*102*	*80-120*			

Great Lakes Analytical--Oak Creek

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STS Consultants	Project: 87210XA	
11425 S. Lake Park Dr.	Project Number: [none]	**Reported:**
Milwaukee WI, 53224	Project Manager: Mark Mejac	10/25/02 14:25

Notes and Definitions

QC	The result for one or more quality control measurements associated with this sample did not meet the laboratory and/or source method acceptance criteria.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
L	This quality control measurement is below the laboratory established limit.
H	This quality control measurement is above the laboratory established limit.

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GREAT LAKES ANALYTICAL

CHAIN OF CUSTODY REPORT

[illegible] Business Parkway
Buffalo Grove, IL 60089-4505
(847) 808-7766
FAX (847) 808-7772

[illegible] E. [illegible] Road
Oak Creek, WI 53154
(414) 570-9460
FAX (414) 570-9461

Client: STS Consultants	Bill To: Same	TAT: (STD) 4 DAY 3 DAY 2 DAY 1 DAY < 24 HRS.
Address: 11425 W. Lake Park Dr.	Address:	☐ YES - TAT is critical ☐ NO - TAT is not critical — DATE RESULTS NEEDED:
Milwaukee, WI 53224		Received: ☑ ice ☐ ambient ☐ refrigerator — Temp. Upon Receipt:
Report to: Mark Mejac — Phone #: (414) 359-3030 — E-mail: — Fax #: (414) 359-0822	State & Program: — Phone #: ( ) — Fax #: ( )	Deliverable Package: ☐ STD ☐ Other — Delivery Method: GLA ☐ Client ☐ Shipped ☐ Courier ☐
Project Name: Bence		
Project #/PO#: 87210 XA		
Sampler: Adam Florin		

	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	# of Bottles Preservative Used: MeOH	NaHSO4	HCl	HNO3	H2SO4	NaOH	NONE	TOTAL # OF BOTTLES	DO NOT DRY-WEIGHT CORRECT RESULTS	SAMPLES FIELD FILTERED ☐YES ☐NO	VOC	SAMPLE CONTROL: CRACKED-BROKEN	IMPROPERLY SEALED	LABORATORY ID NUMBER
1 MW-3 PID:	10/11/02		W			3					3			✓			W210198-01
2 MW-1 PID:	↓		↓			↓					↓			↓			-02
3 MW-1D PID:	↓		↓			↓					↓			↓			-03
4 MW-2 PID:	↓		↓			↓					↓			↓			-04
5 Trip Blank PID:	-	-	-			1					1			↓			-05
6 PID:																	
7 PID:																	
8 PID:																	
9 PID:																	
10 PID:																	

RELINQUISHED	RECEIVED	RELINQUISHED	RECEIVED
Adam Florin 10/11/02 A.M.	Raina Steadwell 10/11/02 11:05		
RELINQUISHED	RECEIVED	RELINQUISHED	RECEIVED

COMMENTS: