

**STS CONSULTANTS, LTD.**



**Site Investigation Report  
301 East Brown Street Property  
Milwaukee, Wisconsin**

Brown Street III LLC  
20 W. Hubbard Street Suite 2W  
Chicago, IL 60610

*File: 341065230*

STS Project No. 5-87185EA





January 10, 2003

Ms. Victoria Stovall  
Wisconsin Department of Natural Resources  
2300 N. Martin Luther King Drive  
Milwaukee, WI 53212

Re: 301 East Brown Street Property in Milwaukee, Wisconsin – STS Project No. 87185EA  
BRRTS#: 03-41-373872  
FID#: 341065230

Dear Ms. Stovall:

On behalf of Brown Street III LLC, please find enclosed a Site Investigation Report for the referenced property, prepared by STS Consultants, Ltd. This report was prepared to provide information required under Chapter NR716.15 of the Wisconsin Administrative Code (WAC). We have enclosed a check in the amount of \$750 for Department review of this document, as required under WAC Chapter NR749. If you have any questions or comments concerning the information contained herein, please feel free to contact us at your convenience.

Respectfully submitted,

STS CONSULTANTS, LTD

Mark M. Mejac, P.G.  
Senior Hydrogeologist

Dennis R. Lawton, P.G.  
Senior Hydrogeologist

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Attachment

cc: Mr. Brian Columbus, Brown Street III LLC



**NR700 CERTIFICATIONS**

"I, Mark Mejac, certify that I am a hydrogeologist as that term is defined in s.NR712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR700 to 726, Wis. Adm. Code."

Mark M. Mejac

1-10-03

Mark Mejac, P.G.  
Senior Hydrogeologist

Date

"I, Dennis Lawton, certify that I am a hydrogeologist as that term is defined in s.NR712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR700 to 726, Wis. Adm. Code."

Dennis Lawton

1-10-03

Dennis Lawton, P.G.  
Senior Hydrogeologist

Date



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**NR716 SITE INVESTIGATION REPORT  
301 EAST BROWN STREET PROPERTY  
MILWAUKEE, WISCONSIN**

10/7/02

## 1.0 INTRODUCTION

STS Consultants Ltd (STS) has prepared this report to document the methodology and results of an NR 716 Site Investigation of soil and groundwater conditions at the property located at 301 East Brown Street in Milwaukee, Wisconsin (Figure 1). The report provides information required under Section NR716.15 of the Wisconsin Administrative Code (WAC), as a follow-up to the STS "NR 716 Site Investigation Work Plan", dated October 3, 2002. The NR 716 Site Investigation Work Plan referenced the following three previous reports associated with the subject property:

- Phase I Environmental Site Assessment (ESA) Report dated August 21, 1998, Weyco Group Buildings and Land, 234 East Reservoir Avenue, Milwaukee, Wisconsin, KEY Engineering Group Ltd.
- Phase II Environmental Site Assessment (ESA) Report dated March 11, 1999, Weyco Group Buildings and Land, 234 East Reservoir Avenue and 301 East Brown Street, Milwaukee, Wisconsin, KEY Engineering Group Ltd.
- Supplemental Phase II Environmental Site Assessment Report dated April 9, 1999, Weyco Group Buildings and Land, 234 East Reservoir Avenue and 301 East Brown Street, Milwaukee, Wisconsin, KEY Engineering Group Ltd.

These documents identify the former presence of an oil-fired boiler room in the basement of a former shoe manufacturing building within the northeastern portion of the subject property. No information is available concerning the specific former location of the tank or system used to provide fuel for the former boiler. The documents also identify the former presence of a solvent storage area along the western side of the former shoe manufacturing building. The results of the KEY Engineering investigations are summarized on KEY Engineering Figure 2 provided as Appendix A. As shown on the KEY Engineering Figure 2, soil sample B-4 (3.5 to 5 feet below ground surface [bgs]) collected from the immediate vicinity of the solvent storage area along the



western side of the former shoe manufacturing building did not reveal detectable concentrations of volatile organic compounds (VOCs). Soil samples GP-8 and GP-12 (11 to 13 feet bgs), collected from the area of the former boiler room, revealed detectable concentrations of petroleum VOCs (PVOCs).

### 1.1 Involved Parties

Parties currently involved with this project are provided in Appendix B.

### 1.2 Objectives and Scope of Work

The objectives of the scope of work presented herein are as follows:

- Source Identification (including the former presence of the oil-fired boiler room in the basement of the former shoe manufacturing building within the northeastern portion of the subject property, as well as unknown sources);
- Evaluation of Extent of Affected Soil and Groundwater; and
- Contaminant Fate and Transport Characterization.

To address the objectives listed above, four hydraulic probes were initially installed at the locations identified as STS-1 through STS-4 on Figure 2. The purpose of this initial field investigation task was to provide subsurface data to allow for proper placement of monitoring wells.

After receipt of laboratory results of collected soil samples from hydraulic probes STS-1 through STS-4, three hollow-stem augered soil borings were completed and permanent NR 141 WAC groundwater monitoring wells MW-1 through MW-3 (Figure 2) were installed for collection of soil and groundwater samples for laboratory analysis and determining groundwater flow direction.

Specific sampling and data collection and analysis activities are outlined below:

- Soil Sampling – With respect to the monitoring well installation borings, soil samples were collected at 2.5-foot intervals to 10 feet bgs, followed by 5-foot intervals to the base of each monitoring well installation boring. Soil samples were collected at continuous intervals from the hydraulic probes, to the base of each probe.

- Monitoring Well Installation and Groundwater Sampling – One groundwater sample was retained from each of the three monitoring wells for laboratory analysis. Flush-mounted groundwater monitoring wells were installed in conformance with WAC NR 141. The wells were constructed with 10-foot length screens, and the locations and elevations of the wells were surveyed to evaluate local groundwater flow direction.

### 1.3 Physical Site Description

The site location is depicted on Figure 1 and is described as follows:

301 East Brown Street  
City of Milwaukee, Wisconsin 53212  
SE1/4 of NE1/4 of Sec.20, T. 7N, R. 22E.

The subject site is a rectangular-shaped parcel that covers approximately 1.4 acres. The site is situated within an area of light industrial and residential land use.

### 1.4 Project History

The site was previously used as a shoe manufacturing facility. An oil-fired boiler room was reportedly present in the basement of the former shoe manufacturing building within the northernmost portion of the subject property. No information is available concerning the specific location of the tank or system used to provide fuel for the former boiler. A solvent storage area was reportedly previously present along the western side of the former shoe manufacturing building within the property. As indicated in the 1999 KEY Engineering Group Phase II Environmental Site Assessment Report (ESA) provided as Appendix A, relatively low concentrations of petroleum hydrocarbons have generally been detected in site soil samples; groundwater samples had not been collected.

### 1.5 Potential Receptors

Under current site land use, the only potential receptor for site conditions identified by this investigation is the limited potential for direct contact exposure with site soils. With appropriate site development, as referenced herein, the current limited risk of direct contact should be eliminated. The City of Milwaukee obtains its municipal water supply from Lake Michigan. The Milwaukee River is located approximately 1,000 feet to the southeast of the site.



## 2.0 INVESTIGATION FIELD ACTIVITIES

This section describes the data collection activities completed as part of the NR 716 Site Investigation of the 301 East Brown Street property. The rationale and methodologies for data collection are described in the STS NR 716 Site Investigation Work Plan, dated October 3, 2002. Data collection activities conducted during the Site Investigation consisted of the following:

- Installation of four hydraulic probe soil borings (October 16, 2002);
- Completion of three hollow-stem auger soil borings, followed by installation of monitoring wells in each of the borings (October 29, 2002);
- Completion of location and elevation survey of monitoring wells (November 5, 2002);
- Measurement of groundwater elevations from the monitoring wells (November 8, 2002 and December 27, 2002); and
- Sampling of monitoring wells (November 8, 2002).

The hydraulic probe services were provided by Probe Technologies, Inc. of North Lake, Wisconsin. The monitoring well installation activities were conducted by North Shore Drilling, Inc. of Grafton, Wisconsin and Giles Engineering Associates, Inc. of Waukesha, Wisconsin. Quantitative chemical analyses of collected soil and groundwater samples were conducted by Great Lakes Analytical of Oak Creek, Wisconsin.

### 2.1 Hydraulic Probe Installation

The soil probe unit hydraulically advanced a 2-inch diameter drive rod to collect soil samples. Soil samples were collected inside of a 4-foot polyethylene sheath inserted into the end of the drive rod. When the selected sample depth was reached, a spring release allowed the soil sample to be collected inside of the sheath. A new sheath was used to collect each sample at the specified depth. To extract the soil sample, the sheath was cut open using a razor blade. Collected soil samples were placed in containers for eventual laboratory analysis ("primary" samples) or in-field analysis ("co-located" samples). Following collection, primary samples were clearly labeled, placed in a cooler on ice to achieve a sample temperature of 4 degrees

centigrade, and securely stored pending delivery to the project laboratory. Sample labels identified the date of sample collection, the sample location, and the depth from which the sample was collected. Soil samples submitted to Great Lakes Analytical were delivered via courier within allowable holding times. All soil samples intended for laboratory analysis were placed in containers provided by the project laboratory.

The soil samples were described in the field with respect to the soil types (unified soil classification system code), grain size distribution, color (or discoloration), odor, moisture content, consistency and photoionizable constituent content, as appropriate. The observations were recorded on soil boring logs, which are provided in Appendix C. The soil samples were collected from each sampling interval for in-field screening 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 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 co-located 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 co-located 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 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 samples submitted to Great Lakes Analytical were analyzed for all or a

subset of the following: VOCs, polynuclear aromatic hydrocarbons (PAHs), total lead, and total organic carbon (TOC).

Groundwater samples were not collected from the hydraulic probes, as they did not yield sufficient quantities of water. Each probe hole advanced at the site was abandoned in accordance with the procedures outlined in WAC NR 141. The probe holes were backfilled with bentonite chips from the bottom of the boring to the surface. A copy of WDNR Form 3300-5B was prepared for each location; these forms are provided in Appendix C.

## **2.2 Soil Sampling/Monitoring Well Installation**

Three groundwater monitoring wells were installed at locations shown on Figure 2. The monitoring wells were installed in accordance with WAC Chapter NR 141. Hollow-stem augers (4 1/4-inch diameter) were utilized (ASTM Method D1586) to advance boreholes during auger drilling. The augers were advanced using a truck-mounted auger drilling rig.

Soil samples were collected at 2.5-foot intervals to 10 feet bgs and 5-foot intervals thereafter from the monitoring well installation borings. The soil samples were collected using a two-inch diameter split-spoon sampler (ASTM Method D1587) and visually classified in the field by an STS geologist. Soil boring logs are provided in Appendix B.

The soil sampling equipment was decontaminated prior to each soil-sampling event using laboratory-grade detergent and tap water rinse. Upon retrieval of the sampler, visual observations of the recovered material were documented in accordance with ASTM Method D-2488-93. Collected soil samples were placed in containers for eventual laboratory analysis ("primary" samples) or in-field analysis ("co-located" samples). Following collection, primary samples were clearly labeled, placed in a cooler on ice to achieve a sample temperature of 4 degrees centigrade, and securely stored pending delivery to the project laboratory. Sample labels identified the date of sample collection, the sample location, and the depth from which the sample was collected. Soil samples submitted to Great Lakes Analytical were delivered via courier within allowable holding times. All soil samples intended for laboratory analysis were placed in containers provided by the project laboratory.

The soil samples were described in the field with respect to soil type (unified soil classification system code), grain size distribution, color (or discoloration), odor, moisture content, consistency



and photoionizable constituent content, as appropriate. The observations were recorded on the soil boring logs. Soil samples were collected from each sampling interval for in-field screening using a PID, as discussed in Section 2.1.

The soil samples submitted to Great Lakes Analytical were at all times accompanied by a chain-of-custody form, using the procedure described in Section 2.1. The monitoring well installation boring soil samples submitted to Great Lakes Analytical were analyzed for all or a subset of the following: VOCs, PAHs, total lead, and TOC.

The new monitoring wells were constructed of 2-inch diameter, flush-thread, schedule 40 polyvinyl chloride (PVC) riser pipe with 10-slot screens. Monitoring well screen lengths were 10 or 15 feet. Coarse silica filter sand packs were placed to depths of approximately 2 feet above the top of each well screen. Following placement of the coarse sand pack, an approximate 1-foot fine sand pack was placed, followed by bentonite chips to 1 foot bgs and a concrete surface seal. The monitoring wells were completed with locking, flush-mount protective casings.

Prior to groundwater sampling, the new monitoring wells were developed in accordance with WAC Chapter NR141. Monitoring well construction details and monitoring well development forms are provided in Appendix C. The monitoring well purge water and soil cuttings generated as part of this investigation were stored on-site in 55-gallon drums.

### **2.3 Location and Elevation Survey**

To facilitate reliable estimates of local groundwater flow direction and to document new monitoring well locations, the elevation and horizontal location of each well was surveyed by STS to a vertical accuracy of  $\pm 0.01$  foot and horizontal accuracy of 1 foot. Vertical elevations at each monitoring well were obtained at the ground surface and on the north or marked side top of the PVC well casing using differential leveling relative to a local datum.

### **2.4 Groundwater Sampling**

Prior to sampling, depth to groundwater measurements were obtained from the three monitoring wells to an accuracy of 0.01-ft using an electronic water level indicator. These measurements were referenced to the top of the PVC casing at each well. Pre-sampling well purging consisted of the removal of a minimum of four volumes of water from each well. Groundwater sampling



was then conducted by lowering a dedicated disposable PVC bailer into the water column within the well (using dedicated polypropylene rope), in a manner such that disturbance to the water column was minimized. The bailer was then raised to the surface and water was discharged from the bailer into laboratory-supplied containers. Volatile organic analysis (VOA) vials were securely capped with a Teflon-lined lid and observed to verify that no headspace existed within the sample container. The groundwater samples collected from the monitoring wells were submitted to Great Lakes Analytical for analysis of VOCs, PAHs, and dissolved lead.

### **3.0 PHYSICAL SITE CHARACTERISTICS**

#### **3.1 Regional Geology**

Surficial soils in the vicinity of the site are classified as Miami Clay Loam. This soil type consists of 4 to 8 inches of grayish-brown compact clay loam overlying clay loam or clay. Loam, gravel or sand is encountered at minimum depths of 2.5 feet bgs.

The general geology near the site consists of approximately 100 feet of glacial ground moraine deposits (glacial till). The glacial till includes boulders, gravel, sand, silt and clay, and overlies an approximate 2,000 to 3,000 foot thick sequence of sedimentary bedrock units. Progressing downward, the bedrock consists of Devonian-age dolomite, shaly limestone and shale. The Devonian-age dolomite overlies Silurian-age dolomite.

#### **3.2 Regional Hydrogeology and Water Usage**

Near-surface groundwater occurs in unconsolidated glacial deposits, and regionally flows to the southeast (toward the Milwaukee River). Local features, however, such as wells, buried utilities, tunnels, roadways, building foundations and fill soil can affect the direction of local shallow groundwater flow. Regionally, groundwater flow is eastward, toward Lake Michigan.

#### **3.3 Site Specific Topography and Geology**

The site is situated approximately 665 feet above mean sea level and slopes slightly to the south and southwest. The Milwaukee River is situated approximately 1,000 feet to the southeast of the subject property, at an elevation approximately 70 feet lower than the property. Surface water drainage from the subject site likely flows toward stormwater inlets located along North Hubbard Street to the east and/or East Reservoir Avenue to the south, and is directed toward the Milwaukee River.

Data collection activities conducted as part of this investigation have provided information to characterize subsurface conditions at the 301 East Brown Street property. The locations of hydraulic probe borings and monitoring wells installed as part of this investigation are shown on Figure 2, and their total depths and the depths of soil samples retained for laboratory analysis (in feet bgs) are as follows:

<u>Probe/Well</u>	<u>Total Depth (ft)</u>	<u>Soil Sample Depth (ft)</u>
STS-1	8	2-4, 6-8
STS-2	9.5	2-4, 8-9.5
STS-3	8	2-4, 6-8
STS-4	6	2.5-4
MW-1	25.5	2-4, 7.5-9.5
MW-2	25.5	2-4, 7.5-9.5
MW-3	25.5	0-2, 7.5-9.5

With respect to soils encountered, the hydraulic probes and monitoring well installation borings revealed the presence of a minimum of approximately 18 feet of fill materials that consist of silty sand, silt, silty clay, clayey silt and sand and gravel that contains brick, slag, coal and concrete fragments, and possible foundry sand. The fill materials are underlain by sandy silt and silty clay to depths of 25.5 feet bgs. Based on the absence of noteworthy stratigraphy encountered beneath the fill materials, a geologic cross-section was not prepared as part of this report.

### 3.4 Site Specific Hydrogeology

Based on the November 8, 2002 depth to groundwater level measurements in feet below top of PVC well casing and the November 5, 2002 monitoring well elevation survey results, groundwater elevations are documented as follows:

<u>Monitoring Well</u>	<u>Top of PVC Elevation</u>	<u>Depth to Water</u>	<u>Potentiometric Surface</u>
MW-1	658.78	23.55	635.23
MW-2	658.89	20.15	638.74
MW-3	658.48	19.70	638.78

Based on apparent slow recovery of groundwater levels after monitoring well installation, additional groundwater levels were obtained on December 27, 2002. The resulting groundwater elevations are documented as follows:

Top of Monitoring Well	Depth PVC Elevation	Depth to Water	Potentiometric Surface
MW-1	658.78	21.05	637.73
MW-2	658.89	21.55	637.34
MW-3	658.48	21.20	637.28

The potentiometric surface and inferred directions of groundwater flow based on the groundwater elevations listed above are illustrated on Figure 3. As shown on Figure 3, the estimated direction of shallow groundwater flow is toward the east-southeast, at a horizontal hydraulic gradient of 0.012.



#### 4.0 CHEMICAL CHARACTERISTICS OF SOIL

Laboratory reports including chain-of-custody forms for the 13 soil samples collected from the 4 hydraulic probes and 3 monitoring well installation borings are provided in Appendix C, and the results are summarized in Table 1. The hydraulic probe and monitoring well installation boring locations are shown on Figure 2. Sample results are reported in units of micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ), which is equivalent to parts per billion, or milligrams per kilogram ( $\text{mg}/\text{kg}$ ), which is equivalent to parts per million.

##### 4.1 Volatile Organic Compounds

Seven soil samples were retained for laboratory analysis of VOCs. None of the soil samples collected from hydraulic probes STS-1 and STS-3 (Figure 2) at depths of 2 to 4 feet bgs revealed detectable concentrations of VOCs. Soil samples collected from STS-2 and STS-4 revealed the following VOC concentrations:

- STS-2 (2 – 4 feet): Toluene ( $35.5 \mu\text{g}/\text{kg}$ ), Ethylbenzene ( $27.8 \mu\text{g}/\text{kg}$ ), Xylenes ( $108 \mu\text{g}/\text{kg}$ ); and
- STS-4 (2.5 – 4 feet): sec-Butylbenzene ( $34.1 \mu\text{g}/\text{kg}$ ), tert-Butylbenzene ( $213 \mu\text{g}/\text{kg}$ ), Ethylbenzene ( $34.8 \mu\text{g}/\text{kg}$ ), Naphthalene ( $19,500 \mu\text{g}/\text{kg}$ ).

*Not indicated  
GW Pathway*

Soil samples from all three monitoring well installation borings were also collected and submitted for laboratory analysis as part of this investigation. The soil sample collected from monitoring well installation boring MW-1 did not reveal detectable VOC concentrations. The remaining two soil samples revealed the following VOC concentrations:

- MW-2 (2 – 4 feet): n-Butylbenzene ( $36.8 \mu\text{g}/\text{kg}$ ), p-Isopropyltoluene ( $25.8 \mu\text{g}/\text{kg}$ ), Naphthalene ( $149 \mu\text{g}/\text{kg}$ ), Toluene ( $44 \mu\text{g}/\text{kg}$ ), Trichloroethene ( $127 \mu\text{g}/\text{kg}$ ), Xylenes ( $101 \mu\text{g}/\text{kg}$ ); and
- MW-3 (7.5 – 9.5 feet): n-Butylbenzene ( $1,050 \mu\text{g}/\text{kg}$ ), sec-Butylbenzene ( $781 \mu\text{g}/\text{kg}$ ), Ethylbenzene ( $5,880 \mu\text{g}/\text{kg}$ ), Isopropylbenzene ( $280 \mu\text{g}/\text{kg}$ ), p-isopropyltoluene ( $3,050 \mu\text{g}/\text{kg}$ ), Naphthalene ( $1,260 \mu\text{g}/\text{kg}$ ), Toluene ( $1,740 \mu\text{g}/\text{kg}$ ), 1,2,4-Trimethylbenzene ( $211 \mu\text{g}/\text{kg}$ ), 1,3,5-Trimethylbenzene ( $70.6 \mu\text{g}/\text{kg}$ ), and Xylenes ( $18,900 \mu\text{g}/\text{kg}$ ).



1.4 Area

With respect to the VOCs of interest, the groundwater pathway WAC NR 720 RCL is a lower value than the direct contact pathway RCL. Site-specific groundwater pathway RCLs for VOCs of interest at the 301 East Brown Street Property were calculated based on USEPA Soil Screening Levels and the arithmetic mean of TOC analyses from vadose zone soil samples (the mean TOC value is 0.0114) collected as part of this investigation. These RCL values are provided as follows:

- Ethylbenzene – 12 mg/kg
- Xylenes – 1,300 mg/kg
- Toluene – 9 mg/kg
- TCE – 0.021 mg/kg
- Naphthalene – 67 mg/kg

0.057

Based on a comparison of the detected VOC concentrations in the seven soil samples retained for VOC analysis with the site-specific groundwater pathway RCLs listed above, the detected TCE concentration in sample MW-2 (2 to 4 feet bgs, 0.127 mg/kg) slightly exceeds the RCL. No other detected VOC concentrations exceed their respective RCLs.

#### 4.2 Lead

All ten of the hydraulic probe and monitoring well installation boring soil samples submitted for laboratory analysis of lead revealed detectable lead concentrations, ranging from 8.47 mg/kg to 404 mg/kg. The seven soil samples retained for lead analysis from the upper four feet of the subsurface<sup>1</sup> revealed lead concentrations that also ranged between 8.47 mg/kg and 404 mg/kg. Six of seven soil samples revealed lead concentrations greater than the 50 mg/kg WAC NR720 generic direct contact RCL for non-industrial land use and less than the 500 mg/kg WAC NR720 generic direct contact RCL for industrial land use, as follows (Figure 2): MW-1 – 66.8 mg/kg, MW-2 – 210 mg/kg, MW-3 – 86.3 mg/kg, STS-1 – 156 mg/kg, STS-2 – 76.4 mg/kg, and STS-4 – 404 mg/kg. As indicated in Section 5.3, none of the collected groundwater samples revealed

<sup>1</sup> Based on WDNR guidance, the upper four feet of the subsurface is evaluated for direct contact exposure as part of WAC NR700 rule series.

detectable lead concentrations. The detected lead concentrations in collected soil samples have therefore not affected groundwater quality.

### 4.3 Polynuclear Aromatic Hydrocarbons

Of the seven soil samples submitted for laboratory analysis of PAHs, all seven soil samples revealed detectable concentrations of PAHs (Table 1). All seven soil samples revealed exceedances of non-industrial land use direct contact pathway RCLs for PAHs, and four of the seven soil samples revealed exceedances of industrial land use direct contact pathway RCLs for PAHs. These four soil samples are as follows: MW-1 (2 – 4 feet), MW-2 (2 – 4 feet), STS-2 (2 – 4 feet), and STS-4 (2.5 – 4 feet) (Figure 2). The specific PAH compounds that exceed the direct contact pathway RCLs are identified in Table 1.

The PAH concentrations detected in all seven soil samples are further evaluated in the determination of soil cleanup levels for PAHs using the benzo(a)pyrene-equivalent concentration approach. This approach is specified in the WDNR March 1997 “Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons (PAHs) Interim Guidance” document. Under this approach, the equivalent benzo(a)pyrene (BaP) concentration is determined by multiplying the measured concentration (mg/kg) of each carcinogenic PAH compound by its relative potency factor (RPF), as follows:

For MW-1:			
<u>PAH</u>	<u>RPF</u>	<u>Concentration</u>	<u>BaP Equivalent Concentration</u>
Benzo(a)anthracene	0.1	1.49	0.149
Benzo(a)pyrene	1	1.27	1.27
Benzo(b)fluoranthene	0.1	1.41	0.141
Benzo(k)fluoranthene	0.01	0.54	0.0054
Chrysene	0.001	1.29	0.00129
Indeno(1,2,3-cd)-pyrene	0.1	1.04	0.104
Dibenz(a,h)anthracene	1	1.12	<u>1.12</u>
		<b>Total</b>	<b>2.79 mg/kg</b>

For MW-2:

<u>PAH</u>	<u>RPF</u>	<u>Concentration</u>	<u>BaP Equivalent Concentration</u>
Benzo(a)anthracene	0.1	1.91	0.191
Benzo(a)pyrene	1	2.71	2.71
Benzo(b)fluoranthene	0.1	1.41	0.141
Benzo(k)fluoranthene	0.01	1.13	0.0113
Chrysene	0.001	2.07	0.00207
Indeno(1,2,3-cd)-pyrene	0.1	2.31	0.231
Dibenz(a,h)anthracene	1	2.87	<u>2.87</u>
<b>Total</b>			<b>6.16 mg/kg</b>

For MW-3:

<u>PAH</u>	<u>RPF</u>	<u>Concentration</u>	<u>BaP Equivalent Concentration</u>
Benzo(a)anthracene	0.1	0.197	0.0197
Benzo(a)pyrene	1	0.207	0.207
Benzo(b)fluoranthene	0.1	0.220	0.022
Chrysene	0.001	0.198	0.000198
Indeno(1,2,3-cd)-pyrene	0.1	0.232	0.0232
Dibenz(a,h)anthracene	1	0.0316	<u>0.0316</u>
<b>Total</b>			<b>0.304 mg/kg</b>

For STS-1:

<u>PAH</u>	<u>RPF</u>	<u>Concentration</u>	<u>BaP Equivalent Concentration</u>
Benzo(a)anthracene	0.1	0.396	0.0396
Benzo(a)pyrene	1	0.627	0.627
Benzo(b)fluoranthene	0.1	0.555	0.0555
Benzo(k)fluoranthene	0.01	0.218	0.00218
Chrysene	0.001	0.564	0.000564
Indeno(1,2,3-cd)-pyrene	0.1	0.328	0.0328
Dibenz(a,h)anthracene	1	0.222	<u>0.222</u>
<b>Total</b>			<b>0.980 mg/kg</b>



For STS-2:

<u>PAH</u>	<u>RPF</u>	<u>Concentration</u>	<u>BaP Equivalent Concentration</u>
Benzo(a)anthracene	0.1	0.411	0.0411
Benzo(a)pyrene	1	0.604	0.604
Benzo(b)fluoranthene	0.1	0.514	0.0514
Benzo(k)fluoranthene	0.01	0.195	0.00195
Chrysene	0.001	0.502	0.000502
Indeno(1,2,3-cd)-pyrene	0.1	0.323	0.0323
Dibenz(a,h)anthracene	1	0.344	<u>0.344</u>
<b>Total</b>			<b>1.08 mg/kg</b>

For STS-3:

<u>PAH</u>	<u>RPF</u>	<u>Concentration</u>	<u>BaP Equivalent Concentration</u>
Benzo(a)pyrene	1	0.0225	0.0225
Dibenz(a,h)anthracene	1	0.00964	<u>0.00964</u>
<b>Total</b>			<b>0.0321 mg/kg</b>

For STS-4:

<u>PAH</u>	<u>RPF</u>	<u>Concentration</u>	<u>BaP Equivalent Concentration</u>
Benzo(a)anthracene	0.1	19.4	1.94
Benzo(a)pyrene	1	16.5	16.5
Benzo(b)fluoranthene	0.1	13.7	1.37
Benzo(k)fluoranthene	0.01	7.14	0.0714
Chrysene	0.001	20.1	0.0201
Indeno(1,2,3-cd)-pyrene	0.1	7.74	0.774
Dibenz(a,h)anthracene	1	1.92	<u>1.92</u>
<b>Total</b>			<b>22.6 mg/kg</b>

As indicated on page D-2 of the WDNR March 1997 guidance document identified above, the target risk for the non-industrial scenario can be modified for in-situ contaminated soil to  $1 \times 10^{-6}$  on a site-specific basis under WAC NR 720.19(5)(a). Therefore, the resultant soil cleanup level equivalent to the generic RCLs (expressed as BaP-equivalent concentration) using a combined target risk of  $7 \times 10^{-6}$  is 0.61 mg/kg. This soil cleanup level is greater than the equivalent BaP concentrations for the soil samples identified as MW-3 (0 – 2 feet bgs) and STS-3 (2 – 4 feet bgs), such that the PAH concentrations detected in these two soil samples do not pose an

unacceptable risk to public health via the direct contact exposure pathway, based on WDNR guidance. The remaining five soil samples (collected from MW-1, MW-2, STS-1, STS-2, and STS-4) revealed PAH concentrations that exceeded the combined target risk of  $7 \times 10^{-6}$  of 0.61 mg/kg (expressed as BaP-equivalent concentration).

With respect to groundwater pathway RCLs for the PAHs, the following slight exceedances were noted: acenaphthylene (0.843 mg/kg detected compared with RCL of 0.7 mg/kg) and phenanthrene (2.98 mg/kg detected compared with RCL of 1.8 mg/kg) in the soil sample collected from monitoring well installation boring MW-1, and acenaphthylene (0.778 mg/kg detected compared with RCL of 0.7 mg/kg) in the soil sample collected from MW-2. As indicated in Section 5.2, however, none of the groundwater samples collected as part of this investigation revealed detectable PAH concentrations. The detected PAH concentrations in collected soil samples have therefore not affected groundwater quality.

## 5.0 CHEMICAL CHARACTERISTICS OF GROUNDWATER

Laboratory reports for the groundwater samples are provided as Appendix C and the results are summarized in Table 2. The monitoring well locations are shown on Figure 2. Sample results are reported in units of micrograms per liter ( $\mu\text{g/L}$ ), which is equivalent to parts per billion, or milligrams per liter ( $\text{mg/L}$ ), which is equivalent to parts per million.

### 5.1 Volatile Organic Compounds

With respect to groundwater samples collected from monitoring wells, no VOCs were detected in the groundwater samples collected from monitoring wells MW-1 and MW-3. The groundwater sample collected from MW-2 revealed a TCE concentration of  $0.864 \mu\text{g/L}$ , which slightly exceeds the WAC NR140 Preventive Action Limit (PAL) of  $0.5 \mu\text{g/L}$  but is less than the Enforcement Standard (ES) of  $5 \mu\text{g/L}$ .

### 5.2 Lead

None of the collected groundwater samples had detectable concentrations of lead.

### 5.3 Polynuclear Aromatic Hydrocarbons

None of the collected groundwater samples revealed detectable PAH concentrations.

## 6.0 CONCLUSIONS

The field and laboratory information obtained as part of this site investigation have substantially increased our understanding of subsurface conditions at the 301 East Brown Street Property. With respect to soils encountered during the investigation, the hydraulic probes and monitoring well installation borings revealed the presence of a minimum of approximately 18 feet of fill materials that consist of silty sand, silt, silty clay, clayey silt and sand and gravel that contains brick, slag, coal and concrete fragments, and possible foundry sand. The presence of these fill materials may result in the subject property being classified as a "historic fill site", based on information contained in the WDNR April 2002 publication PUB-RR-683.

The fill materials are underlain by sandy silt and silty clay to depths of 25.5 feet bgs. The approximate depth to the water table measured in monitoring wells MW-1, MW-2 and MW-3 ranges between 21 and 22 feet bgs. The estimated direction of shallow groundwater flow is toward the east-southeast, at a horizontal hydraulic gradient of 0.012.

Based on a comparison of the detected VOC concentrations in the seven soil samples retained for VOC analysis with site-specific groundwater pathway RCLs, the detected TCE concentration in sample MW-2 (2 to 4 feet bgs, 0.127 mg/kg) slightly exceeds the RCL. No other detected VOC concentrations exceed their respective groundwater pathway and direct contact RCLs. Based on concentration and frequency of detection, STS concludes that the detected VOC concentrations in the vadose zone at the 301 East Reservoir property do not warrant additional vadose zone investigation or remediation.

Six of seven soil samples revealed lead concentrations greater than the 50 mg/kg WAC NR720 generic direct contact RCL for non-industrial land use and less than the 500 mg/kg WAC NR720 generic direct contact RCL for industrial land use. None of the collected groundwater samples revealed detectable lead concentrations. The detected lead concentrations in collected soil samples have therefore not affected groundwater quality.

With respect to PAHs, the soil cleanup level equivalent to the generic RCLs (expressed as BaP-equivalent concentration) using a combined target risk of  $7 \times 10^{-6}$  is 0.61 mg/kg. This soil cleanup level is greater than the equivalent BaP concentrations for the soil samples identified as MW-3 (0 – 2 feet bgs) and STS-3 (2 – 4 feet bgs), such that the PAH concentrations detected in these two



soil samples do not pose an unacceptable risk to public health via the direct contact exposure pathway, based on WDNR guidance. The remaining five soil samples (collected from MW-1, MW-2, STS-1, STS-2, and STS-4) revealed PAH concentrations that exceeded the combined target risk of  $7 \times 10^{-6}$  of 0.61 mg/kg (expressed as BaP-equivalent concentration). An applicable remedy to address the direct contact pathway would consist of covering the impacted soils in-place, which represents a performance standard remedy that would meet the requirements of WAC NR720.19(2).

With regard to groundwater pathway RCLs for the PAHs, the following slight exceedances were noted: acenaphthylene (0.843 mg/kg detected compared with RCL of 0.7 mg/kg) and phenanthrene (2.98 mg/kg detected compared with RCL of 1.8 mg/kg) in the soil sample collected from monitoring installation boring MW-1, and acenaphthylene (0.778 mg/kg detected compared with RCL of 0.7 mg/kg) in the soil sample collected from MW-2. None of the collected groundwater samples revealed detectable PAH concentrations. The detected PAH concentrations in collected soil samples have therefore not affected groundwater quality.

No VOCs were detected in the groundwater samples collected from monitoring wells MW-1 and MW-3. The groundwater sample collected from MW-2 revealed a TCE concentration of 0.864  $\mu\text{g/L}$ , which slightly exceeds the WAC NR140 Preventive Action Limit (PAL) of 0.5  $\mu\text{g/L}$  but is less than the ES value of 5.0  $\mu\text{g/L}$ . Based on concentration and frequency of detection, and the absence of groundwater receptors within the site vicinity, we request a PAL variance from the WDNR for the 0.864  $\mu\text{g/L}$  detected TCE concentration in the groundwater sample collected from monitoring well MW-2. ①

In summary, STS concludes the following:

1. Lead, PAHs and VOCs have not impacted site groundwater to the extent that additional groundwater investigation or remediation is warranted.
2. Soil samples collected from locations MW-1, MW-2, MW-3, STS-1, STS-2 and STS-4 (Figure 2) revealed PAH or lead concentrations that exceeded direct contact pathway RCLs for non-industrial land use. An applicable remedy to address the direct contact pathway consists of covering the impacted soils in-place, which represents a performance standard remedy that

will meet the requirements of WAC NR720.19(2). The impacted soils will be covered as part of property development during 2003, using a subset or all of the following: asphalt pavement, concrete pavement, an approximate two-foot layer of imported clean fill material, and building foundations. Impacted soils that are excavated as part of site development will be re-located beneath the cover elsewhere on the property or properly disposed offsite. Pursuant to WAC NR 724.15, a Construction Documentation Report will be prepared subsequent to the implementation of the performance standard remedy, and will be submitted to the WDNR as part of WAC NR726 Case Closure. As a condition of Case Closure, appropriate institutional controls, such as a property deed restriction to document the presence of the covered impacted soils, will be implemented.

3. As indicated above, the presence of fill materials on the subject property may result in the property being classified as a "historic fill site", based on information contained in the WDNR April 2002 publication PUB-RR-683. As part of WDNR review of this Site Investigation report, we request a determination from the WDNR as to whether the 301 East Brown Street property is classified as a historic fill site. In that event, prior to site development, an exemption to WAC NR506.085 (which prohibits development on historic fill sites) will be requested from the WDNR through the completion of WDNR Forms 4400-226 and 4400-226A and supporting documents.

*Waste Profile*

②

*#3 SI Review*

## FIGURES

1 – Site Location

2 – Site Features

3 – Potentiometric Surface Elevations (December 27, 2002)





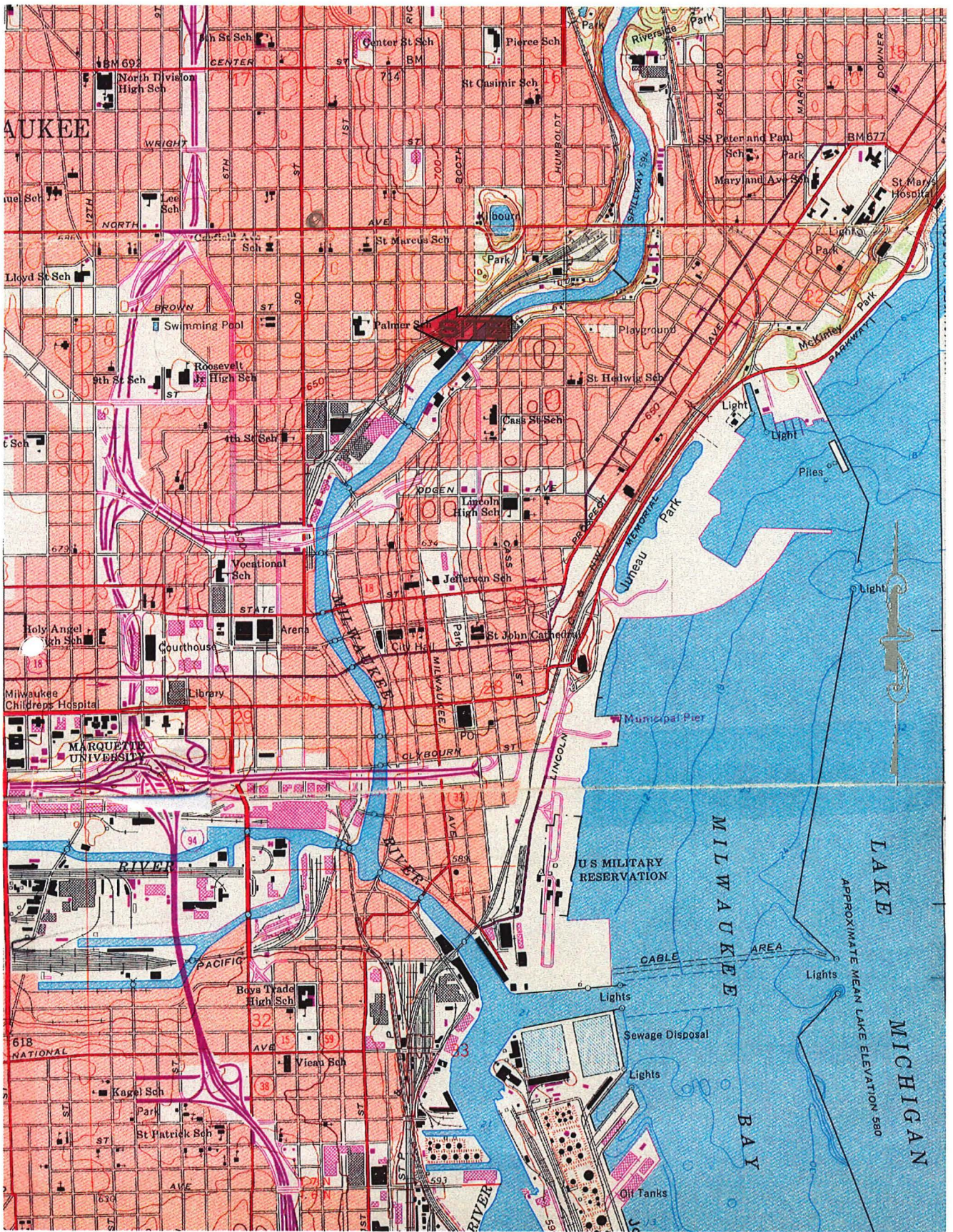


FIGURE 1  
 SITE LOCATION MAP  
 301 EAST BROWN STREET  
 MILWAUKEE, WISCONSIN



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

DESIGNED BY	MOM	8-7-02
DRAWN BY	CMS	8-7-02
APPROVED BY	MOM	8-7-02
CADFILE	SCALE	
0587185EA001	N.T.S.	
STS PROJECT NO.	FIGURE NO.	
0587185EA	1	



EAST BROWN STREET

AREA OF FORMER  
BOILER/ENGINE  
ROOM STS-1 STS-2  
(BASEMENT) STS-3 STS-4  
MW-1 MW-2  
MW-3

APPROXIMATE LOCATION  
OF FORMER SOLVENT  
STORAGE AREA

NORTH HUBBARD STREET

FORMER LOCATION OF  
SHOE FACTORY  
(RAZED LATE 1970'S)

NORTH KILLIAN PLACE

INDUSTRIAL  
BUILDING

INDUSTRIAL  
BUILDING

SUBJECT  
SITE  
BUILDING

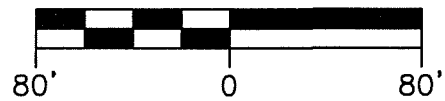
INDUSTRIAL  
BUILDING

EAST RESERVOIR AVENUE

**LEGEND:**

- STS-1 - HYDRAULIC PROBE LOCATION
- ⊕ MW-1 - MONITORING WELL LOCATION

SCALE IN FEET



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FIGURE 2  
SAMPLING LOCATIONS  
301 EAST BROWN STREET  
MILWAUKEE, WISCONSIN

DESIGNED BY	MOM	8-7-02
DRAWN BY	CMS	8-7-02
APPROVED BY	MOM	8-7-02
CADFILE	SCALE	
0587185EA002	AS SHOWN	
STS PROJECT NO.	FIGURE NO.	
0587185EA	2	

**EAST BROWN STREET**

(637.73)

AREA OF FORMER  
BOILER/ENGINE  
ROOM STS-1  
(BASEMENT)

STW-2  
STW-3  
STW-4  
MW-3  
(637.28)

MW-1  
(637.34)

APPROXIMATE LOCATION  
OF FORMER SOLVENT  
STORAGE AREA

**NORTH HUBBARD STREET**

FORMER LOCATION OF  
SHOE FACTORY  
(RAZED LATE 1970'S)

**NORTH KILLIAN PLACE**

SUBJECT  
SITE  
BUILDING

INDUSTRIAL  
BUILDING

INDUSTRIAL  
BUILDING

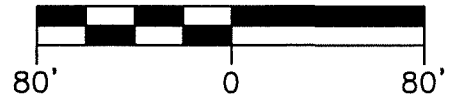
INDUSTRIAL  
BUILDING

**EAST RESERVOIR AVENUE**

**LEGEND:**

- STS-1 - HYDRAULIC PROBE LOCATION
- ⊕ MW-1 - MONITORING WELL LOCATION
- 637.3- - POTENTIOMETRIC SURFACE CONTOUR RELATIVE TO MEAN SEA LEVEL
- - INFERRED DIRECTION OF GROUNDWATER FLOW

SCALE IN FEET



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POTENTIOMETRIC SURFACE  
12/27/2002  
301 EAST BROWN STREET  
MILWAUKEE, WISCONSIN

DESIGNED BY	MOM	12-27-02
DRAWN BY	CJH	12-27-02
APPROVED BY	MOM	12-27-02
CADFILE	SCALE	
0587185EA002	AS SHOWN	
STS PROJECT NO.	FIGURE NO.	
0587185EA	3	

## TABLES

1 - Laboratory Results of Collected Soil Samples

2 - Laboratory Results of Collected Groundwater Samples



TABLE 1  
LABORATORY RESULTS OF COLLECTED SOIL SAMPLES  
301 EAST BROWN STREET PROPERTY  
STS PROJECT NO. 5-87185EA

Parameters	Generic RCLs			MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	STS-1	STS-1	STS-2	STS-2	STS-3	STS-3	STS-4
	Direct Contact Pathway		Groundwater Pathway	2-4'	7.5-9.5'	2-4'	7.5-9.5'	0-2'	7.5-9.5'	2-4'	6-8'	2-4'	8-9.5'	2-4'	6-6'	2.5-4'
	Non-Industrial	Industrial		10/29/2002	10/29/2002	10/29/2002	10/29/2002	10/29/2002	10/29/2002	10/16/2002	10/16/2002	10/16/2002	10/16/2002	10/16/2002	10/16/2002	10/16/2002
Metals (mg/kg)																
Lead	50	500	--	66.8 <sup>A</sup>	396 <sup>A</sup>	210 <sup>A</sup>	9.98	86.3 <sup>A</sup>	203 <sup>A</sup>	156	NA	76.4 <sup>A</sup>	NA	8.47	NA	404
VOCs (µg/kg)																
Benzene	--	--	5.5	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Bromobenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Bromodichloromethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
sec-Butylbenzene	--	--	--	NA	<25.0	<25.0	NA	NA	781	<25.0	NA	<25.0	NA	<25.0	NA	34.1
tert-Butylbenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	213
n-Butylbenzene	--	--	--	NA	<25.0	36.8	NA	NA	1050	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Carbon tetrachloride	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Chloroform	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Chlorobenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Chlorodibromomethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Chloroethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Chloromethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
2-Chlorotoluene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
4-Chlorotoluene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,2-Dibromo-3-chloropropane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,2-Dibromoethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,3-Dichlorobenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,4-Dichlorobenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,2-Dichloroethane	--	--	4.9	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,2-Dichlorobenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,1-Dichloroethene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
cis-1,2-Dichloroethene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Dichlorodifluoromethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
trans-1,2-Dichloroethene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,1-Dichloroethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,2-Dichloroethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,2-Dichloropropane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
1,3-Dichloropropane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
2,2-Dichloropropane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Diisopropyl ether	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	<25.0	NA	<25.0	NA	<25.0
Ethylbenzene	--	--	2,900	NA	<25.0	<25.0	NA	NA	5880 <sup>C</sup>	<25.0	NA	27.8	NA	<25.0	NA	34.8
Hexachlorobutadiene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
Isopropylbenzene	--	--	--	NA	<25.0	<25.0	NA	NA	280	<25.0	NA	NA	NA	<25.0	NA	NA
p-Isopropyltoluene	--	--	--	NA	<25.0	25.8	NA	NA	3050	<25.0	NA	NA	NA	<25.0	NA	<100
Methylene chloride	--	--	--	NA	<100	<100	NA	NA	<1000	<100	NA	NA	NA	<100	NA	<100
Methyl-tert-butyl-ether	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	<25.0
Naphthalene	20,000	110,000	400	NA	<25.0	149	NA	NA	1260 <sup>C</sup>	<25.0	NA	NA	NA	<25.0	NA	19500 <sup>C</sup>
n-Propylbenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
1,1,2,2-Tetrachloroethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
Tetrachloroethene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
Toluene	--	--	1,500	NA	<25.0	44	NA	NA	1740 <sup>C</sup>	<25.0	NA	35.5	NA	<25.0	NA	NA
1,2,3-Trichlorobenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
1,2,4-Trichlorobenzene	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
1,1,1-Trichloroethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
1,1,2-Trichloroethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
Trichlorofluoromethane	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
1,2,4-Trimethylbenzene	--	--	--	NA	<25.0	<25.0	NA	NA	211	<25.0	NA	NA	NA	<25.0	NA	103
Trichloroethene	--	--	--	NA	<25.0	127	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
1,3,5-Trimethylbenzene	--	--	--	NA	<25.0	<25.0	NA	NA	70.6	<25.0	NA	NA	NA	<25.0	NA	NA
Vinyl chloride	--	--	--	NA	<25.0	<25.0	NA	NA	<25.0	<25.0	NA	NA	NA	<25.0	NA	NA
Xylenes, total	--	--	4,100	NA	<25.0	101	NA	NA	18900 <sup>C</sup>	<25.0	NA	108	NA	<25.0	NA	NA
PAHs (µg/L)																
Acenaphthene	900,000	60,000,000	38,000	3050	NA	1160	NA	237	NA	1600	NA	1040	NA	<113	NA	31700
Acenaphthylene	18,000	360,000	700	843 <sup>C</sup>	NA	778 <sup>C</sup>	NA	<235	NA	275	NA	<218	NA	<226	NA	4000 <sup>C</sup>
Anthracene	5,000,000	300,000,000	3,000,000	945	NA	135	NA	<117	NA	168	NA	<109	NA	<113	NA	16400
Benzo(a)anthracene	88	3,900	17,000	1490 <sup>A</sup>	NA	1910 <sup>A</sup>	NA	197 <sup>A</sup>	NA	396 <sup>A</sup>	NA	411 <sup>A</sup>	NA	<56.6	NA	19400 <sup>C</sup>
Benzo(a)pyrene	8.8	390	48,000	1270 <sup>AB</sup>	NA	2710 <sup>AB</sup>	NA	207 <sup>A</sup>	NA	627 <sup>A</sup>	NA	604 <sup>AB</sup>	NA	22.5 <sup>A</sup>	NA	16500 <sup>A</sup>
Benzo(b)fluoranthene	88	3,900	360,000	1410 <sup>A</sup>	NA	3360 <sup>A</sup>	NA	220 <sup>A</sup>	NA	555 <sup>A</sup>	NA	514 <sup>A</sup>	NA	<56.6	NA	13700 <sup>A</sup>
Benzo(ghi)perylene	1,800	39,000	6,800,000	637	NA	1340	NA	186	NA	333	NA	349	NA	<113	NA	6190 <sup>A</sup>
Benzo(k)fluoranthene	880	39,000	870,000	540	NA	1130 <sup>A</sup>	NA	<117	NA	218	NA	195	NA	<113	NA	7140 <sup>A</sup>
Chrysene	8,800	390,000	37,000	1290	NA	2070	NA	198	NA	564	NA	502	NA	<113	NA	20100 <sup>A</sup>
Dibenzo(a,h)anthracene	8.8	390	38,000	1120 <sup>AB</sup>	NA	2870 <sup>AB</sup>	NA	31.6 <sup>A</sup>	NA	222 <sup>A</sup>	NA	344 <sup>A</sup>	NA	9.64 <sup>A</sup>	NA	1920 <sup>A</sup>
Fluoranthene	600,000	40,000,000	500,000	3810	NA	1030	NA	327	NA	1040	NA	769	NA	<113	NA	145000
Fluorene	600,000	40,000,000	100,000	448	NA	130	NA	<117	NA	179	NA	<109	NA	<113	NA	11000
Indeno(1,2,3-cd)pyrene	88	3,900	680,000	1040 <sup>A</sup>	NA	2310 <sup>A</sup>	NA	232 <sup>A</sup>	NA	328 <sup>A</sup>	NA	323 <sup>A</sup>	NA	<56.6	NA	7740 <sup>A</sup>
1-Methylnaphthalene	1,100,000	70,000,000	23,000	2390	NA	556	NA	<117	NA	194	NA	<109	NA	<113	NA	9120
2-Methylnaphthalene	600,000	40,000,000	20,000	2730	NA	791	NA	<117	NA	782	NA	347	NA	<113	NA	18800
Naphthalene	20,000	110,000	400	331	NA	<106	NA	<117	NA	<112	NA	<109	NA	<113	NA	2630 <sup>C</sup>
Phenanthrene	18,000	390,000	1,800	2980 <sup>C</sup>	NA	<106	NA	171	NA	814	NA	286	NA	<113	NA	51000 <sup>AC</sup>
Pyrene	500,000	30,000,000	8,700,000	2010	NA	732	NA	409	NA	405	NA	320	NA	<113	NA	19900
Total Organic Carbon											13200		12100		8930	

Notes:  
VOCs = Volatile Organic Compounds  
A Parameter exceeds NR 720 Generic RCL for Non-Industrial Direct Contact.  
B Parameter exceeds NR 720 Generic RCL for Industrial Direct Contact.  
C Parameter exceeds NR 720 Generic RCL for Groundwater Pathway.  
-- No Generic RCL established.  
NA = Not analyzed



**TABLE 2**  
**LABORATORY RESULTS OF COLLECTED GROUNDWATER SAMPLES**  
**301 EAST BROWN STREET PROPERTY**  
**STS PROJECT NO. 5-87185EA**

Parameters	NR 140 Standards		MW-1	MW-2	MW-3	MW-3D
	ES	PAL	11/8/2002	11/8/2002	11/8/2002	11/8/2002
Metals (ug/L)						
Lead	15	1.5	<5.00	<5.00	<5.00	NA
VOCs (µg/L)						
Benzene	5	0.5	<0.500	<0.500	<0.500	<0.500
Bromobenzene	--	--	<0.500	<0.500	<0.500	<0.500
Bromodichloromethane	0.6	0.06	<0.500	<0.500	<0.500	<0.500
n-Butylbenzene	--	--	<0.500	<0.500	<0.500	<0.500
sec-Butylbenzene	--	--	<0.500	<0.500	<0.500	<0.500
tert-Butylbenzene	--	--	<0.500	<0.500	<0.500	<0.500
Carbon tetrachloride	5	0.5	<0.500	<0.500	<0.500	<0.500
Chlorobenzene	--	--	<0.500	<0.500	<0.500	<0.500
Chloroethane	400	80	<0.500	<0.500	<0.500	<0.500
Chloroform	6	0.6	<0.140	<0.140	<0.140	<0.140
Chloromethane	3	0.3	<0.600	<0.600	<0.600	<0.600
2-Chlorotoluene	--	--	<0.500	<0.500	<0.500	<0.500
4-Chlorotoluene	--	--	<0.500	<0.500	<0.500	<0.500
Dibromochloromethane	60	6	<0.500	<0.500	<0.500	<0.500
1,2-Dibromo-3-chloropropane	0.2	0.02	<0.390	<0.390	<0.390	<0.390
1,2-Dibromoethane	0.05	0.005	<0.380	<0.380	<0.380	<0.380
1,2-Dichlorobenzene	600	6	<0.500	<0.500	<0.500	<0.500
1,3-Dichlorobenzene	1250	125	<0.500	<0.500	<0.500	<0.500
1,4-Dichlorobenzene	75	15	<0.500	<0.500	<0.500	<0.500
Dichlorodifluoromethane	1000	200	<0.500	<0.500	<0.500	<0.500
1,1-Dichloroethane	850	85	<0.500	<0.500	<0.500	<0.500
1,2-Dichloroethane	5	0.5	<0.500	<0.500	<0.500	<0.500
1,1-Dichloroethene	7	0.7	<0.500	<0.500	<0.500	<0.500
cis-1,2-Dichloroethene	--	--	<0.500	<0.500	<0.500	<0.500
trans-1,2-Dichloroethene	--	--	<0.500	<0.500	<0.500	<0.500
1,2-Dichloropropane	5	0.5	<0.500	<0.500	<0.500	<0.500
1,3-Dichloropropane	--	--	<0.500	<0.500	<0.500	<0.500
2,2-Dichloropropane	--	--	<0.500	<0.500	<0.500	<0.500
Diisopropyl ether	--	--	<5.00	<5.00	<5.00	<5.00
Ethylbenzene	700	140	<0.500	<0.500	<0.500	<0.500
Hexachlorobutadiene	--	--	<5.00	<5.00	<5.00	<5.00
Isopropylbenzene	--	--	<0.500	<0.500	<0.500	<0.500
p-Isopropyltoluene	--	--	<0.500	<0.500	<0.500	<0.500
Methylene chloride	5	0.5	<0.530	<0.530	<0.530	<0.530
Methyl-tert-butyl-ether	60	12	<0.500	<0.500	<0.500	<0.500
Naphthalene	40	8	<2.00	<2.00	<2.00	<2.00
n-Propylbenzene	--	--	<0.500	<0.500	<0.500	<0.500
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.350	<0.350	<0.350	<0.350
Tetrachloroethene	5	0.5	<0.500	<0.500	<0.500	<0.500
Toluene	1000	200	<0.500	<0.500	<0.500	<0.500
1,2,3-Trichlorobenzene	--	--	<2.00	<2.00	<2.00	<2.00
1,2,4-Trichlorobenzene	--	--	<2.00	<2.00	<2.00	<2.00
1,1,1-Trichloroethane	200	40	<0.500	<0.500	<0.500	<0.500
1,1,2-Trichloroethane	5	0.5	<0.160	<0.160	<0.160	<0.160
Trichloroethene	5	0.5	<0.500	0.864	<0.500	<0.500
Trichlorofluoromethane	--	--	<0.500	<0.500	<0.500	<0.500
1,2,4-Trimethylbenzene	480	96	<1.00	<1.00	<1.00	<1.00
1,3,5-Trimethylbenzene	480	96	<1.00	<1.00	<1.00	<1.00
Vinyl chloride	0.2	0.02	<0.170	<0.170	<0.170	<0.170
Xylenes, total	10,000	1000	<0.500	<0.500	<0.500	<0.500

PAL

**TABLE 2**  
**LABORATORY RESULTS OF COLLECTED GROUNDWATER SAMPLES**  
**301 EAST BROWN STREET PROPERTY**  
**STS PROJECT NO. 5-87185EA**

Parameters	NR 140 Standards		MW-1	MW-2	MW-3	MW-3D
	ES	PAL	11/8/2002	11/8/2002	11/8/2002	11/8/2002
PAHs (ug/kg)						
Acenaphthene	--	--	<5.00	<5.00	<5.00	NA
Acenaphthylene	--	--	<5.00	<5.00	<5.00	NA
Anthracene	<b>3000</b>	<i>600</i>	<5.00	<5.00	<5.00	NA
Benzo(a)anthracene	--	--	<0.100	<0.100	<0.100	NA
Benzo(a)pyrene	<b>0.2</b>	<i>0.02</i>	<0.0200	<0.0200	<0.0200	NA
Benzo(b)fluoranthene	<b>0.2</b>	<i>0.02</i>	<0.0200	<0.0200	<0.0200	NA
Benzo(g,h,i)perylene	--	--	<5.00	<5.00	<5.00	NA
Benzo(k)fluoranthene	--	--	<0.100	<0.100	<0.100	NA
Chrysene	<b>0.2</b>	<i>0.02</i>	<0.0200	<0.0200	<0.0200	NA
Dibenzo(a,h)anthracene	--	--	<0.100	<0.100	<0.100	NA
Fluoranthene	<b>400</b>	<i>80</i>	<5.00	<5.00	<5.00	NA
Fluorene	<b>400</b>	<i>80</i>	<5.00	<5.00	<5.00	NA
Indeno (1,2,3-cd) pyrene			<0.200	<0.200	<0.200	NA
1-Methylnaphthalene			<5.00	<5.00	<5.00	NA
2-Methylnaphthalene	--	--	<5.00	<5.00	<5.00	NA
Naphthalene	<b>40</b>	<i>8</i>	<5.00	<5.00	<5.00	NA
Phenanthrene	--	--	<5.00	<5.00	<5.00	NA
Pyrene	<b>250</b>	<i>50</i>	<5.00	<5.00	<5.00	NA

## Notes:

VOCs = Volatile Organic Compounds

PAHs = Polynuclear Aromatic Hydrocarbons

**Bold value** = NR 140 Enforcement Standard Exceedance*Italic value* = NR 140 WAC Preventive Action Limit Exceedance

-- No NR 140 ES or PAL established.

NA = Not analyzed

## APPENDICES

- A – Summary of KEY Engineering Investigations
- B – Involved Parties List
- C – Soil Boring Logs, Well Construction Details, Well Development Forms, and Borehole Abandonment Forms
- D – Laboratory Results of Collected Soil and Groundwater Samples



## APPENDIX A

### Summary of KEY Engineering Investigations





SOIL	
GP-1	
DEPTH 1'-3'	7'-9'
PID	<2
VOCs	ND
Ba	63
Cd	1.3
Cr	15
Pb	47
Hg	<0.1
PHEN	7.9(J)

SOIL	
B-7	
DEPTH 3.5'-5'	8.5'-10'
PID	<5
Ba	19
Cd	0.7
Cr	5.2
Pb	21
Se	<6.2

SOIL	
GP-2	
DEPTH 1'-3'	
Ba	70
Cd	1.8
Cr	13
Pb	27

SOIL	
GP-3	
DEPTH 3'-5'	9'-11'
Ba	60
Cd	2.9
Cr	2.9
Pb	52
Se	18

GROUNDWATER	
TW-1	
DATE	2/22/99
B	0.2(J)
TCE	0.2(J)

SOIL	
GP-14	
DEPTH 7'-9'	
PID	<5
VOCs	ND

SOIL	
GP-15	
DEPTH 5'-7'	
PID	<5
VOCs	ND

GROUNDWATER	
TW-3	
DATE	3/26/99
MC	0.62(A)
PCE	2.6

SOIL	
B-8	
DEPTH 11'-12.5'	
PID	<5
VOCs	ND

SOIL	
GP-4	
DEPTH 7'-9'	
PID	<2
GRO	<0.6
DRO	<1.1
PCE	320

GROUNDWATER	
TW-2	
DATE	2/22/99
B	0.4(J)
T	0.7(J)
TCE	0.7

SOIL	
GP-16	
DEPTH 3'-5'	7'-9'
PID	<5
N	90
T	27
TCE	49

SOIL	
GP-5	
DEPTH 1'-3'	
PID	<2
VOCs	ND

SOIL	
GP-8	
DEPTH 1'-3'	
PID	<2
N	37(J)

SOIL	
B-13	
DEPTH 11'-12.5'	13.5'-15'
PID	<5
DRO	1.9
VOCs	ND
PVOCs	ND

SOIL	
B-12	
DEPTH 11'-12.5'	13.5'-15'
PID	<5
VOCs	ND

AREA 2

AREA 3

Subject Bldg Site

SOIL	
GP-7	
DEPTH 1'-3'	
PID	<2
VOCs	ND

SOIL	
GP-12	
DEPTH 11'-12'	
PID	<5
GRO	9.5
DRO	<5.6
t-BB	67
E	31
IPB	45
N	97
n-PB	52
T	38
TMBs	45
X	79

SOIL	
GP-6	
DEPTH 11'-13'	
PID	<2
E	5,070
Y	6,880
TMBs	43,300
s-BB	14,600
IPB	5,170
N	42,000
n-PB	7,130
p-IPT	9,090

SOIL	
GP-13	
DEPTH 11'-12'	
PID	<5.0
GRO	<6.0
DRO	11
VOCs	ND

SOIL	
GP-11	
DEPTH 10'-12'	
PID	<5
GRO	<0.0
DRO	<0.0
VOCs	ND

SOIL	
B-4	
DEPTH 3.5'-5'	
PID	<5
VOCs	ND

SOIL	
GP-9	
DEPTH 1'-3'	
PID	<2
DRO	12
N	34(J)

SOIL NOTES

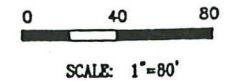
- P.I.D.: PHOTOIONIZATION DETECTOR, LU.
- LU: INSTRUMENT UNITS
- GRO: GASOLINE RANGE ORGANICS, mg/kg
- DRO: DIESEL RANGE ORGANICS, mg/kg
- VOCs: VOLATILE ORGANIC COMPOUNDS, ug/kg
- PVOCs: PETROLEUM VOLATILE ORGANIC COMPOUNDS, ug/kg
- E: ETHYLENE, ug/kg
- T: TOLUENE, ug/kg
- X: TOTAL XYLENES, ug/kg
- TMBs: TOTAL TRIMETHYLBENZENES, ug/kg
- s-BB: sec-BUTYLBENZENE, ug/kg
- t-BB: t-BUTYLBENZENE, ug/kg
- IPB: ISOPROPYLBENZENE, ug/kg
- N: NAPHTHALENE, ug/kg
- n-PB: n-PROPYLBENZENE, ug/kg
- p-IPT: p-ISOPROPYLTOLUENE, ug/kg
- PCE: TETRACHLOROETHENE, ug/kg
- TCE: TRICHLOROETHENE, ug/kg
- Ba: BARIUM, mg/kg
- Cd: CADMIUM, mg/kg
- Cr: CHROMIUM, mg/kg
- Pb: TOTAL LEAD, mg/kg
- Hg: MERCURY, mg/kg
- Se: SELENIUM, mg/kg
- PHEN: PHENANTHRENE, mg/kg
- mg/kg: MILLIGRAMS PER KILOGRAM
- ug/kg: MICROGRAMS PER KILOGRAM
- <: LESS THAN
- : NOT ANALYZED
- ND: NOT DETECTED ABOVE LABORATORY METHOD DETECTION LIMITS
- (J): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
- (A): LABORATORY ARTIFACT (NOT LIKELY PRESENT IN SAMPLE)

GROUNDWATER NOTES

- B: BENZENE, ug/l
- PCE: TETRACHLOROETHENE, ug/l
- T: TOLUENE, ug/l
- TCE: TRICHLOROETHENE, ug/l
- MC: METHYLENE CHLORIDE, ug/l
- ug/l: MICROGRAMS PER LITER
- (J): CONCENTRATION BETWEEN LIMIT OF DETECTION AND LIMIT OF QUANTITATION
- (A): LABORATORY ARTIFACT (NOT LIKELY PRESENT IN SAMPLE)

- LEGEND
- ⊕ PROPOSED SOIL PROBE LOCATION
  - ⊕ PROPOSED MONITORING WELL LOCATION
  - ⊕ PROPOSED PIEZOMETER LOCATION
  - ⊙ SOIL PROBE LOCATION
  - ✕ SOIL PROBE REFUSAL AT <5 FT. BELOW GROUND SURFACE
  - ⊕ GEOTECHNICAL SOIL BORING LOCATION, FEBRUARY 1999
  - ✕ GEOTECHNICAL SOIL BORING LOCATION, JANUARY 2002
  - ☞ CONCENTRATION GREATER THAN: NR 140 ENFORCEMENT STANDARD (ES) (GROUNDWATER) or NR 720 GENERIC RESIDUAL CONTAMINANT LEVEL (GRCL) (SOIL)
  - ☞ CONCENTRATION GREATER THAN NR 140 PREVENTIVE ACTION LIMIT (PAL) (GROUNDWATER)

SOIL	
GP-17	
DEPTH 3'-5'	7'-9'
PID	<5
VOCs	ND
Ba	52
Cr	12
Pb	9.5
Hg	0.14
Se	1.0



DRN. BY:	C.S.	DATE:	01/14/02
DSN. BY:	D.K.P.	FILE NO.:	PROPOSAL
CHK. BY:	D.K.P.	DWG. NO.:	TANDEM
REV. BY:	G.L.J.	SHEET NO.:	2

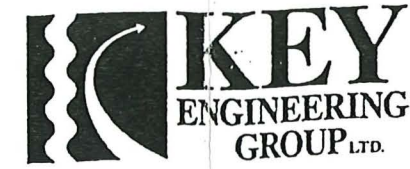


FIGURE 2  
SUMMARY OF GROUNDWATER AND SOIL SAMPLE ANALYTICAL RESULTS  
PRELIMINARY PROPOSAL FOR SITE INVESTIGATION SERVICES  
TANDEM DEVELOPMENT, LLC PROPERTY  
EAST RESERVOIR AVENUE and BROWN STREET  
MILWAUKEE, WISCONSIN

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## APPENDIX B

### Involved Parties List



**APPENDIX B**

**INVOLVED PARTIES LIST  
BROWN STREET III LLC  
MILWAUKEE, WISCONSIN**

Site Owner:	Brown Street III LLC 20 W. Hubbard Suite 2W Chicago, Illinois 60610 (312) 245-9000 Contact: Mr. Brian Columbus
Attorney:	Foley & Lardner 777 East Wisconsin Avenue, Suite 3800 Milwaukee, Wisconsin 53202-5367 (414) 297-5830 Contact: Mr. Edward B. Witte
Consultant:	STS Consultants, Ltd. 11425 West Lake Park Drive Milwaukee, WI 53224 (414) 359-3030 Contact: Mr. Mark Mejac Mr. Dennis Lawton
Department of Natural Resources:	Department of Natural Resources 2300 N. Dr. Martin Luther King, Jr. Drive Milwaukee, WI 53212-0436 (414) 263-8500 Contact: Ms. Victoria Stovall

## APPENDIX C

Soil Borings Logs, Well Construction Details, Well Development Forms, and Borehole Abandonment Forms




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

Facility/Project Name Tandem Development 87185EA			License/Permit/Monitoring Number		Boring Number STS-1		
Boring Drilled By (Firm name and name of crew chief) Probe Technologies, Dan Bendorf			Date Drilling Started 10/16/2002		Date Drilling Completed 10/16/2002		
Drilling Method GeoProbe			WI Unique Well No.		DNR Well ID No.		
Common Well Name STS-1			Final Static Water Level		Surface Elevation Feet		
Borehole Diameter 2.0 Inches			Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> )				
State Plane SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E			S/C/N S/C/N		Local Grid Location (If applicable)		
Lat. _____ ' _____ "			Long. _____ ' _____ "		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Milwaukee		County Code 41		Civil Town/City/ or Village Milwaukee	

Sample Number and Type	Length Art. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1 GP	24 18		1	Fill: Silt, little sand and brick fragments, trace slag - brown - moist	ML			0.0						
2 GP	24 18		2	Fill: Silt, sand and brick fragments - brown - moist	GM			0.0						
3 GP	24 24		4	Fill: Silty Fine to Coarse Sand and Gravel, little brick fragments and slag - brown - moist - moist to wet from 6 to 8 feet	GM			4.4						
4 GP	24 24		6		GM			0.0						
			8	END OF BORING Refusal at 8 ft. on concrete. Boring advanced to 8 ft. by GeoProbe. Boring backfilled with bentonite.				4.8						

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: (414) 359-3030  
11425 West Lake Park Drive, Milwaukee, WI 53224 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 used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

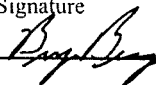


Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Tandem Development 87185EA</b>			License/Permit/Monitoring Number		Boring Number <b>STS-2</b>		
Boring Drilled By (Firm name and name of crew chief) <b>Probe Technologies, Dan Bendorf</b>			Date Drilling Started <b>10/16/2002</b>		Date Drilling Completed <b>10/16/2002</b>		
Drilling Method <b>GeoProbe</b>		WI Unique Well No.		DNR Well ID No.		Common Well Name <b>STS-2</b>	
Final Static Water Level		Surface Elevation <b>Feet</b>		Borehole Diameter <b>2.0 Inches</b>			
Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> ) State Plane <b>SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E</b>				Local Grid Location (if applicable) Lat. _____ Long. _____ Feet <input type="checkbox"/> N <input type="checkbox"/> E Feet <input type="checkbox"/> S <input type="checkbox"/> W			
Facility ID		County <b>Milwaukee</b>		County Code <b>41</b>		Civil Town/City/ or Village <b>Milwaukee</b>	

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					RQD/ Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
1 GP	24 20		1.5	Fill: Silt, some gravel and brick fragments, trace sand and clay - brown - moist	ML			0.0							
2 GP	24 20		3.0	Fill: Silty Fine to Coarse Sand and Gravel, trace brick fragments and coal - brown - moist	GM			0.0							
3 GP	24 15		4.5	Fill: Silty Fine to Coarse Sand and Gravel, little red brick fragments, trace glass - brown - moist	GM			0.0							
4 GP	24 15		6.0		GM			0.0							
5 GP	18 20		9.0	Fill: Silty Fine to Coarse Sand, little gravel - brown - moist	SM			0.0							
				Fill: Silty Gravel - dark brown - moist to wet	GM										
				<p><b>END OF BORING</b></p> <p>Refusal at 9.5' on concrete.</p> <p>Boring advanced to 9.5 feet by GeoProbe.</p> <p>Boring backfilled with bentonite.</p>											

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 West 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 used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

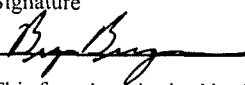


Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Tandem Development 87185EA</b>		License/Permit/Monitoring Number		Boring Number <b>STS-3</b>	
Boring Drilled By (Firm name and name of crew chief) <b>Probe Technologies, Dan Bendorf</b>		Date Drilling Started <b>10/16/2002</b>		Date Drilling Completed <b>10/16/2002</b>	
Drilling Method <b>GeoProbe</b>		WI Unique Well No.		DNR Well ID No.	
Common Well Name <b>STS-3</b>		Final Static Water Level		Surface Elevation <b>Feet</b>	
Borehole Diameter <b>2.0 Inches</b>		Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> )			
State Plane <b>SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E</b>		S/C/N <b>S/C/N</b>		Local Grid Location (if applicable)	
Lat. _____"		Long. _____"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County <b>Milwaukee</b>		County Code <b>41</b>	
				Civil Town/City/ or Village <b>Milwaukee</b>	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1 GP	24 20		1.5	Fill: Silt, little red brick fragments, trace gravel and sand - brown - moist	ML			0.0						
2 GP	24 20		3.0	Fill: Clayey Silt, some red brick fragments, trace sand and gravel - brown - moist	ML			0.0						
3 GP	24 18		4.5	Fill: Silty Fine to Coarse Sand and Gravel, some red brick fragments - brown - moist - wet at tip	GM			0.0						
4 GP	24 18		6.0	END OF BORING  Refusal at 8' on concrete.  Boring advanced to 8 ft. by GeoProbe.  Boring backfilled with bentonite.				0.0						
			7.5											

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

Signature 	Firm <b>STS Consultants, Ltd.</b> 11425 West Lake Park Drive, Milwaukee, WI 53224	Tel: (414) 359-3030 Fax: (414) 359-0822
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Tandem Development 87185EA</b>		License/Permit/Monitoring Number		Boring Number <b>STS-4</b>	
Boring Drilled By (Firm name and name of crew chief) <b>Probe Technologies, Dan Bendorf</b>			Date Drilling Started <b>10/16/2002</b>	Date Drilling Completed <b>10/16/2002</b>	Drilling Method <b>GeoProbe</b>
WI Unique Well No.	DNR Well ID No.	Common Well Name <b>STS-4</b>	Final Static Water Level	Surface Elevation <b>Feet</b>	Borehole Diameter <b>2.0 Inches</b>
Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> ) State Plane <b>SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E</b> S/C/N			Lat. _____ ' _____ "	Local Grid Location (If applicable) <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County <b>Milwaukee</b>	County Code <b>41</b>	Civil Town/City/ or Village <b>Milwaukee</b>	

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					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1 GP	18 12		1	Fill: Silt, little sand and gravel - brown - moist	ML			0.0						
2 GP	12 8		2	Fill: Gravel - gray - moist	GP									
3 GP	18 12		3	Fill: Possible Foundry Sand, little gravel and brick fragments - dark brown - moist	SP			0.7						
4 GP	24 18		4	Fill: Gravel and Concrete Rubble - gray - moist	GP			1.9						
			5											
			6	END OF BORING Refusal at 6' on concrete. Boring advanced to 6 ft. by GeoProbe. Boring backfilled with bentonite.										

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

Signature 	Firm <b>STS Consultants, Ltd.</b> 11425 West 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 used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

<b>(1) GENERAL INFORMATION</b>		<b>(2) FACILITY NAME</b> Tandem Development 87185EA	
Well/Drillhole/Borehole Location	County Milwaukee	Original Well Owner (If Known) Tandem Development	
SE 1/4 of NE 1/4 of Sec. 20 ; T. 7 N; R. 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W (If Applicable)		Present Well Owner Tandem Development	
Gov't Lot _____ Grid Number _____		Street or Route SE Corner of Intersection of N. Hubbard St. and E. Brown St	
Grid Location _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.		City, State, Zip Code Milwaukee, WI 53212	
Civil Town Name Milwaukee		Facility Well No. and/or Name (If Applicable) STS-1	WI Unique Well No.
Street Address of Well SE Corner of Intersection of N. Hubbard St. and E. Brown St.		Reason For Abandonment Temporary Soil Boring	
City, Village Milwaukee		Date of Abandonment 10/16/02	

**WELL/DRILLHOLE/BOREHOLE INFORMATION**

**(3) Original Well/Drillhole/Borehole Construction Completed On**  
(Date) 10/16/2002

Monitoring Well  
 Water Well  
 Drillhole  
 Borehole

Construction Report Available?  
 Yes  No

Construction Type:  
 Drilled  Driven (Sandpoint)  Dug  
 Other (Specify) GeoProbe

Formation Type:  
 Unconsolidated Formation  Bedrock

Total Well Depth (ft) \_\_\_\_\_ Casing Diameter (in.) \_\_\_\_\_  
 (From ground surface) Casing Depth (ft) \_\_\_\_\_

Lower Drillhole Diameter (in.) \_\_\_\_\_

Was Well Annular Space Grouted?  Yes  No  Unknown  
 If Yes, To What Depth? \_\_\_\_\_ Feet

**(4) Depth to Water (Feet)** \_\_\_\_\_

Pump & Piping Removed?  Yes  No  Not Applicable  
 Liner(s) Removed?  Yes  No  Not Applicable  
 Screen Removed?  Yes  No  Not Applicable  
 Casing Left in Place?  Yes  No  
 If No, Explain \_\_\_\_\_

Was Casing Cut Off Below Surface?  Yes  No  
 Did Sealing Material Rise to Surface?  Yes  No  
 Did Material Settle After 24 Hours?  Yes  No  
 If Yes, Was Hole Retopped?  Yes  No

**(5) Required Method of Placing Sealing Material**

Conductor Pipe - Gravity  Conductor Pipe - Pumped  
 Dump Bailer  Other (Explain)

**(6) Sealing Materials** For monitoring wells and monitoring well boreholes only


Neat Cement Grout  
 Sand-Cement (Concrete) Grout  
 Concrete  
 Clay-Sand Slurry  
 Bentonite-Sand Slurry  
 Chipped Bentonite

Bentonite Pellets  
 Granular Bentonite  
 Bentonite-Cement Grout

(7) Sealing Material Used	From (Ft.)	To (Ft.)	Mix Ratio or Mud Weight
Native Soil	Surface	0.5	
Chipped Bentonite	0.5	8.0	

**(8) Comments** \_\_\_\_\_

**(9) Name of Person or Firm Doing Sealing Work**  
STS Consultants Ltd.

Signature of Person Doing Work 	Date Signed 10-22-02
Street or Route 11425 W. Lake Park Drive	Telephone Number 414-359-3030
City, State, Zip Code Milwaukee, WI 53224	

**(10) FOR DNR OR COUNTY USE ONLY**

Date Received/Inspected	District/County
Reviewer/Inspector	<input type="checkbox"/> Complying Work
Follow-up Necessary	<input type="checkbox"/> Noncomplying Work

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

<b>(1) GENERAL INFORMATION</b>		<b>(2) FACILITY NAME</b> Tandem Development 87185EA	
Well/Drillhole/Borehole Location	County Milwaukee	Original Well Owner (If Known) Tandem Development	
<u>SE</u> 1/4 of <u>NE</u> 1/4 of Sec. <u>20</u> ; T. <u>7</u> N.; R. <u>22</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Present Well Owner Tandem Development	
(If Applicable) Gov't Lot _____ Grid Number _____		Street or Route SE Corner of Intersection of N. Hubbard St. and E. Brown S	
Grid Location _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.		City, State, Zip Code Milwaukee, WI 53212	
Civil Town Name Milwaukee		Facility Well No. and/or Name (If Applicable) STS-2	WI Unique Well No.
Street Address of Well SE Corner of Intersection of N. Hubbard St. and E. Brown St.		Reason For Abandonment Temporary Soil Boring	
City, Village Milwaukee		Date of Abandonment 10/16/02	

**WELL/DRILLHOLE/BOREHOLE INFORMATION**

<b>(3) Original Well/Drillhole/Borehole Construction Completed On</b> (Date) <u>10/16/2002</u>		<b>(4) Depth to Water (Feet)</b> _____	
<input type="checkbox"/> Monitoring Well	Construction Report Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pump & Piping Removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Water Well		Liner(s) Removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
<input type="checkbox"/> Drillhole		Screen Removed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable
<input checked="" type="checkbox"/> Borehole		Casing Left in Place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <u>GeoProbe</u>		If No, Explain _____	
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Was Casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Total Well Depth (ft) _____ Casing Diameter (in.) _____ (From ground surface) Casing Depth (ft.) _____		Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Lower Drillhole Diameter (in.) _____		Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet		If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No	
		<b>(5) Required Method of Placing Sealing Material</b>	
		<input checked="" type="checkbox"/> Conductor Pipe - Gravity <input type="checkbox"/> Conductor Pipe - Pumped	
		<input type="checkbox"/> Dump Bailer <input type="checkbox"/> Other (Explain)	
		<b>(6) Sealing Materials</b>	
		<input type="checkbox"/> Neat Cement Grout	
		<input type="checkbox"/> Sand-Cement (Concrete) Grout	
		<input type="checkbox"/> Concrete	
		<input type="checkbox"/> Clay-Sand Slurry	
		<input type="checkbox"/> Bentonite-Sand Slurry	
		<input checked="" type="checkbox"/> Chipped Bentonite	
		For monitoring wells and monitoring well boreholes only	
		<input type="checkbox"/> Bentonite Pellets	
		<input type="checkbox"/> Granular Bentonite	
		<input type="checkbox"/> Bentonite-Cement Grout	

(7) Sealing Material Used	From (Ft.)	To (Ft.)	Mix Ratio or Mud Weight
Native Soil	Surface	0.5	
Chipped Bentonite	0.5	9.5	

**(8) Comments** \_\_\_\_\_

**(9) Name of Person or Firm Doing Sealing Work**  
STS Consultants Ltd.

Signature of Person Doing Work 	Date Signed <u>10-22-02</u>
Street or Route 11425 W. Lake Park Drive	Telephone Number 414-359-3030
City, State, Zip Code Milwaukee, WI 53224	

**(10) FOR DNR OR COUNTY USE ONLY**

Date Received/Inspected	District/County
Reviewer/Inspector	<input type="checkbox"/> Complying Work <input type="checkbox"/> Noncomplying Work
Follow-up Necessary	

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

<b>(1) GENERAL INFORMATION</b>		<b>(2) FACILITY NAME</b> Tandem Development 87185EA	
Well/Drillhole/Borehole Location	County Milwaukee	Original Well Owner (If Known) Tandem Development	
SE 1/4 of NE 1/4 of Sec. 20 ; T. 7 N; R. 22 W (If Applicable)		Present Well Owner Tandem Development	
Gov't Lot	Grid Number	Street or Route SE Corner of Intersection of N. Hubbard St. and E. Brown S	
Grid Location	ft. <input type="checkbox"/> N. <input type="checkbox"/> S., <input type="checkbox"/> E. <input type="checkbox"/> W.	City, State, Zip Code Milwaukee, WI 53212	
Civil Town Name Milwaukee	Facility Well No. and/or Name (If Applicable) STS-3	WI Unique Well No.	
Street Address of Well SE Corner of Intersection of N. Hubbard St. and E. Brown St.	Reason For Abandonment Temporary Soil Boring		
City, Village Milwaukee	Date of Abandonment 10/16/02		

**WELL/DRILLHOLE/BOREHOLE INFORMATION**

**(3) Original Well/Drillhole/Borehole Construction Completed On**  
(Date) 10/16/2002

Monitoring Well  
 Water Well  
 Drillhole  
 Borehole

Construction Report Available?  
 Yes  No

Construction Type:  
 Drilled  Driven (Sandpoint)  Dug  
 Other (Specify) GeoProbe

Formation Type:  
 Unconsolidated Formation  Bedrock

Total Well Depth (ft) \_\_\_\_\_ Casing Diameter (in.) \_\_\_\_\_  
(From ground surface) Casing Depth (ft.) \_\_\_\_\_

Lower Drillhole Diameter (in.) \_\_\_\_\_

Was Well Annular Space Grouted?  Yes  No  Unknown  
If Yes, To What Depth? \_\_\_\_\_ Feet

**(4) Depth to Water (Feet)** \_\_\_\_\_

Pump & Piping Removed?  Yes  No  Not Applicable  
Liner(s) Removed?  Yes  No  Not Applicable  
Screen Removed?  Yes  No  Not Applicable  
Casing Left in Place?  Yes  No  
If No, Explain \_\_\_\_\_

Was Casing Cut Off Below Surface?  Yes  No  
Did Sealing Material Rise to Surface?  Yes  No  
Did Material Settle After 24 Hours?  Yes  No  
If Yes, Was Hole Retopped?  Yes  No

**(5) Required Method of Placing Sealing Material**  
 Conductor Pipe - Gravity  Conductor Pipe - Pumped  
 Dump Bailer  Other (Explain)

**(6) Sealing Materials** For monitoring wells and monitoring well boreholes only

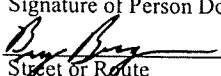
Neat Cement Grout  
 Sand-Cement (Concrete) Grout  
 Concrete  
 Clay-Sand Slurry  
 Bentonite-Sand Slurry  
 Chipped Bentonite

Bentonite Pellets  
 Granular Bentonite  
 Bentonite-Cement Grout

(7) Sealing Material Used	From (Ft.)	To (Ft.)	Mix Ratio or Mud Weight
Native Soil	Surface	0.5	
Chipped Bentonite	0.5	8.0	

**(8) Comments** \_\_\_\_\_

**(9) Name of Person or Firm Doing Sealing Work**  
STS Consultants Ltd.

Signature of Person Doing Work 	Date Signed 10-22-02
Street or Route 11425 W. Lake Park Drive	Telephone Number 414-359-3030
City, State, Zip Code Milwaukee, WI 53224	

**(10) FOR DNR OR COUNTY USE ONLY**

Date Received/Inspected	District/County
Reviewer/Inspector	<input type="checkbox"/> Complying Work <input type="checkbox"/> Noncomplying Work
Follow-up Necessary	

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

<b>(1) GENERAL INFORMATION</b>		<b>(2) FACILITY NAME</b> Tandem Development 87185EA	
Well/Drillhole/Borehole Location	County Milwaukee	Original Well Owner (If Known) Tandem Development	
SE 1/4 of NE 1/4 of Sec. 20 ; T. 7 N; R. 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W (If Applicable)		Present Well Owner Tandem Development	
Gov't Lot _____ Grid Number _____		Street or Route SE Corner of Intersection of N. Hubbard St. and E. Brown S	
Grid Location _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S., _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.		City, State, Zip Code Milwaukee, WI 53212	
Civil Town Name Milwaukee		Facility Well No. and/or Name (If Applicable) STS-4	WI Unique Well No.
Street Address of Well SE Corner of Intersection of N. Hubbard St. and E. Brown St.		Reason For Abandonment Temporary Soil Boring	
City, Village Milwaukee		Date of Abandonment 10/16/02	

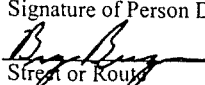
**WELL/DRILLHOLE/BOREHOLE INFORMATION**

<p><b>(3) Original Well/Drillhole/Borehole Construction Completed On</b> (Date) 10/16/2002</p> <p><input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input type="checkbox"/> Drillhole <input checked="" type="checkbox"/> Borehole</p> <p>Construction Report Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) <u>GeoProbe</u></p> <p>Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock</p> <p>Total Well Depth (ft) _____ Casing Diameter (in.) _____ (From ground surface) Casing Depth (ft.) _____</p> <p>Lower Drillhole Diameter (in.) _____</p> <p>Was Well Annular Space Grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If Yes, To What Depth? _____ Feet</p>	<p><b>(4) Depth to Water (Feet)</b> _____</p> <p>Pump &amp; Piping Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Liner(s) Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Screen Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable Casing Left in Place? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If No, Explain _____</p> <p>Was Casing Cut Off Below Surface? <input type="checkbox"/> Yes <input type="checkbox"/> No Did Sealing Material Rise to Surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Did Material Settle After 24 Hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Was Hole Retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><b>(5) Required Method of Placing Sealing Material</b> <input checked="" type="checkbox"/> Conductor Pipe - Gravity <input type="checkbox"/> Conductor Pipe - Pumped <input type="checkbox"/> Dump Bailer <input type="checkbox"/> Other (Explain)</p> <p><b>(6) Sealing Materials</b> For monitoring wells and monitoring well boreholes only</p> <p><input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Clay-Sand Slurry <input type="checkbox"/> Bentonite-Sand Slurry <input checked="" type="checkbox"/> Chipped Bentonite</p> <p><input type="checkbox"/> Bentonite Pellets <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite-Cement Grout</p>
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(7) Sealing Material Used	From (Ft.)	To (Ft.)	Mix Ratio or Mud Weight
Native Soil	Surface	0.5	
Chipped Bentonite	0.5	6.0	

(8) Comments \_\_\_\_\_

**(9) Name of Person or Firm Doing Sealing Work**  
STS Consultants Ltd.

Signature of Person Doing Work 	Date Signed 10-22-02
Street or Route 11425 W. Lake Park Drive	Telephone Number 414-359-3030
City, State, Zip Code Milwaukee, WI 53224	

**(10) FOR DNR OR COUNTY USE ONLY**

Date Received/Inspected	District/County
Reviewer/Inspector	<input type="checkbox"/> Complying Work <input type="checkbox"/> Noncomplying Work
Follow-up Necessary	



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

Facility/Project Name <b>Tandem Development 87185EA</b>		License/Permit/Monitoring Number		Boring Number <b>MW-1</b>	
Boring Drilled By (Firm name and name of crew chief) <b>Giles Engineering Associates, Inc. - B.J.</b>		Date Drilling Started <b>10/29/2002</b>		Date Drilling Completed <b>10/29/2002</b>	
Drilling Method <b>HSA</b>		WI Unique Well No. <b>PK561</b>		DNR Well ID No.	
Common Well Name <b>MW-1</b>		Final Static Water Level		Surface Elevation <b>Feet</b>	
Borehole Diameter <b>8.3 Inches</b>		Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> ) State Plane <b>SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E</b>		Local Grid Location (If applicable) Lat. _____ " _____ " Long. _____ " _____ " <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County <b>Milwaukee</b>		County Code <b>41</b>	
				Civil Town/City/ or Village <b>Milwaukee</b>	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1 SS	24 12	3 5 5 4	1	Fill: Clayey Silt, little sand, gravel and red brick fragments - brown - moist				0.0						
2 SS	24 14	4 5 5 7	2 3	Fill: Silty Sand, little gravel and brick fragments, trace asphalt - brown - moist				0.0						
3 SS	24 6	4 3 3 2	5 6	Fill: Silty Fine to Coarse Sand, Gravel and Red Brick Fragments, trace wood and concrete rubble - brown moist				0.0						
4 SS	24 12	4 5 4 32	8 9					0.0						
5 SS	24 12	5 4 6 6	10 11					0.0						

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

Signature	Firm <b>STS Consultants, Ltd.</b> 11425 West Lake Park Drive, Milwaukee, WI 53224	Tel: (414) 359-3030 Fax: (414) 359-0822
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Tandem Development 87185EA</b>			License/Permit/Monitoring Number		Boring Number <b>MW-2</b>		
Boring Drilled By (Firm name and name of crew chief) <b>Giles Engineering Associates, Inc.</b>			Date Drilling Started <b>10/29/2002</b>		Date Drilling Completed <b>10/29/2002</b>		
Drilling Method <b>HSA</b>			WI Unique Well No. <b>PK562</b>		DNR Well ID No.		
Common Well Name <b>MW-2</b>			Final Static Water Level		Surface Elevation <b>Feet</b>		
Borehole Diameter <b>8.3 Inches</b>			Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> ) State Plane <b>S/C/N</b>		Local Grid Location (If applicable)		
SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E			Lat. _____ ° _____ ' _____ "		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County <b>Milwaukee</b>		County Code <b>41</b>		Civil Town/City/ or Village <b>Milwaukee</b>	

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						RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
1 SS	24 16	4 4 5 7	4 5 7	Fill: Silty Clay, trace gravel - brown - moist				0.0							
2 SS	24 18	6 6 3 4	2 3	Fill: Silty Fine to Coarse Sand - brown - moist Fill: Fine to Coarse Sand, little gravel and slag - brown - moist				0.0							
3 SS	24 22	3 4 5 5	5 6	Possible Fill: Silty Fine Sand, trace to some clay, trace gravel - brown - moist				0.0							
4 SS	24 24	2 3 3 2	8 9		SM			0.0							
5 SS	24 18	2 2 2 1	10 11	Possible Fill: Sandy Silt, trace charcoal and possible brick fragments - brown - moist				0.0							

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

Signature	Firm <b>STS Consultants, Ltd.</b> 11425 West Lake Park Drive, Milwaukee, WI 53224	Tel: (414) 359-3030 Fax: (414) 359-0822
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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 used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number **MW-2** Use only as an attachment to Form 4400-122. Page 2 of 2

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
6 SS	24 12	3 2 1 1	13		ML			0.0						
			14											
7 SS	24 18	WOH WOH 1 1	15	Possible Fill: Sand and Gravel, some silt, possible brick fragments - gray brown - wet	GW			0.0						
			16											
8 SS	24 12	1 1 2 2	17	Fine to Coarse Sandy Silt, possible trace coal - dark brown gray - moist to wet	ML			0.0						
			18											
27				END OF BORING	Boring advanced to 25.5 ft. by hollow stem auger.  Groundwater monitoring well installed to 25 feet on 10/29/02.									

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

Facility/Project Name <b>Tandem Development 87185EA</b>		License/Permit/Monitoring Number		Boring Number <b>MW-3</b>	
Boring Drilled By (Firm name and name of crew chief) <b>Giles Engineering Associates, Inc.</b>		Date Drilling Started <b>10/29/2002</b>		Date Drilling Completed <b>10/29/2002</b>	
Drilling Method <b>HSA</b>		WI Unique Well No. <b>PK563</b>		DNR Well ID No. <b>MW-3</b>	
Common Well Name <b>MW-3</b>		Final Static Water Level		Surface Elevation <b>Feet</b>	
Borehole Diameter <b>8.3 Inches</b>		Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> ) State Plane <b>SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E</b>		Local Grid Location (If applicable) Lat. _____ " _____ " _____ " Long. _____ " _____ " _____ " <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County <b>Milwaukee</b>		County Code <b>41</b>	
				Civil Town/City/ or Village <b>Milwaukee</b>	

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						RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
1 SS	24 12	6 7 12 10	1	Fill: Clayey Silt, trace sand and gravel - brown - moist				0.0							
2 SS	24 6	10 24 40 48	2 3	Fill: Concrete Rubble, little red brick fragments, metal bolt - gray - moist				0.0							
3 SS	24 12	42 9 9 3	5 6					4.3							
4 SS	24 16	4 7 9 3	8 9	Fill: Sandy Silt, some red brick fragments, trace wood and coal - brown - moist - petroleum odor				1999							
5 SS	24 10	WOH 1 1 3	10 11	Fill: Sandy Silt, trace brick fragments and coal - gray - moist				7.3							

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

Signature	Firm <b>STS Consultants, Ltd.</b> 11425 West Lake Park Drive, Milwaukee, WI 53224	Tel: (414) 359-3030 Fax: (414) 359-0822
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Tandem Development 87185EA</b>		License/Permit/Monitoring Number		Boring Number <b>MW-3</b>	
Boring Drilled By (Firm name and name of crew chief) <b>Giles Engineering Associates, Inc.</b>		Date Drilling Started <b>10/29/2002</b>		Date Drilling Completed <b>10/29/2002</b>	
Drilling Method <b>HSA</b>		WI Unique Well No. <b>PK563</b>		DNR Well ID No.	
Common Well Name <b>MW-3</b>		Final Static Water Level		Surface Elevation <b>Feet</b>	
Borehole Diameter <b>8.3 Inches</b>		Boring Location or Local Grid Origin (Check if estimated: <input type="checkbox"/> ) State Plane <b>SE 1/4 of NE 1/4 of Section 20, T 7 N, R 22 E</b>		Local Grid Location (If applicable) Lat. _____ ° _____ ' _____ " <input type="checkbox"/> N <input type="checkbox"/> E Long. _____ ° _____ ' _____ " <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County <b>Milwaukee</b>		County Code <b>41</b>	
				Civil Town/City/ or Village <b>Milwaukee</b>	

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					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1 SS	24 12	6 7 12 10	1	Fill: Clayey Silt, trace sand and gravel - brown - moist				0.0						
2 SS	24 6	10 24 40 48	2 3	Fill: Concrete Rubble, little red brick fragments, metal bolt - gray - moist				0.0						
3 SS	24 12	42 9 9 3	5 6					4.3						
4 SS	24 16	4 7 9 3	8 9	Fill: Sandy Silt, some red brick fragments, trace wood and coal - brown - moist - petroleum odor				1999						
5 SS	24 10	WOH 1 1 3	10 11	Fill: Sandy Silt, trace brick fragments and coal - gray - moist				7.3						

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

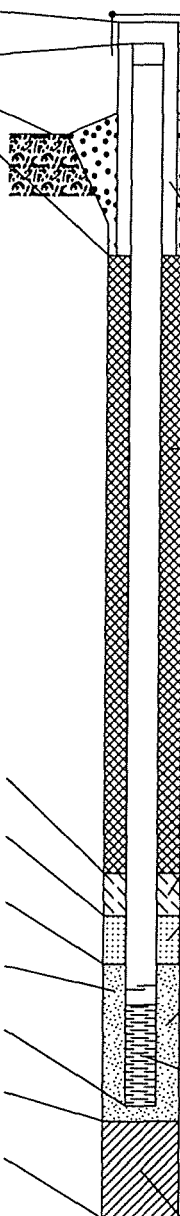
Signature	Firm <b>STS Consultants, Ltd.</b> 11425 West Lake Park Drive, Milwaukee, WI 53224	Tel: (414) 359-3030 Fax: (414) 359-0822
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This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form 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 used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.





Facility/Project Name <b>Tandem Development 87185EA</b>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.	Well Name <b>MW-1</b>
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: <input type="checkbox"/> ) Lat. _____ Long. _____ or _____	Wis. Unique Well No/DNR Well Number <b>PK561</b>
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed <b>10/29/2002</b>
Type of Well <b>Well Code 11/mw</b>	Section Location of Waste/Source <b>SE 1/4 of NE 1/4 of Sec. 20, T. 7 N, R. 22</b> <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) <b>B.J., Brian, Keith</b>
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	<b>Giles Engineering Associates, Inc.</b>

<p>A. Protective pipe, top elevation _____ ft. MSL</p> <p>B. Well casing, top elevation _____ ft. MSL</p> <p>C. Land surface elevation _____ ft. MSL</p> <p>D. Surface seal, bottom _____ ft. MSL or <u>1.0</u> ft.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>12. USC classification of soil near screen:                  GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/>                  SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input checked="" type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/>                  Bedrock <input type="checkbox"/></p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 5 0                  Hollow Stem Auger <input checked="" type="checkbox"/> 4 1                  _____ Other <input type="checkbox"/></p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1                  Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Describe _____</p> <p>17. Source of water (attach analysis): _____</p> </div> <p>E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.</p> <p>F. Fine sand, top _____ ft. MSL or <u>12.0</u> ft.</p> <p>G. Filter pack, top _____ ft. MSL or <u>13.0</u> ft.</p> <p>H. Screen joint, top _____ ft. MSL or <u>15.0</u> ft.</p> <p>I. Well bottom _____ ft. MSL or <u>25.0</u> ft.</p> <p>J. Filter pack, bottom _____ ft. MSL or <u>25.5</u> ft.</p> <p>K. Borehole, bottom _____ ft. MSL or <u>27.0</u> ft.</p> <p>L. Borehole, diameter <u>8.3</u> in.</p> <p>M. O.D. well casing <u>2.38</u> in.</p> <p>N. I.D. well casing <u>2.07</u> in.</p>	 <p>1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Protective cover pipe:                  a. Inside diameter: _____ <u>9.0</u> in.                  b. Length: _____ <u>1.0</u> ft.                  c. Material: Steel <input checked="" type="checkbox"/> 0 4                  _____ Other <input type="checkbox"/></p> <p>d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                  If yes, describe: _____</p> <p>3. Surface seal: Bentonite <input type="checkbox"/> 3 0                  Concrete <input checked="" type="checkbox"/> 0 1                  _____ Other <input type="checkbox"/></p> <p>4. Material between well casing and protective pipe:                  _____ Bentonite <input type="checkbox"/> 3 0                  _____ Sand _____ Other <input checked="" type="checkbox"/></p> <p>5. Annular space seal:                  a. Granular Bentonite <input checked="" type="checkbox"/> 3 3                  b. _____ Lbs/gal mud weight . Bentonite-sand slurry <input type="checkbox"/> 3 5                  c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 3 1                  d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 5 0                  e. _____ Ft<sup>3</sup> volume added for any of the above                  f. How installed: Tremie <input type="checkbox"/> 0 1                  Tremie pumped <input type="checkbox"/> 0 2                  Gravity <input checked="" type="checkbox"/> 0 8</p> <p>6. Bentonite seal:                  a. Bentonite granules <input type="checkbox"/> 3 3                  b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input checked="" type="checkbox"/> 3 2                  c. _____ Other <input type="checkbox"/></p> <p>7. Fine sand material: Manufacturer, product name and mesh size                  a. _____ <u>Red Flint #45-55</u> _____                  b. Volume added _____ ft<sup>3</sup></p> <p>8. Filter pack material: Manufacturer, product name and mesh size                  a. _____ <u>Red Flint #30</u> _____                  b. Volume added _____ ft<sup>3</sup></p> <p>9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3                  Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4                  _____ Other <input type="checkbox"/></p> <p>10. Screen material: <u>PVC Schedule 40</u>                  a. Screen Type: Factory cut <input checked="" type="checkbox"/> 1 1                  Continuous slot <input type="checkbox"/> 0 1                  _____ Other <input type="checkbox"/></p> <p>b. Manufacturer <u>Diedrich</u>                  c. Slot size: _____ <u>0.010</u> in.                  d. Slotted length: _____ <u>10.0</u> ft.</p> <p>11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1 4                  _____ Other <input type="checkbox"/></p>
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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 the forms may result in a 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 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 be sent.

Route To:

Watershed/Wastewater   
Remediation/Redevelopment

Waste Management   
Other

Facility/Project Name Tandem Development 87185EA	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name MW-2
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: <input type="checkbox"/> ) Lat. _____ " Long. _____ " or _____ " or _____ "	Wis. Unique Well No. <input type="checkbox"/> DNR Well Number PK562
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed 10/29/2002
Type of Well Well Code 11/mw	Section Location of Waste/Source SE 1/4 of NE 1/4 of Sec. 20, T. 7 N, R. 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) B.J., Brian, Keith
Distance Well Is From Waste/Source Boundary ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Giles Engineering Associates, Inc.

- 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

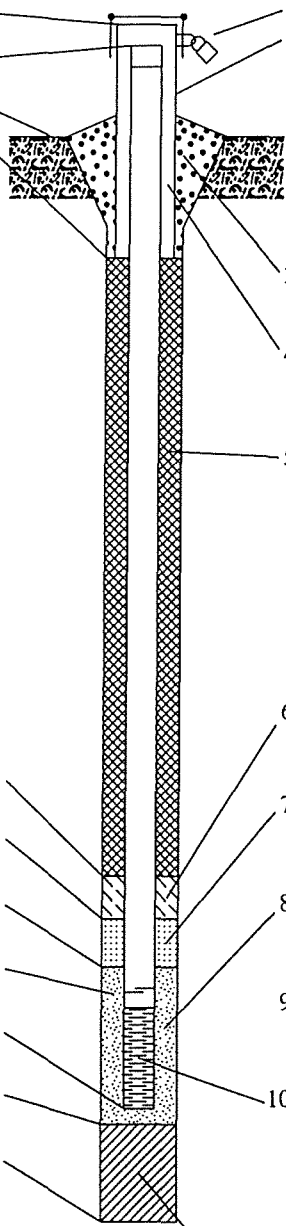
14. Drilling method used: Rotary  5 0  
 Hollow Stem Auger  4 1  
 \_\_\_\_\_ Other  \_\_\_

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):  
 \_\_\_\_\_



- 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<sup>3</sup> 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 size  
a. \_\_\_\_\_ Red Flint #45-55  
b. Volume added \_\_\_\_\_ ft<sup>3</sup>
- 8. Filter pack material: Manufacturer, product name and mesh size  
a. \_\_\_\_\_ Red Flint #30  
b. Volume added \_\_\_\_\_ ft<sup>3</sup>
- 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 \_\_\_\_\_ Diedrich  
c. Slot size: \_\_\_\_\_ 0.010 in.  
d. Slotted length: \_\_\_\_\_ 10.0 ft.
- 11. Backfill material (below filter pack): None  1 4  
\_\_\_\_\_ Other  \_\_\_

- E. Bentonite seal, top \_\_\_\_\_ ft. MSL or 1.0 ft.
- F. Fine sand, top \_\_\_\_\_ ft. MSL or 12.0 ft.
- G. Filter pack, top \_\_\_\_\_ ft. MSL or 13.0 ft.
- H. Screen joint, top \_\_\_\_\_ ft. MSL or 15.0 ft.
- I. Well bottom \_\_\_\_\_ ft. MSL or 25.0 ft.
- J. Filter pack, bottom \_\_\_\_\_ ft. MSL or 25.5 ft.
- K. Borehole, bottom \_\_\_\_\_ ft. MSL or 27.0 ft.
- L. Borehole, diameter 8.3 in.
- M. O.D. well casing 2.38 in.
- N. I.D. well casing 2.07 in.

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 the forms may result in a 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 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 be sent.

Route To:

Watershed/Wastewater   
Remediation/Redevelopment

Waste Management   
Other

Facility/Project Name Tandem Development 87185EA	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name MW-3
Facility License, Permit or Monitoring No.	Grid Origin Location (Check if estimated: <input type="checkbox"/> ) Lat. _____ " Long. _____ " or _____ " or _____ "	Wis. Unique Well No. / DNR Well Number PK563
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed 10/29/2002
Type of Well Well Code 11/mw	Section Location of Waste/Source SE 1/4 of NE 1/4 of Sec. 20, T. 7 N, R. 22 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) B.J., Brian, Keith
Distance Well Is From Waste/Source Boundary _____ ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	Giles Engineering Associates, Inc.

A. Protective pipe, top elevation _____ ft. MSL		1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation _____ ft. MSL		2. Protective cover pipe: a. Inside diameter: _____ 9.0 in b. Length: _____ 1.0 ft c. Material: Steel <input checked="" type="checkbox"/> 0.4 Other <input type="checkbox"/> _____
C. Land surface elevation _____ ft. MSL		d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom _____ ft. MSL or 1.0 ft.		3. Surface seal: Bentonite <input type="checkbox"/> 3.0 Concrete <input checked="" type="checkbox"/> 0.1 Other <input type="checkbox"/> _____
12. USC classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input checked="" type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>		4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3.0 Sand _____ Other <input checked="" type="checkbox"/> _____
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		5. Annular space seal: a. Granular Bentonite <input checked="" type="checkbox"/> 3.3 b. _____ Lbs/gal mud weight . Bentonite-sand slurry <input type="checkbox"/> 3.5 c. _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 3.1 d. _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 5.0 e. _____ Ft <sup>3</sup> volume added for any of the above
14. Drilling method used: Rotary <input type="checkbox"/> 5.0 Hollow Stem Auger <input checked="" type="checkbox"/> 4.1 Other <input type="checkbox"/> _____		f. How installed: Tremie <input type="checkbox"/> 0.1 Tremie pumped <input type="checkbox"/> 0.2 Gravity <input checked="" type="checkbox"/> 0.8
15. Drilling fluid used: Water <input type="checkbox"/> 0.2 Air <input type="checkbox"/> 0.1 Drilling Mud <input type="checkbox"/> 0.3 None <input checked="" type="checkbox"/> 9.9		6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3.3 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input checked="" type="checkbox"/> 3.2 c. _____ Other <input type="checkbox"/> _____
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____		7. Fine sand material: Manufacturer, product name and mesh size: a. _____ Red Flint #45-55 _____ b. Volume added _____ ft <sup>3</sup>
17. Source of water (attach analysis): _____		8. Filter pack material: Manufacturer, product name and mesh size: a. _____ Red Flint #30 _____ b. Volume added _____ ft <sup>3</sup>
E. Bentonite seal, top _____ ft. MSL or 1.0 ft.		9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2.3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2.4 Other <input type="checkbox"/> _____
F. Fine sand, top _____ ft. MSL or 12.0 ft.		10. Screen material: PVC Schedule 40 a. Screen Type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/> _____
G. Filter pack, top _____ ft. MSL or 13.0 ft.		b. Manufacturer _____ Diedrich _____
H. Screen joint, top _____ ft. MSL or 15.0 ft.		c. Slot size: _____ 0.010 in.
I. Well bottom _____ ft. MSL or 25.0 ft.		d. Slotted length: _____ 10.0 ft.
J. Filter pack, bottom _____ ft. MSL or 25.5 ft.		11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1.4 Other <input type="checkbox"/> _____
K. Borehole, bottom _____ ft. MSL or 27.0 ft.		
L. Borehole, diameter 8.3 in.		
M. O.D. well casing 2.38 in.		
N. I.D. well casing 2.07 in.		

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 the forms may result in a 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 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 be sent.



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

Facility/Project Name <b>Tandem Development 87185EA</b>	County <b>Milwaukee</b>	Well Name <b>MW-1</b>
Facility License, Permit or Monitoring Number	County Code <b>41</b>	Wis. Unique Well Number <b>PK561</b>
		DNR Well Number

1. Can this well be purged dry?  Yes  No
2. Well development method:
- surged with bailer and bailed  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed, and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - other \_\_\_\_\_  \_\_\_
3. Time spent developing well **10 min.**
4. Depth of well (from top of well casing) **25.0 ft.**
5. Inside diameter of well **2.07 in.**
6. Volume of water in filter pack and well casing **1.0 gal.**
7. Volume of water removed from well **0.5 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. 23.91 ft.	24.95 ft.
Date	b. 11/05/2002	11/05/2002
Time	c. 01:00 pm	01:10 pm
12. Sediment in well bottom	0.0 inches	0.0 inches
13. Water clarity	Clear <input checked="" type="checkbox"/> 1 0 Turbid <input type="checkbox"/> 1 5 (Describe)	Clear <input checked="" type="checkbox"/> 2 0 Turbid <input type="checkbox"/> 2 5 (Describe)
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 <b>Bryan Bergmann</b> <b>STS Consultants, Ltd.</b>		

17. Additional comments on development:  
**Removed 0.5 gallons, then dry.**

Facility Address or Owner/Responsible Party Address

Name: \_\_\_\_\_

Firm: Brown Street II LLC

Street: 20 West Hubbard, Suite 2W

City/State/Zip: Chicago, IL 60610

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

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Firm: STS Consultants Ltd.

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

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

Facility/Project Name <b>Tandem Development 87185EA</b>	County <b>Milwaukee</b>	Well Name <b>MW-2</b>
Facility License, Permit or Monitoring Number	County Code <b>41</b>	Wis. Unique Well Number <b>PK562</b>
		DNR Well Number

1. Can this well be purged dry?  Yes  No

2. Well development method:
- surged with bailer and bailed  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed, and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - other \_\_\_\_\_  \_\_\_\_\_

3. Time spent developing well **85 min.**

4. Depth of well (from top of well casing) **25.0 ft.**

5. Inside diameter of well **2.07 in.**

6. Volume of water in filter pack and well casing **4.5 gal.**

7. Volume of water removed from well **25.0 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)

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 20.15 ft.	20.15 ft.
Date	b. 11/05/2002	11/05/2002
Time	c. 01:20 pm	02:45 pm
12. Sediment in well bottom	0.0 inches	0.0 inches
13. Water clarity	Clear <input type="checkbox"/> 1 0 Turbid <input checked="" type="checkbox"/> 1 5 (Describe) <u>Gray</u>	Clear <input checked="" type="checkbox"/> 2 0 Turbid <input type="checkbox"/> 2 5 (Describe) _____

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  
**Bryan Bergmann**  
**STS Consultants, Ltd.**

Facility Address or Owner/Responsible Party Address

Name: \_\_\_\_\_

Firm: Brown Street II LLC

Street: 20 West Hubbard, Suite 2W

City/State/Zip: Chicago, IL 60610

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

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Firm: STS Consultants Ltd.

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

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

Facility/Project Name <b>Tandem Development 87185EA</b>	County <b>Milwaukee</b>	Well Name <b>MW-3</b>
Facility License, Permit or Monitoring Number	County Code <b>41</b>	Wis. Unique Well Number <b>PK563</b>
		DNR Well Number

1. Can this well be purged dry?  Yes  No
2. Well development method:
- surged with bailer and bailed  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed, and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - other \_\_\_\_\_  \_\_\_\_\_
3. Time spent developing well **50 min.**
4. Depth of well (from top of well casing) **25.0 ft.**
5. Inside diameter of well **2.07 in.**
6. Volume of water in filter pack and well casing **4.9 gal.**
7. Volume of water removed from well **25.0 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. 19.67 ft.	19.67 ft.
Date	b. 11/05/2002	11/05/2002
Time	c. 01:25 pm	02:15 pm
12. Sediment in well bottom	0.0 inches	0.0 inches
13. Water clarity	Clear <input type="checkbox"/> 1 0 Turbid <input checked="" type="checkbox"/> 1 5 (Describe) <u>Dark Gray</u>	Clear <input checked="" type="checkbox"/> 2 0 Turbid <input type="checkbox"/> 2 5 (Describe) _____
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  
**Bryan Bergmann**  
**STS Consultants, Ltd.**

17. Additional comments on development:

Facility Address or Owner/Responsible Party Address

Name: \_\_\_\_\_

Firm: Brown Street II LLC

Street: 20 West Hubbard, Suite 2W

City/State/Zip: Chicago, IL 60610

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

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Firm: STS Consultants Ltd.

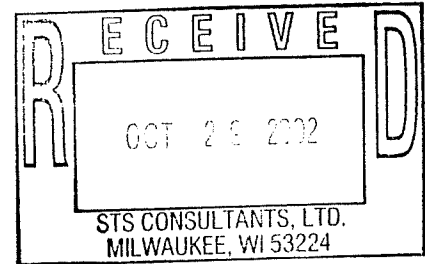
NOTE: See instructions for more information including a list of county codes and well type codes.

## APPENDIX D

### Laboratory Results of Collected Soil and Groundwater Samples



28 October 2002



Mark Mejac  
STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee, WI 53224  
RE: 87185EA Southeast

Enclosed are the results of analyses for samples received by the laboratory on 10/21/02. 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



STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark MejacReported:  
10/28/02 16:50**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
STS-1 6-8'	W210241-01	Soil	10/16/02 00:00	10/21/02 12:11
STS-2 8-9.5'	W210241-02	Soil	10/16/02 00:00	10/21/02 12:11
STS-3 6-8'	W210241-03	Soil	10/16/02 00:00	10/21/02 12:11

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

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

**Reported:**  
 10/28/02 16:50

**General Chemistry**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-1 6-8' (W210241-01) Soil Sampled: 10/16/02 00:00 Received: 10/21/02 12:11</b>									
Total Organic Carbon	13200	100	mg/kg dry	1	2100523	10/25/02	10/28/02	EPA 9060	E
<b>STS-2 8-9.5' (W210241-02) Soil Sampled: 10/16/02 00:00 Received: 10/21/02 12:11</b>									
Total Organic Carbon	12100	100	mg/kg dry	1	2100523	10/25/02	10/28/02	EPA 9060	E
<b>STS-3 6-8' (W210241-03) Soil Sampled: 10/16/02 00:00 Received: 10/21/02 12:11</b>									
Total Organic Carbon	8990	100	mg/kg dry	1	2100523	10/25/02	10/28/02	EPA 9060	E

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 10/28/02 16:50

**Percent Solids**
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-1 6-8' (W210241-01) Soil</b> Sampled: 10/16/02 00:00 Received: 10/21/02 12:11									
% Solids	82.9	0.0100	%	1	2100527	10/25/02	10/25/02	5035 7.5	
<b>STS-2 8-9.5' (W210241-02) Soil</b> Sampled: 10/16/02 00:00 Received: 10/21/02 12:11									
% Solids	89.6	0.0100	%	1	2100527	10/25/02	10/25/02	5035 7.5	
<b>STS-3 6-8' (W210241-03) Soil</b> Sampled: 10/16/02 00:00 Received: 10/21/02 12:11									
% Solids	77.5	0.0100	%	1	2100527	10/25/02	10/25/02	5035 7.5	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 10/28/02 16:50

**General Chemistry - Quality Control  
 Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2100523 - General Prep WC</b>										
<b>Blank (2100523-BLK1)</b>					Prepared: 10/25/02 Analyzed: 10/28/02					
Total Organic Carbon	ND	100	mg/kg wet							
<b>LCS (2100523-BS1)</b>					Prepared: 10/25/02 Analyzed: 10/28/02					
Total Organic Carbon	581	100	mg/kg wet	500		116	80-120			
<b>Duplicate (2100523-DUP1)</b>					Source: B210358-01 Prepared: 10/25/02 Analyzed: 10/28/02					
Total Organic Carbon	10600	100	mg/kg dry		12100			13.2	20	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 10/28/02 16:50

**Percent Solids - Quality Control**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2100527 - General Prep</b>										
<b>Blank (2100527-BLK1)</b>	Prepared & Analyzed: 10/25/02									
% Solids	0.0940	0.0100	%							
<b>Blank (2100527-BLK2)</b>	Prepared & Analyzed: 10/25/02									
% Solids	0.121	0.0100	%							
<b>Blank (2100527-BLK3)</b>	Prepared & Analyzed: 10/25/02									
% Solids	0.113	0.0100	%							
<b>Blank (2100527-BLK4)</b>	Prepared & Analyzed: 10/25/02									
% Solids	ND	0.0100	%							
<b>Duplicate (2100527-DUP1)</b>	Prepared & Analyzed: 10/25/02									
% Solids	79.4	0.0100	%						20	
<b>Duplicate (2100527-DUP2)</b>	Prepared & Analyzed: 10/25/02									
% Solids	83.8	0.0100	%						20	
<b>Duplicate (2100527-DUP3)</b>	Prepared & Analyzed: 10/25/02									
% Solids	83.8	0.0100	%						20	
<b>Duplicate (2100527-DUP4)</b>	Prepared & Analyzed: 10/25/02									
% Solids	87.8	0.0100	%						20	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac


Reported:  
10/28/02 16:50

### Notes and Definitions

- E This result is estimated. The analysis gave a final result that is above the calibration range.
- 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.

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



**CHAIN OF CUSTODY REPORT**

Client: <u>STB Consultants, Ltd.</u>		Bill To:		TAT: <u>(STD)</u> 4 DAY 3 DAY 2 DAY 1 DAY < 24 HRS.	
Address: <u>11425 W. Lake Park Dr.</u>		Address:		<input type="checkbox"/> YES - TAT is critical <input type="checkbox"/> NO - TAT is not critical DATE RESULTS NEEDED:	
<u>Milwaukee WI 53224</u>				Received: <input checked="" type="checkbox"/> Ice <input type="checkbox"/> refrigerator <input type="checkbox"/> ambient <input type="checkbox"/> refrigerator Temp. Upon Receipt: <u>MT</u>	
Report to: <u>Mark Mejac</u>	Phone #: <u>(414) 359-3030</u>	State & Program:	Phone #: ( )	Deliverable Package:	Delivery Method:
E-mail:	Fax #: <u>(414) 359-0822</u>		Fax #: ( )	<input type="checkbox"/> STD <input type="checkbox"/> Other	<input type="checkbox"/> GLA <input type="checkbox"/> Client <input type="checkbox"/> Shipped <input type="checkbox"/> Courier

Project Name:	Project #/PO#:	Sampler:	FIELD ID, LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	# of Bottles Preservative Used							TOTAL # OF BOTTLES	DO NOT DRY-WEIGHT CORRECT RESULTS	SAMPLES FIELD FILTERED	<input type="checkbox"/> YES <input type="checkbox"/> NO	CRACKED-BROKEN IMPROPERLY SEALED	SAMPLE CONTROL	LABORATORY ID NUMBER
							MeOH	NaHSO4	HCl	HNO3	H2SO4	NaOH	NONE							
<u>STB-1</u>	<u>6-8'</u>			<u>10-16-02</u>		<u>SOIL</u>														<u>W210241-01</u>
<u>STB-2</u>	<u>8-9.5'</u>			↓		↓														<u>-02</u>
<u>STB-3</u>	<u>6-8'</u>			↓		↓														<u>-03</u>
<u>4</u>																				
<u>5</u>																				
<u>6</u>																				
<u>7</u>																				
<u>8</u>																				
<u>9</u>																				
<u>10</u>																				

RELINQUISHED	<u>10-21-02</u>	RECEIVED	<u>[Signature]</u>	<u>10/21/02</u>	RELINQUISHED		RECEIVED	
RELINQUISHED	<u>10/21/02</u>	RECEIVED	<u>[Signature]</u>	<u>10/21/02</u>	RELINQUISHED		RECEIVED	

COMMENTS:

PAGE OF

28 October 2002

Mark Mejac  
STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee, WI 53224  
RE: 87185EA Southeast

Enclosed are the results of analyses for samples received by the laboratory on 10/17/02. 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

STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224


Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
STS-1;2-4'	W210203-01	Soil	10/16/02 00:00	10/17/02 09:40
STS-2;2-4'	W210203-02	Soil	10/16/02 00:00	10/17/02 09:40
STS-3;2-4'	W210203-03	Soil	10/16/02 00:00	10/17/02 09:40
STS-4;2.5-4'	W210203-04	Soil	10/16/02 00:00	10/17/02 09:40
MeOH Blank	W210203-05	MeOH Blank	10/16/02 00:00	10/17/02 09:40

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

Reported:  
 10/28/02 08:38

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
STS-1;2-4' (W210203-01) Soil Sampled: 10/16/02 00:00 Received: 10/17/02 09:40									
Benzene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/24/02	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	ND	25.0	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

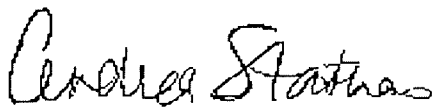
Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>STS-1;2-4' (W210203-01) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
Toluene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/24/02	EPA 8021B	
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	"	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>		104 %	80-120		"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (PID)</i>		103 %	80-120		"	"	"	"	
<b>STS-2;2-4' (W210203-02) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
Benzene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/24/02	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	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

Reported:  
 10/28/02 08:38

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-2;2-4' (W210203-02) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
trans-1,2-Dichloroethene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/24/02	EPA 8021B	
1,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	25.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	25.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>27.8</b>	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	"	"	"	"	"	"	
<b>Toluene</b>	<b>35.5</b>	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	"	"	"	"	"	"	
<b>Total Xylenes</b>	<b>108</b>	25.0	"	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>		91.7 %		80-120	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (PID)</i>		90.3 %		80-120	"	"	"	"	

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
STS-3;2-4' (W210203-03) Soil Sampled: 10/16/02 00:00 Received: 10/17/02 09:40									
Benzene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/24/02	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	ND	25.0	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-3;2-4' (W210203-03) Soil Sampled: 10/16/02 00:00 Received: 10/17/02 09:40</b>									
Toluene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/24/02	EPA 8021B	
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	"	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>		93.9 %	80-120		"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (PID)</i>		88.6 %	80-120		"	"	"	"	
<b>STS-4;2.5-4' (W210203-04) Soil Sampled: 10/16/02 00:00 Received: 10/17/02 09:40</b>									
Benzene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/25/02	EPA 8021B	
Bromobenzene	ND	25.0	"	"	"	"	"	"	
Bromodichloromethane	ND	25.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>213</b>	25.0	"	"	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>34.1</b>	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	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

Reported:  
 10/28/02 08:38

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>STS-4;2.5-4' (W210203-04) Soil Sampled: 10/16/02 00:00 Received: 10/17/02 09:40</b>									
trans-1,2-Dichloroethene	ND	25.0	ug/kg dry	50	2100157	10/24/02	10/25/02	EPA 8021B	
1,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	25.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	25.0	"	"	"	"	"	"	
Di-isopropyl ether	ND	25.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>34.8</b>	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	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>19500</b>	500	"	1000	"	"	10/25/02	"	
n-Propylbenzene	ND	25.0	"	50	"	"	10/25/02	"	
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	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>103</b>	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)		90.2 %		80-120	"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		87.7 %		80-120	"	"	"	"	

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

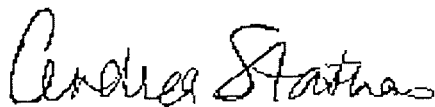
Reported:  
10/28/02 08:38

**Percent Solids**

**Great Lakes Analytical--Oak Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-1;2-4' (W210203-01) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
% Solids	89.1	0.0100	%	1	2100129	10/18/02	10/21/02	5035 7.5	
<b>STS-2;2-4' (W210203-02) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
% Solids	91.9	0.0100	%	1	2100129	10/18/02	10/21/02	5035 7.5	
<b>STS-3;2-4' (W210203-03) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
% Solids	88.4	0.0100	%	1	2100129	10/18/02	10/21/02	5035 7.5	
<b>STS-4;2.5-4' (W210203-04) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
% Solids	82.3	0.0100	%	1	2100129	10/18/02	10/21/02	5035 7.5	

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

**Total Metals by EPA 6000/7000 Series Methods**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-1;2-4' (W210203-01) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
Lead	156	1.12	mg/kg dry	1	2100474	10/23/02	10/24/02	EPA 6010B	
<b>STS-2;2-4' (W210203-02) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
Lead	76.4	1.09	mg/kg dry	1	2100474	10/23/02	10/24/02	EPA 6010B	
<b>STS-3;2-4' (W210203-03) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
Lead	8.47	1.13	mg/kg dry	1	2100474	10/23/02	10/24/02	EPA 6010B	
<b>STS-4;2.5-4' (W210203-04) Soil    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
Lead	404	1.22	mg/kg dry	1	2100474	10/23/02	10/24/02	EPA 6010B	

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

**WDNR Volatile Organic Compounds by Method 8021 (Blanks)**  
**Great Lakes Analytical--Oak Creek**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
MeOH Blank (W210203-05) MeOH Blank Sampled: 10/16/02 00:00 Received: 10/17/02 09:40										
Benzene	ND	25.0		ug/l	50	2100158	10/24/02	10/24/02	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	10.0		"	"	"	"	"	"	
Naphthalene	ND	25.0		"	"	"	"	"	"	
n-Propylbenzene	ND	25.0		"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	25.0		"	"	"	"	"	"	
Tetrachloroethene	ND	25.0		"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

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 10/28/02 08:38

**WDNR Volatile Organic Compounds by Method 8021 (Blanks)**  
**Great Lakes Analytical--Oak Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MeOH Blank (W210203-05) MeOH Blank    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40</b>									
Toluene	ND	25.0	ug/l	50	2100158	10/24/02	10/24/02	EPA 8021B	
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)		92.3 %		80-120	"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		96.5 %		80-120	"	"	"	"	

Great Lakes Analytical--Oak Creek



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DC = Non-I

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Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

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10/28/02 08:38

**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-1;2-4' (W210203-01) Soil</b> Sampled: 10/16/02 00:00    Received: 10/17/02 09:40									
Acenaphthene	1600	112	ug/kg dry	1	2100425	10/21/02	10/22/02	EPA 8310	
Acenaphthylene	275	224	"	"	"	"	"	"	
Anthracene	168	112	"	"	"	"	"	"	
Benz (a) anthracene	396	DC	56.1	"	"	"	"	"	
Benzo (a) pyrene	627	DC	5.61	"	"	"	"	"	
Benzo (b) fluoranthene	555	DC	56.1	"	"	"	"	"	
Benzo (ghi) perylene	333	112	"	"	"	"	"	"	
Benzo (k) fluoranthene	218	112	"	"	"	"	"	"	
Chrysene	564	112	"	"	"	"	"	"	
Dibenz (a,h) anthracene	222	DC	5.61	"	"	"	"	"	
Fluoranthene	1040	112	"	"	"	"	"	"	
Fluorene	179	112	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	328	DC	56.1	"	"	"	"	"	
1-Methylnaphthalene	194	112	"	"	"	"	"	"	
2-Methylnaphthalene	782	112	"	"	"	"	"	"	
Naphthalene	ND	112	"	"	"	"	"	"	
Phenanthrene	814	112	"	"	"	"	"	"	
Pyrene	405	112	"	"	"	"	"	"	

QC

Surrogate: Carbazole

242 %    14.9-144

H

**STS-2;2-4' (W210203-02) Soil**    Sampled: 10/16/02 00:00    Received: 10/17/02 09:40

QC

Acenaphthene	1040	109	ug/kg dry	1	2100425	10/21/02	10/22/02	EPA 8310	
Acenaphthylene	ND	218	"	"	"	"	"	"	
Anthracene	ND	109	"	"	"	"	"	"	
Benz (a) anthracene	411	DC	54.4	"	"	"	"	"	
Benzo (a) pyrene	604	DC	5.44	"	"	"	"	"	
Benzo (b) fluoranthene	514	DC	54.4	"	"	"	"	"	
Benzo (ghi) perylene	349	DC	109	"	"	"	"	"	
Benzo (k) fluoranthene	195	DC	109	"	"	"	"	"	
Chrysene	502	109	"	"	"	"	"	"	
Dibenz (a,h) anthracene	344	DC	5.44	"	"	"	"	"	
Fluoranthene	769	109	"	"	"	"	"	"	
Fluorene	ND	109	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	323	DC	54.4	"	"	"	"	"	
1-Methylnaphthalene	ND	109	"	"	"	"	"	"	
2-Methylnaphthalene	347	109	"	"	"	"	"	"	
Naphthalene	ND	109	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

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**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
STS-2;2-4' (W210203-02) Soil Sampled: 10/16/02 00:00 Received: 10/17/02 09:40									QC
Phenanthrene	286	109	ug/kg dry	1	2100425	10/21/02	10/22/02	EPA 8310	
Pyrene	320	109	"	"	"	"	"	"	
<i>Surrogate: Carbazole</i>		94.3 %	14.9-144	"	"	"	"	"	
STS-3;2-4' (W210203-03) Soil Sampled: 10/16/02 00:00 Received: 10/17/02 09:40									QC
Acenaphthene	ND	113	ug/kg dry	1	2100425	10/21/02	10/23/02	EPA 8310	
Acenaphthylene	ND	226	"	"	"	"	"	"	
Anthracene	ND	113	"	"	"	"	"	"	
Benzo (a) anthracene	ND	56.6	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>22.5</b>	<b>5.66</b>	"	"	"	"	"	"	<b>DC</b>
Benzo (b) fluoranthene	ND	56.6	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	113	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	113	"	"	"	"	"	"	
Chrysene	ND	113	"	"	"	"	"	"	
<b>Dibenz (a,h) anthracene</b>	<b>9.64</b>	5.66	"	"	"	"	"	"	
Fluoranthene	ND	113	"	"	"	"	"	"	
Fluorene	ND	113	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	56.6	"	"	"	"	"	"	
1-Methylnaphthalene	ND	113	"	"	"	"	"	"	
2-Methylnaphthalene	ND	113	"	"	"	"	"	"	
Naphthalene	ND	113	"	"	"	"	"	"	
Phenanthrene	ND	113	"	"	"	"	"	"	
Pyrene	ND	113	"	"	"	"	"	"	
<i>Surrogate: Carbazole</i>		72.2 %	14.9-144	"	"	"	"	"	

Great Lakes Analytical--Oak Creek



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Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

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**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Limit							
<b>STS-4;2.5-4' (W210203-04) Soil</b> <b>Sampled: 10/16/02 00:00</b> <b>Received: 10/17/02 09:40</b> <b>QC</b>										
Acenaphthene	31700	12200	ug/kg dry	100	2100425	10/21/02	10/23/02	EPA 8310		
Acenaphthylene	4000 <i>GW</i>	2430	"	"	"	"	"	"	"	
Anthracene	16400	12200	"	"	"	"	"	"	"	
Benz (a) anthracene	19400 <i>DC</i>	6080	"	"	"	"	"	"	"	
Benzo (a) pyrene	16500 <i>DC</i>	608	"	"	"	"	"	"	"	
Benzo (b) fluoranthene	13700 <i>DC</i>	6080	"	"	"	"	"	"	"	
Benzo (ghi) perylene	6190 <i>DC</i>	1220	"	"	"	"	"	"	"	
Benzo (k) fluoranthene	7140 <i>DC</i>	1220	"	"	"	"	"	"	"	
Chrysene	20100 <i>DC</i>	12200	"	"	"	"	"	"	"	
Dibenz (a,h) anthracene	1920 <i>DC</i>	608	"	"	"	"	"	"	"	
Fluoranthene	145000 <i>GW</i>	12200	"	"	"	"	"	"	"	
Fluorene	11000	1220	"	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	7740 <i>DC</i>	6080	"	"	"	"	"	"	"	
1-Methylnaphthalene	9120	1220	"	"	"	"	"	"	"	
2-Methylnaphthalene	18800	12200	"	"	"	"	"	"	"	
Naphthalene	2630 <i>GW</i>	1220	"	"	"	"	"	"	"	
Phenanthrene	51000 <i>GW, DC</i>	12200	"	"	"	"	"	"	"	
Pyrene	19900	12200	"	"	"	"	"	"	"	
Surrogate: Carbazole		5650 %		14.9-144	"	"	"	"	"	H

Great Lakes Analytical--Oak Creek

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Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

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10/28/02 08:38

**Percent Solids**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>STS-1;2-4' (W210203-01) Soil</b> <b>Sampled: 10/16/02 00:00</b> <b>Received: 10/17/02 09:40</b>									
% Solids	89.1	0.0100	%	1	2100470	10/23/02	10/25/02	5035 7.5	
<b>STS-2;2-4' (W210203-02) Soil</b> <b>Sampled: 10/16/02 00:00</b> <b>Received: 10/17/02 09:40</b>									
% Solids	91.9	0.0100	%	1	2100470	10/23/02	10/25/02	5035 7.5	
<b>STS-3;2-4' (W210203-03) Soil</b> <b>Sampled: 10/16/02 00:00</b> <b>Received: 10/17/02 09:40</b>									
% Solids	88.4	0.0100	%	1	2100470	10/23/02	10/25/02	5035 7.5	
<b>STS-4;2.5-4' (W210203-04) Soil</b> <b>Sampled: 10/16/02 00:00</b> <b>Received: 10/17/02 09:40</b>									
% Solids	82.3	0.0100	%	1	2100470	10/23/02	10/25/02	5035 7.5	

Great Lakes Analytical--Oak Creek



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 Milwaukee WI, 53224

Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

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**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
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**Batch 2100129 - Percent Solids**

**Blank (2100129-BLK1)**

Prepared: 10/18/02 Analyzed: 10/21/02

% Solids	ND	0.0100	%							
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**Duplicate (2100129-DUP1)**

Source: W210193-03

Prepared: 10/18/02 Analyzed: 10/21/02

% Solids	83.8	0.0100	%		81.5			2.78	20	
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Great Lakes Analytical--Oak Creek

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Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2100474 - EPA 3050B</b>									
<b>Blank (2100474-BLK1)</b> Prepared: 10/23/02 Analyzed: 10/24/02									
Lead	ND	1.00	mg/kg wet						
<b>LCS (2100474-BS1)</b> Prepared: 10/23/02 Analyzed: 10/24/02									
Lead	201	1.00	mg/kg wet	201	100	84-109			
<b>Matrix Spike (2100474-MS1)</b> Source: W210203-01 Prepared: 10/23/02 Analyzed: 10/24/02									
Lead	324	1.12	mg/kg dry	224	156	75.0	52-125		
<b>Matrix Spike Dup (2100474-MSD1)</b> Source: W210203-01 Prepared: 10/23/02 Analyzed: 10/24/02									
Lead	305	1.12	mg/kg dry	224	156	66.5	52-125	6.04	14

Great Lakes Analytical--Oak Creek



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Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

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**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control  
Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
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**Batch 2100425 - EPA 3550B**

**Blank (2100425-BLK1)**

Prepared: 10/21/02 Analyzed: 10/22/02

Acenaphthene	ND	100	ug/kg wet							
Acenaphthylene	ND	200	"							
Anthracene	ND	100	"							
Benz (a) anthracene	ND	50.0	"							
Benzo (a) pyrene	ND	5.00	"							
Benzo (b) fluoranthene	ND	50.0	"							
Benzo (ghi) perylene	ND	100	"							
Benzo (k) fluoranthene	ND	100	"							
Chrysene	ND	100	"							
Dibenz (a,h) anthracene	ND	5.00	"							
Fluoranthene	ND	100	"							
Fluorene	ND	100	"							
Indeno (1,2,3-cd) pyrene	ND	50.0	"							
1-Methylnaphthalene	ND	100	"							
2-Methylnaphthalene	ND	100	"							
Naphthalene	ND	100	"							
Phenanthrene	ND	100	"							
Pyrene	ND	100	"							
Surrogate: Carbazole	47.3		"	66.7		70.9	14.9-144			


**LCS (2100425-BS1)**

Prepared: 10/21/02 Analyzed: 10/22/02

Acenaphthene	125	10.0	ug/kg wet	133		94.0	30.3-126			
Acenaphthylene	85.9	20.0	"	133		64.6	75.8-175			L
Anthracene	101	10.0	"	133		75.9	45-115			
Benz (a) anthracene	120	5.00	"	133		90.2	40.9-146			
Benzo (a) pyrene	115	0.500	"	133		86.5	10-150			
Benzo (b) fluoranthene	122	5.00	"	133		91.7	47.4-133			
Benzo (ghi) perylene	124	10.0	"	133		93.2	38-131			
Benzo (k) fluoranthene	126	10.0	"	133		94.7	49.1-137			
Chrysene	121	10.0	"	133		91.0	59.7-119			
Dibenz (a,h) anthracene	132	0.500	"	133		99.2	33.7-144			
Fluoranthene	96.6	10.0	"	133		72.6	52.3-126			
Fluorene	98.8	10.0	"	133		74.3	51-110			
Indeno (1,2,3-cd) pyrene	115	5.00	"	133		86.5	54.1-125			

Great Lakes Analytical--Oak Creek

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Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control  
Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2100425 - EPA 3550B**

**LCS (2100425-BS1)**

Prepared: 10/21/02 Analyzed: 10/22/02

1-Methylnaphthalene	148	10.0	ug/kg wet	133		111	31.2-125			
2-Methylnaphthalene	117	10.0	"	133		88.0	33.3-119			
Naphthalene	104	10.0	"	133		78.2	43.3-136			
Phenanthrene	105	10.0	"	133		78.9	36.3-142			
Pyrene	113	10.0	"	133		85.0	41.3-122			
<i>Surrogate: Carbazole</i>	<i>50.2</i>		<i>"</i>	<i>66.7</i>		<i>75.3</i>	<i>14.9-144</i>			

**Matrix Spike (2100425-MS1)**

Source: B210328-09

Prepared: 10/21/02 Analyzed: 10/22/02

Acenaphthene	97.8	12.2	ug/kg dry	162	ND	60.4	10-140			
Acenaphthylene	100	24.4	"	162	ND	61.7	10-218			
Anthracene	84.7	12.2	"	162	ND	52.3	10-136			
Benz (a) anthracene	93.0	6.09	"	162	ND	57.4	10-152			
Benzo (a) pyrene	81.5	0.609	"	162	ND	50.3	10-132			
Benzo (b) fluoranthene	86.3	6.09	"	162	ND	53.3	10-140			
Benzo (ghi) perylene	77.2	12.2	"	162	ND	47.7	10-167			
Benzo (k) fluoranthene	89.5	12.2	"	162	ND	55.2	10-144			
Chrysene	94.5	12.2	"	162	ND	58.3	10-146			
Dibenz (a,h) anthracene	88.6	0.609	"	162	ND	54.7	10-131			
Fluoranthene	91.2	12.2	"	162	14.0	47.7	10-153			
Fluorene	89.5	12.2	"	162	ND	55.2	10-125			
Indeno (1,2,3-cd) pyrene	72.2	6.09	"	162	ND	44.6	10-138			
1-Methylnaphthalene	112	12.2	"	162	ND	69.1	10-150			
2-Methylnaphthalene	99.9	12.2	"	162	ND	61.7	10-155			
Naphthalene	103	12.2	"	162	ND	63.6	10-158			
Phenanthrene	99.3	12.2	"	162	ND	61.3	10-155			
Pyrene	95.1	12.2	"	162	ND	55.4	10-154			
<i>Surrogate: Carbazole</i>	<i>57.1</i>		<i>"</i>	<i>81.2</i>		<i>70.3</i>	<i>14.9-144</i>			

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

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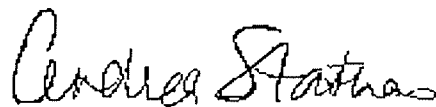
**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control  
Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2100425 - EPA 3550B**

<b>Matrix Spike Dup (2100425-MSD1)</b>	<b>Source: B210328-09</b>			<b>Prepared: 10/21/02</b>		<b>Analyzed: 10/22/02</b>				
Acenaphthene	112	12.2	ug/kg dry	162	ND	69.1	10-140	13.5	105	
Acenaphthylene	107	24.4	"	162	ND	66.0	10-218	6.76	59.8	
Anthracene	101	12.2	"	162	ND	62.3	10-136	17.6	62.1	
Benz (a) anthracene	114	6.09	"	162	ND	70.4	10-152	20.3	81.6	
Benzo (a) pyrene	105	0.609	"	162	ND	64.8	10-132	25.2	56.9	
Benzo (b) fluoranthene	109	6.09	"	162	ND	67.3	10-140	23.2	96.8	
Benzo (ghi) perylene	101	12.2	"	162	ND	62.3	10-167	26.7	64.9	
Benzo (k) fluoranthene	112	12.2	"	162	ND	69.1	10-144	22.3	59.5	
Chrysene	114	12.2	"	162	ND	70.4	10-146	18.7	113	
Dibenz (a,h) anthracene	113	0.609	"	162	ND	69.8	10-131	24.2	57.5	
Fluoranthene	106	12.2	"	162	14.0	56.8	10-153	15.0	103	
Fluorene	101	12.2	"	162	ND	62.3	10-125	12.1	59	
Indeno (1,2,3-cd) pyrene	100	6.09	"	162	ND	61.7	10-138	32.3	84.6	
1-Methylnaphthalene	123	12.2	"	162	ND	75.9	10-150	9.36	91.8	
2-Methylnaphthalene	110	12.2	"	162	ND	67.9	10-155	9.62	89.4	
Naphthalene	108	12.2	"	162	ND	66.7	10-158	4.74	92.2	
Phenanthrene	117	12.2	"	162	ND	72.2	10-155	16.4	89	
Pyrene	116	12.2	"	162	ND	68.3	10-154	19.8	78.5	
<i>Surrogate: Carbazole</i>	<i>57.9</i>		<i>"</i>	<i>81.0</i>		<i>71.5</i>	<i>14.9-144</i>			

Great Lakes Analytical--Oak Creek



Andrea Stathas, Project Manager

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STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

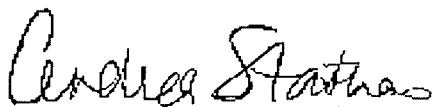
Reported:  
10/28/02 08:38

### 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--Oak Creek



Andrea Stathas, Project Manager

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14 November 2002

Mark Mejac  
STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee, WI 53224  
RE: 87185EA Southeast

Enclosed are the results of analyses for samples received by the laboratory on 11/01/02. If you have any questions concerning this report, please feel free to contact me.

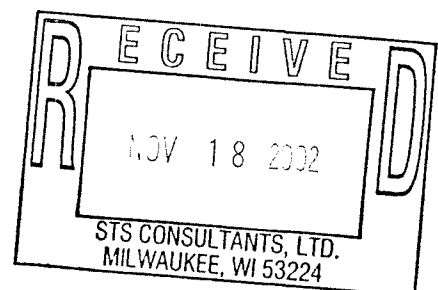
Sincerely,

**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



STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

**Reported:**  
 11/14/02 16:45

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 2-4'	W211002-01	Soil	10/29/02 00:00	11/01/02 09:01
MW-1 7.5-9.5'	W211002-02	Soil	10/29/02 00:00	11/01/02 09:01
MW-2 2-4'	W211002-03	Soil	10/29/02 00:00	11/01/02 09:01
MW-2 7.5-9.5'	W211002-04	Soil	10/29/02 00:00	11/01/02 09:01
MW-3 0-2'	W211002-05	Soil	10/29/02 00:00	11/01/02 09:01
MW-3 7.5-9.5'	W211002-06	Soil	10/29/02 00:00	11/01/02 09:01
BLANK	W211002-07	MeOH Blank	10/29/02 00:00	11/01/02 09:01

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager



STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
10/28/02 08:38

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Great Lakes Analytical—Oak Creek



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Andrea Stathas, Project Manager

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 Milwaukee WI, 53224

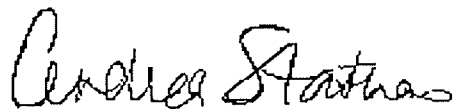
 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**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 7.5-9.5' (W211002-02) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01 <span style="float: right;">QC</span>									
Benzene	ND	25.0	ug/kg wet	50	2110064	11/12/02	11/12/02	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	"	"	"	"	"	"	
1,1,1,2-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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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 7.5-9.5' (W211002-02) Soil</b> <b>Sampled: 10/29/02 00:00</b> <b>Received: 11/01/02 09:01</b> <b>Q</b>									
1,2,4-Trichlorobenzene	ND	25.0	ug/kg wet	50	2110064	11/12/02	11/12/02	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	"	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>		86.7 %		80-120	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (PID)</i>		89.2 %		80-120	"	"	"	"	
<b>MW-2 2-4' (W211002-03) Soil</b> <b>Sampled: 10/29/02 00:00</b> <b>Received: 11/01/02 09:01</b> <b>QC</b>									
Benzene	ND	25.0	ug/kg wet	50	2110064	11/12/02	11/12/02	EPA 8021B	
Bromobenzene	ND	25.0	"	"	"	"	"	"	
Bromodichloromethane	ND	25.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>36.8</b>	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

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

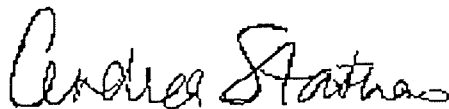
 Reported:  
 11/14/02 16:45

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
MW-2 2-4' (W211002-03) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01 <span style="float: right;">QC</span>									
Di-isopropyl ether	ND	25.0	ug/kg wet	50	2110064	11/12/02	11/12/02	EPA 8021B	
Ethylbenzene	ND	25.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	25.0	"	"	"	"	"	"	
Isopropylbenzene	ND	25.0	"	"	"	"	"	"	
<b>p-Isopropyltoluene</b>	<b>25.8</b>	25.0	"	"	"	"	"	"	
Methylene chloride	ND	100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	25.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>149</b>	25.0	"	"	"	"	"	"	
n-Propylbenzene	ND	25.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	25.0	"	"	"	"	"	"	
Tetrachloroethene	ND	25.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>44.0</b>	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	"	"	"	"	"	"	
<b>Trichloroethene</b>	<b>127</b>	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	"	"	"	"	"	"	
<b>Total Xylenes</b>	<b>101</b>	25.0	"	"	"	"	"	"	
Surrogate: 1-Cl-4-FB (ELCD)		102 %		80-120	"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		95.5 %		80-120	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**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 7.5-9.5' (W211002-06) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01 <span style="float: right;">QC</span>									
Benzene	ND	25.0	ug/kg wet	50	2110064	11/12/02	11/13/02	EPA 8021B	
Bromobenzene	ND	250	"	500	"	"	11/13/02	"	
Bromodichloromethane	ND	250	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>1050</b>	250	"	"	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>781</b>	250	"	"	"	"	"	"	
tert-Butylbenzene	ND	250	"	"	"	"	"	"	
Carbon tetrachloride	ND	250	"	"	"	"	"	"	
Chlorobenzene	ND	250	"	"	"	"	"	"	
Chloroethane	ND	250	"	"	"	"	"	"	
Chloroform	ND	250	"	"	"	"	"	"	
Chloromethane	ND	250	"	"	"	"	"	"	
2-Chlorotoluene	ND	250	"	"	"	"	"	"	
4-Chlorotoluene	ND	250	"	"	"	"	"	"	
Dibromochloromethane	ND	250	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	250	"	"	"	"	"	"	
1,2-Dibromoethane	ND	250	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	250	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	250	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	250	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	250	"	"	"	"	"	"	
1,1-Dichloroethane	ND	250	"	"	"	"	"	"	
1,2-Dichloroethane	ND	250	"	"	"	"	"	"	
1,1-Dichloroethene	ND	250	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	250	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	250	"	"	"	"	"	"	
1,2-Dichloropropane	ND	250	"	"	"	"	"	"	
1,3-Dichloropropane	ND	250	"	"	"	"	"	"	
2,2-Dichloropropane	ND	250	"	"	"	"	"	"	
Di-isopropyl ether	ND	250	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>5880</b>	250	"	"	"	"	"	"	
Hexachlorobutadiene	ND	250	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>280</b>	250	"	"	"	"	"	"	
<b>p-Isopropyltoluene</b>	<b>3050</b>	250	"	"	"	"	"	"	
Methylene chloride	ND	1000	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	250	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>1260</b>	250	"	"	"	"	"	"	
n-Propylbenzene	ND	250	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	250	"	"	"	"	"	"	
Tetrachloroethene	ND	250	"	"	"	"	"	"	
<b>Toluene</b>	<b>1740</b>	250	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	250	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-3 7.5-9.5' (W211002-06) Soil</b>									
Sampled: 10/29/02 00:00 Received: 11/01/02 09:01									
<b>QC</b>									
1,2,4-Trichlorobenzene	ND	250	ug/kg wet	500	2110064	11/12/02	11/13/02	EPA 8021B	
1,1,1-Trichloroethane	ND	250	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	250	"	"	"	"	"	"	
Trichloroethene	ND	250	"	"	"	"	"	"	
Trichlorofluoromethane	ND	250	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	211	25.0	"	50	"	"	11/13/02	"	
1,3,5-Trimethylbenzene	70.6	25.0	"	"	"	"	"	"	
Vinyl chloride	ND	250	"	500	"	"	11/13/02	"	
<b>Total Xylenes</b>	<b>18900</b>	<b>250</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
Surrogate: 1-Cl-4-FB (ELCD)		120 %		80-120	"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		91.3 %		80-120	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**WDNR Volatile Organic Compounds by Method 8021 (Blanks)**  
**Great Lakes Analytical--Oak Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BLANK (W211002-07) MeOH Blank    Sampled: 10/29/02 00:00    Received: 11/01/02 09:01</b>									
Benzene	ND	25.0	ug/l	50	2110065	11/12/02	11/12/02	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	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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Andrea Stathas, Project Manager



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 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

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 11/14/02 16:45

**WDNR Volatile Organic Compounds by Method 8021 (Blanks)**  
**Great Lakes Analytical--Oak Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BLANK (W211002-07) MeOH Blank    Sampled: 10/29/02 00:00    Received: 11/01/02 09:01</b>									
1,2,4-Trichlorobenzene	ND	25.0	ug/l	50	2110065	11/12/02	11/12/02	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	"	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>		<i>124 %</i>		<i>80-120</i>					<i>H</i>
<i>Surrogate: 1-Cl-4-FB (PID)</i>		<i>87.0 %</i>		<i>80-120</i>					



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 Project Manager: Mark Mejac

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**Total Metals by EPA 6000/7000 Series Methods  
 Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 2-4' (W211002-01) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
Lead	66.8	1.15 mg/kg dry		1	2110142	11/08/02	11/11/02	EPA 6010B	
<b>MW-1 7.5-9.5' (W211002-02) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
Lead	396	1.18 mg/kg dry		1	2110142	11/08/02	11/11/02	EPA 6010B	
<b>MW-2 2-4' (W211002-03) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
Lead	210	1.06 mg/kg dry		1	2110142	11/08/02	11/11/02	EPA 6010B	
<b>MW-2 7.5-9.5' (W211002-04) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
Lead	9.98	1.15 mg/kg dry		1	2110142	11/08/02	11/11/02	EPA 6010B	
<b>MW-3 0-2' (W211002-05) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
Lead	86.3	1.17 mg/kg dry		1	2110142	11/08/02	11/11/02	EPA 6010B	
<b>MW-3 7.5-9.5' (W211002-06) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
Lead	203	1.20 mg/kg dry		1	2110142	11/08/02	11/11/02	EPA 6010B	

Great Lakes Analytical--Oak Creek

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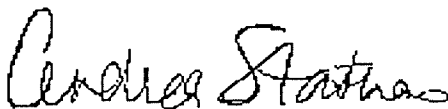
 Reported:  
 11/14/02 16:45

**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 2-4' (W211002-01) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01									QC
Acenaphthene	3050	115	ug/kg dry	10	2110070	11/05/02	11/07/02	EPA 8310	
Acenaphthylene	843	230	"	"	"	"	"	"	
Anthracene	945	115	"	"	"	"	"	"	
Benz (a) anthracene	1490	57.5	"	"	"	"	"	"	
Benzo (a) pyrene	1270	5.75	"	"	"	"	"	"	
Benzo (b) fluoranthene	1410	57.5	"	"	"	"	"	"	
Benzo (ghi) perylene	637	115	"	"	"	"	"	"	
Benzo (k) fluoranthene	540	115	"	"	"	"	"	"	
Chrysene	1290	115	"	"	"	"	"	"	
Dibenz (a,h) anthracene	1120	5.75	"	"	"	"	"	"	
Fluoranthene	3810	115	"	"	"	"	"	"	
Fluorene	448	115	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	1040	57.5	"	"	"	"	"	"	
1-Methylnaphthalene	2390	115	"	"	"	"	"	"	
2-Methylnaphthalene	2730	115	"	"	"	"	"	"	
Naphthalene	331	115	"	"	"	"	"	"	
Phenanthrene	2980	115	"	"	"	"	"	"	
Pyrene	2010	115	"	"	"	"	"	"	
Surrogate: Carbazole		418 %	14.9-144	"	"	"	"	"	H
MW-2 2-4' (W211002-03) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01									QC
Acenaphthene	1160	1060	ug/kg dry	10	2110070	11/05/02	11/07/02	EPA 8310	
Acenaphthylene	778	212	"	"	"	"	"	"	
Anthracene	135	106	"	"	"	"	"	"	
Benz (a) anthracene	1910	529	"	"	"	"	"	"	
Benzo (a) pyrene	2710	52.9	"	"	"	"	"	"	
Benzo (b) fluoranthene	3360	529	"	"	"	"	"	"	
Benzo (ghi) perylene	1340	1060	"	"	"	"	"	"	
Benzo (k) fluoranthene	1130	1060	"	"	"	"	"	"	
Chrysene	2070	1060	"	"	"	"	"	"	
Dibenz (a,h) anthracene	2870	52.9	"	"	"	"	"	"	
Fluoranthene	1030	106	"	"	"	"	"	"	
Fluorene	130	106	"	1	"	"	"	"	
Indeno (1,2,3-cd) pyrene	2310	529	"	10	"	"	"	"	
1-Methylnaphthalene	556	106	"	"	"	"	"	"	
2-Methylnaphthalene	791	106	"	"	"	"	"	"	
Naphthalene	ND	106	"	1	"	"	"	"	
Phenanthrene	ND	106	"	"	"	"	"	"	
Pyrene	732	106	"	10	"	"	"	"	
Surrogate: Carbazole		60.9 %	14.9-144	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 0-2' (W211002-05) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01									Qt
Acenaphthene	237	117	ug/kg dry	1	2110070	11/05/02	11/08/02	EPA 8310	
Acenaphthylene	ND	235	"	"	"	"	"	"	
Anthracene	ND	117	"	"	"	"	"	"	
Benz (a) anthracene	197	58.7	"	"	"	"	"	"	
Benzo (a) pyrene	207	5.87	"	"	"	"	"	"	
Benzo (b) fluoranthene	220	58.7	"	"	"	"	"	"	
Benzo (ghi) perylene	186	117	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	117	"	"	"	"	"	"	
Chrysene	198	117	"	"	"	"	"	"	
Dibenz (a,h) anthracene	31.6	5.87	"	"	"	"	"	"	
Fluoranthene	327	117	"	"	"	"	"	"	
Fluorene	ND	117	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	232	58.7	"	"	"	"	"	"	
1-Methylnaphthalene	ND	117	"	"	"	"	"	"	
2-Methylnaphthalene	ND	117	"	"	"	"	"	"	
Naphthalene	ND	117	"	"	"	"	"	"	
Phenanthrene	171	117	"	"	"	"	"	"	
Pyrene	409	117	"	"	"	"	"	"	
Surrogate: Carbazole		94.5 %	14.9-144		"	"	"	"	



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 Project: 87185EA Southeast  
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**Percent Solids**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 2-4' (W211002-01) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
% Solids	86.9	0.0100	%	1	2110108	11/07/02	11/08/02	5035 7.5	
<b>MW-1 7.5-9.5' (W211002-02) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
% Solids	84.5	0.0100	%	1	2110108	11/07/02	11/08/02	5035 7.5	
<b>MW-2 2-4' (W211002-03) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
% Solids	94.5	0.0100	%	1	2110108	11/07/02	11/08/02	5035 7.5	
<b>MW-2 7.5-9.5' (W211002-04) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
% Solids	86.7	0.0100	%	1	2110108	11/07/02	11/08/02	5035 7.5	
<b>MW-3 0-2' (W211002-05) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
% Solids	85.2	0.0100	%	1	2110108	11/07/02	11/08/02	5035 7.5	
<b>MW-3 7.5-9.5' (W211002-06) Soil Sampled: 10/29/02 00:00 Received: 11/01/02 09:01</b>									
% Solids	83.4	0.0100	%	1	2110108	11/07/02	11/08/02	5035 7.5	

Great Lakes Analytical--Oak Creek

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 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

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 11/14/02 16:45

**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
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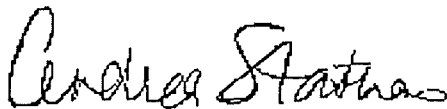
**Batch 2110064 - EPA 5030B [MeOH]**

Prepared &amp; Analyzed: 11/12/02

**Blank (2110064-BLK1)**

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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 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**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
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**Batch 2110064 - EPA 5030B [MeOH]**

<b>Blank (2110064-BLK1)</b>				Prepared & Analyzed: 11/12/02						
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	"							
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>	<i>1120</i>		<i>"</i>	<i>1000</i>		<i>112</i>	<i>80-120</i>			
<i>Surrogate: 1-Cl-4-FB (PID)</i>	<i>867</i>		<i>"</i>	<i>1000</i>		<i>86.7</i>	<i>80-120</i>			

**LCS (2110064-BS1)**

Prepared: 11/12/02 Analyzed: 11/13/02

Benzene	992	25.0	ug/kg wet	1000		99.2	80-120			
Bromobenzene	1180	25.0	"	1000		118	80-120			
Bromodichloromethane	714	25.0	"	1000		71.4	80-120			L
n-Butylbenzene	1090	25.0	"	1000		109	80-120			
sec-Butylbenzene	1160	25.0	"	1000		116	80-120			
tert-Butylbenzene	1160	25.0	"	1000		116	80-120			
Carbon tetrachloride	809	25.0	"	1000		80.9	80-120			
Chlorobenzene	1130	25.0	"	1000		113	80-120			
Chloroethane	1130	25.0	"	1000		113	80-120			
Chloroform	777	25.0	"	1000		77.7	80-120			L
Chloromethane	1990	25.0	"	1000		199	80-120			H
2-Chlorotoluene	1110	25.0	"	1000		111	80-120			
4-Chlorotoluene	1150	25.0	"	1000		115	80-120			
Dibromochloromethane	817	25.0	"	1000		81.7	80-120			

Great Lakes Analytical--Oak Creek

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 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**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
<b>Batch 2110064 - EPA 5030B [MeOH]</b>										
<b>LCS (2110064-BS1)</b>										
				Prepared: 11/12/02 Analyzed: 11/13/02						
1,2-Dibromo-3-chloropropane	852	25.0	ug/kg wet	1000		85.2	80-120			
1,2-Dibromoethane	817	25.0	"	1000		81.7	80-120			
1,2-Dichlorobenzene	1180	25.0	"	1000		118	80-120			
1,3-Dichlorobenzene	1130	25.0	"	1000		113	80-120			
1,4-Dichlorobenzene	1120	25.0	"	1000		112	80-120			
Dichlorodifluoromethane	1680	25.0	"	1000		168	80-120			H
1,1-Dichloroethane	865	25.0	"	1000		86.5	80-120			
1,2-Dichloroethane	834	25.0	"	1000		83.4	80-120			
1,1-Dichloroethene	1150	25.0	"	1000		115	80-120			
cis-1,2-Dichloroethene	1050	25.0	"	1000		105	80-120			
trans-1,2-Dichloroethene	1050	25.0	"	1000		105	80-120			
1,2-Dichloropropane	756	25.0	"	1000		75.6	80-120			L
1,3-Dichloropropane	820	25.0	"	1000		82.0	80-120			
2,2-Dichloropropane	848	25.0	"	1000		84.8	80-120			
Di-isopropyl ether	885	25.0	"	1000		88.5	80-120			
Ethylbenzene	1100	25.0	"	1000		110	80-120			
Hexachlorobutadiene	1150	25.0	"	1000		115	80-120			
Isopropylbenzene	1180	25.0	"	1000		118	80-120			
p-Isopropyltoluene	1080	25.0	"	1000		108	80-120			
Methylene chloride	1080	100	"	1000		108	80-120			
Methyl tert-butyl ether	952	25.0	"	1000		95.2	80-120			
Naphthalene	1110	25.0	"	1000		111	80-120			
n-Propylbenzene	1160	25.0	"	1000		116	80-120			
1,1,2,2-Tetrachloroethane	915	25.0	"	1000		91.5	80-120			
Tetrachloroethene	1070	25.0	"	1000		107	80-120			
Toluene	1090	25.0	"	1000		109	80-120			
1,2,3-Trichlorobenzene	1130	25.0	"	1000		113	80-120			
1,2,4-Trichlorobenzene	1060	25.0	"	1000		106	80-120			
1,1,1-Trichloroethane	857	25.0	"	1000		85.7	80-120			
1,1,2-Trichloroethane	858	25.0	"	1000		85.8	80-120			
Trichloroethene	955	25.0	"	1000		95.5	80-120			
Trichlorofluoromethane	794	25.0	"	1000		79.4	80-120			L
1,2,4-Trimethylbenzene	1170	25.0	"	1000		117	80-120			
1,3,5-Trimethylbenzene	1170	25.0	"	1000		117	80-120			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**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
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**Batch 2110064 - EPA 5030B [MeOH]**
**LCS (2110064-BS1)**

Prepared: 11/12/02 Analyzed: 11/13/02

Vinyl chloride	949	25.0	ug/kg wet	1000		94.9	80-120			
Total Xylenes	3430	25.0	"	3000		114	80-120			
Surrogate: 1-Cl-4-FB (ELCD)	1000		"	1000		100	80-120			
Surrogate: 1-Cl-4-FB (PID)	1020		"	1000		102	80-120			

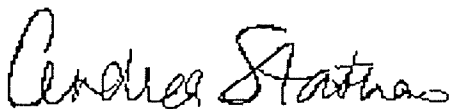
**LCS Dup (2110064-BS1)**

Prepared: 11/12/02 Analyzed: 11/13/02

Benzene	966	25.0	ug/kg wet	1000		96.6	80-120	2.66	20	
Bromobenzene	1120	25.0	"	1000		112	80-120	5.22	20	
Bromodichloromethane	801	25.0	"	1000		80.1	80-120	11.5	20	
n-Butylbenzene	1080	25.0	"	1000		108	80-120	0.922	20	
sec-Butylbenzene	1100	25.0	"	1000		110	80-120	5.31	20	
tert-Butylbenzene	1090	25.0	"	1000		109	80-120	6.22	20	
Carbon tetrachloride	841	25.0	"	1000		84.1	80-120	3.88	20	
Chlorobenzene	1080	25.0	"	1000		108	80-120	4.52	20	
Chloroethane	1130	25.0	"	1000		113	80-120	0.00	20	
Chloroform	805	25.0	"	1000		80.5	80-120	3.54	20	
Chloromethane	1850	25.0	"	1000		185	80-120	7.29	20	H
2-Chlorotoluene	1060	25.0	"	1000		106	80-120	4.61	20	
4-Chlorotoluene	1090	25.0	"	1000		109	80-120	5.36	20	
Dibromochloromethane	812	25.0	"	1000		81.2	80-120	0.614	20	
1,2-Dibromo-3-chloropropane	842	25.0	"	1000		84.2	80-120	1.18	20	
1,2-Dibromoethane	856	25.0	"	1000		85.6	80-120	4.66	20	
1,2-Dichlorobenzene	1100	25.0	"	1000		110	80-120	7.02	20	
1,3-Dichlorobenzene	1080	25.0	"	1000		108	80-120	4.52	20	
1,4-Dichlorobenzene	1080	25.0	"	1000		108	80-120	3.64	20	
Dichlorodifluoromethane	1570	25.0	"	1000		157	80-120	6.77	20	H
1,1-Dichloroethane	908	25.0	"	1000		90.8	80-120	4.85	20	
1,2-Dichloroethane	845	25.0	"	1000		84.5	80-120	1.31	20	
1,1-Dichloroethene	1120	25.0	"	1000		112	80-120	2.64	20	
cis-1,2-Dichloroethene	1030	25.0	"	1000		103	80-120	1.92	20	
trans-1,2-Dichloroethene	1020	25.0	"	1000		102	80-120	2.90	20	
1,2-Dichloropropane	772	25.0	"	1000		77.2	80-120	2.09	20	L
1,3-Dichloropropane	851	25.0	"	1000		85.1	80-120	3.71	20	
2,2-Dichloropropane	886	25.0	"	1000		88.6	80-120	4.38	20	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**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
<b>Batch 2110064 - EPA 5030B [MeOH]</b>										
<b>LCS Dup (2110064-BSD1)</b>					Prepared: 11/12/02 Analyzed: 11/13/02					
Di-isopropyl ether	901	25.0	ug/kg wet	1000		90.1	80-120	1.79	20	
Ethylbenzene	1050	25.0	"	1000		105	80-120	4.65	20	
Hexachlorobutadiene	1060	25.0	"	1000		106	80-120	8.14	20	
Isopropylbenzene	1110	25.0	"	1000		111	80-120	6.11	20	
p-Isopropyltoluene	1080	25.0	"	1000		108	80-120	0.00	20	
Methylene chloride	1070	100	"	1000		107	80-120	0.930	20	
Methyl tert-butyl ether	921	25.0	"	1000		92.1	80-120	3.31	20	
Naphthalene	1110	25.0	"	1000		111	80-120	0.00	20	
n-Propylbenzene	1100	25.0	"	1000		110	80-120	5.31	20	
1,1,2,2-Tetrachloroethane	941	25.0	"	1000		94.1	80-120	2.80	20	
Tetrachloroethene	1040	25.0	"	1000		104	80-120	2.84	20	
Toluene	1060	25.0	"	1000		106	80-120	2.79	20	
1,2,3-Trichlorobenzene	1120	25.0	"	1000		112	80-120	0.889	20	
1,2,4-Trichlorobenzene	1130	25.0	"	1000		113	80-120	6.39	20	
1,1,1-Trichloroethane	883	25.0	"	1000		88.3	80-120	2.99	20	
1,1,2-Trichloroethane	884	25.0	"	1000		88.4	80-120	2.99	20	
Trichloroethene	964	25.0	"	1000		96.4	80-120	0.938	20	
Trichlorofluoromethane	938	25.0	"	1000		93.8	80-120	16.6	20	
1,2,4-Trimethylbenzene	1100	25.0	"	1000		110	80-120	6.17	20	
1,3,5-Trimethylbenzene	1110	25.0	"	1000		111	80-120	5.26	20	
Vinyl chloride	882	25.0	"	1000		88.2	80-120	7.32	20	
Total Xylenes	3300	25.0	"	3000		110	80-120	3.86	20	
Surrogate: 1-CI-4-FB (ELCD)	1030		"	1000		103	80-120			
Surrogate: 1-CI-4-FB (PID)	981		"	1000		98.1	80-120			

Great Lakes Analytical--Oak Creek

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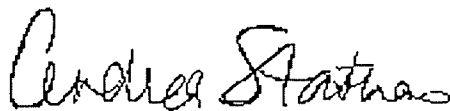


Andrea Stathas, Project Manager

STS Consultants 11425 S. Lake Park Dr. Milwaukee WI, 53224	Project: 87185EA Southeast Project Number: [none] Project Manager: Mark Mejac	<b>Reported:</b> 11/14/02 16:45
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**Total Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2110142 - EPA 3050B</b>										
<b>Blank (2110142-BLK1)</b>					Prepared: 11/08/02 Analyzed: 11/11/02					
Lead	ND	1.00	mg/kg wet							
<b>LCS (2110142-BS1)</b>					Prepared: 11/08/02 Analyzed: 11/11/02					
Lead	202	1.00	mg/kg wet	201	100	84-109				
<b>Matrix Spike (2110142-MS1)</b>					Source: B211019-01 Prepared: 11/08/02 Analyzed: 11/11/02					
Lead	452	1.14	mg/kg dry	223	261	85.7	52-125			
<b>Matrix Spike Dup (2110142-MSD1)</b>					Source: B211019-01 Prepared: 11/08/02 Analyzed: 11/11/02					
Lead	512	1.14	mg/kg dry	219	261	115	52-125	12.4	14	



STS Consultants 11425 S. Lake Park Dr. Milwaukee WI, 53224	Project: 87185EA Southeast Project Number: [none] Project Manager: Mark Mejac	Reported: 11/14/02 16:45
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**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2110070 - EPA 3550B**
**Blank (2110070-BLK1)**

Prepared: 11/05/02 Analyzed: 11/07/02

Acenaphthene	ND	100	ug/kg wet							
Acenaphthylene	ND	200	"							
Anthracene	ND	100	"							
Benz (a) anthracene	ND	50.0	"							
Benzo (a) pyrene	ND	5.00	"							
Benzo (b) fluoranthene	ND	50.0	"							
Benzo (ghi) perylene	ND	100	"							
Benzo (k) fluoranthene	ND	100	"							
Chrysene	ND	100	"							
Dibenz (a,h) anthracene	ND	5.00	"							
Fluoranthene	ND	100	"							
Fluorene	ND	100	"							
Indeno (1,2,3-cd) pyrene	ND	50.0	"							
1-Methylnaphthalene	ND	100	"							
2-Methylnaphthalene	ND	100	"							
Naphthalene	ND	100	"							
Phenanthrene	ND	100	"							
Pyrene	ND	100	"							

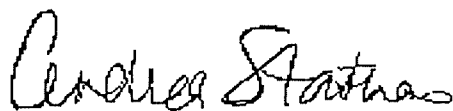
<i>Surrogate: Carbazole</i>	44.4		"	67.9		65.4	14.9-144			
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**LCS (2110070-BS1)**

Prepared: 11/05/02 Analyzed: 11/07/02

Acenaphthene	94.0	10.0	ug/kg wet	137		68.6	30.3-126			
Acenaphthylene	83.1	20.0	"	137		60.7	75.8-175			L
Anthracene	93.8	10.0	"	137		68.5	45-115			
Benz (a) anthracene	130	5.00	"	137		94.9	40.9-146			
Benzo (a) pyrene	107	0.500	"	137		78.1	10-150			
Benzo (b) fluoranthene	117	5.00	"	137		85.4	47.4-133			
Benzo (ghi) perylene	132	10.0	"	137		96.4	38-131			
Benzo (k) fluoranthene	117	10.0	"	137		85.4	49.1-137			
Chrysene	125	10.0	"	137		91.2	59.7-119			
Dibenz (a,h) anthracene	123	0.500	"	137		89.8	33.7-144			
Fluoranthene	105	10.0	"	137		76.6	52.3-126			
Fluorene	94.1	10.0	"	137		68.7	51-110			
Indeno (1,2,3-cd) pyrene	116	5.00	"	137		84.7	54.1-125			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control  
 Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2110070 - EPA 3550B**
**LCS (2110070-BS1)**

Prepared: 11/05/02 Analyzed: 11/07/02

1-Methylnaphthalene	79.6	10.0	ug/kg wet	137		58.1	31.2-125			
2-Methylnaphthalene	84.0	10.0	"	137		61.3	33.3-119			
Naphthalene	78.4	10.0	"	137		57.2	43.3-136			
Phenanthrene	96.3	10.0	"	137		70.3	36.3-142			
Pyrene	118	10.0	"	137		86.1	41.3-122			
<i>Surrogate: Carbazole</i>	<i>48.2</i>		<i>"</i>	<i>68.4</i>		<i>70.5</i>	<i>14.9-144</i>			

**Matrix Spike (2110070-MS1)**

Source: B211011-01

Prepared: 11/05/02 Analyzed: 11/07/02

Acenaphthene	93.5	12.4	ug/kg dry	169	ND	55.3	10-140			
Acenaphthylene	679	24.9	"	169	104	340	10-218			H
Anthracene	69.8	12.4	"	169	ND	41.3	10-136			
Benz (a) anthracene	87.7	6.21	"	169	ND	51.9	10-152			
Benzo (a) pyrene	65.8	0.621	"	169	ND	38.9	10-132			
Benzo (b) fluoranthene	72.8	6.21	"	169	ND	43.1	10-140			
Benzo (ghi) perylene	65.3	12.4	"	169	ND	38.6	10-167			
Benzo (k) fluoranthene	71.5	12.4	"	169	ND	42.3	10-144			
Chrysene	85.4	12.4	"	169	ND	50.5	10-146			
Dibenz (a,h) anthracene	69.2	0.621	"	169	ND	40.9	10-131			
Fluoranthene	131	12.4	"	169	12.6	70.1	10-153			
Fluorene	78.4	12.4	"	169	ND	46.4	10-125			
Indeno (1,2,3-cd) pyrene	61.9	6.21	"	169	ND	36.6	10-138			
1-Methylnaphthalene	499	12.4	"	169	88.0	243	10-150			H
2-Methylnaphthalene	660	12.4	"	169	162	295	10-155			H
Naphthalene	824	12.4	"	169	156	395	10-158			H
Phenanthrene	122	12.4	"	169	ND	72.2	10-155			
Pyrene	99.8	12.4	"	169	ND	55.1	10-154			
<i>Surrogate: Carbazole</i>	<i>66.5</i>		<i>"</i>	<i>84.7</i>		<i>78.5</i>	<i>14.9-144</i>			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control  
Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2110070 - EPA 3550B</b>										
<b>Matrix Spike Dup (2110070-MSD1)</b>		<b>Source: B211011-01</b>		<b>Prepared: 11/05/02</b>	<b>Analyzed: 11/07/02</b>					
Acenaphthene	64.9	12.4	ug/kg dry	170	ND	38.2	10-140	36.1	105	
Acenaphthylene	364	24.9	"	170	104	153	10-218	60.4	59.8	H
Anthracene	67.0	12.4	"	170	ND	39.4	10-136	4.09	62.1	
Benz (a) anthracene	89.0	6.21	"	170	ND	52.4	10-152	1.47	81.6	
Benzo (a) pyrene	69.0	0.621	"	170	ND	40.6	10-132	4.75	56.9	
Benzo (b) fluoranthene	73.9	6.21	"	170	ND	43.5	10-140	1.50	96.8	
Benzo (ghi) perylene	68.4	12.4	"	170	ND	40.2	10-167	4.64	64.9	
Benzo (k) fluoranthene	72.5	12.4	"	170	ND	42.6	10-144	1.39	59.5	
Chrysene	85.1	12.4	"	170	ND	50.1	10-146	0.352	113	
Dibenz (a,h) anthracene	71.4	0.621	"	170	ND	42.0	10-131	3.13	57.5	
Fluoranthene	132	12.4	"	170	12.6	70.2	10-153	0.760	103	
Fluorene	69.3	12.4	"	170	ND	40.8	10-125	12.3	59	
Indeno (1,2,3-cd) pyrene	64.9	6.21	"	170	ND	38.2	10-138	4.73	84.6	
1-Methylnaphthalene	121	12.4	"	170	88.0	19.4	10-150	122	91.8	H
2-Methylnaphthalene	372	12.4	"	170	162	124	10-155	55.8	89.4	
Naphthalene	533	12.4	"	170	156	222	10-158	42.9	92.2	H
Phenanthrene	111	12.4	"	170	ND	65.3	10-155	9.44	89	
Pyrene	93.1	12.4	"	170	ND	50.8	10-154	6.95	78.5	
<i>Surrogate: Carbazole</i>	<i>63.8</i>		<i>"</i>	<i>85.0</i>		<i>75.1</i>	<i>14.9-144</i>			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

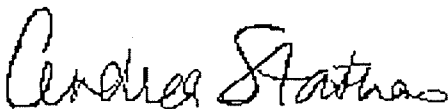
STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/14/02 16:45

**Percent Solids - Quality Control  
Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2110108 - General Prep</b>										
<b>Blank (2110108-BLK1)</b>				Prepared: 11/07/02 Analyzed: 11/08/02						
% Solids	ND	0.0100	%							
<b>Blank (2110108-BLK2)</b>				Prepared: 11/07/02 Analyzed: 11/08/02						
% Solids	0.113	0.0100	%							
<b>Duplicate (2110108-DUP1)</b>				Prepared: 11/07/02 Analyzed: 11/08/02						
% Solids	92.1	0.0100	%						20	
<b>Duplicate (2110108-DUP2)</b>				Prepared: 11/07/02 Analyzed: 11/08/02						
% Solids	84.1	0.0100	%						20	





STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac


**Reported:**  
11/14/02 16:45

### 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.

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager



# CHAIN OF CUSTODY REPORT

1380 Busch Parkway  
 Buffalo Grove, IL 60089-4505  
 (847) 808-7766  
 FAX (847) 808-7772

140 E. Ryan Road  
 Oak Creek, WI 53154  
 (414) 570-9460  
 FAX (414) 570-9461

Client: <u>STS Consultants, Ltd.</u>		Bill To:		TAT: <u>STD.</u> <input type="checkbox"/> 1 DAY 3 DAY 2 DAY 1 DAY <24 HRS.	
Address: <u>11425 W. Lake Park Dr.</u>		Address:		<input type="checkbox"/> YES - TAT is critical <input type="checkbox"/> NO - TAT is not critical	
<u>Milwaukee, WI 53224</u>				TEMPERATURE UPON RECEIPT: <u>40 C</u>	
Report to: <u>Mark Mejac</u>	Phone #: <u>(414) 359-3030</u>	State & Program:	Phone #: ( )	Deliverable Package Needed:	Air Bill No.
	Fax #: <u>(414) 359-0822</u>		Fax #: ( )	<input type="checkbox"/> STD <input type="checkbox"/> Other	

FIELD ID, LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	# of Bottles Preservative Used							TOTAL # OF BOTTLES	DO NOT DRY-WEIGHT CORRECT RESULTS	DO NOT DRY-WEIGHT CORRECT RESULTS	VOC	PAH	Lead	SAMPLE CONTROL		LABORATORY ID NUMBER
				MeOH	NaHSO4	HCl	HNO3	H2SO4	NaOH	NONE							CRACKED-BROKEN	IMPROPERLY SEALED	
1 MW-1 2-4' PID: 0.0	10-29-02		Soil							2	2								W211002-01
2 MW-1 7.5-9.5' PID: 0.0					1					1	2								-02
3 MW-2 2-4' PID: 0.0					1					2	3								-03
4 MW-2 7.5-9.5' PID: 0.0										1	1								-04
5 MW-3 0-2' PID: 0.0										2	2								-05
6 MW-3 7.5-9.5' PID: 1999					1					1	2								-06
7 MeOH Blank PID:	10-29-02				1														-07
8																			
9																			
10																			

RELINQUISHED <i>[Signature]</i> 10-31-02	RECEIVED <i>[Signature]</i> 10/31/02	RELINQUISHED	RECEIVED
RELINQUISHED <i>[Signature]</i> 16:00	RECEIVED <i>[Signature]</i> 11/1/02 8:50	RELINQUISHED	RECEIVED

COMMENTS: \_\_\_\_\_

PAGE \_\_\_\_\_ OF \_\_\_\_\_

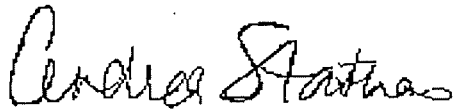
19 November 2002

Mark Mejac  
STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee, WI 53224  
RE: 87185EA Southeast

Enclosed are the results of analyses for samples received by the laboratory on 11/08/02. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

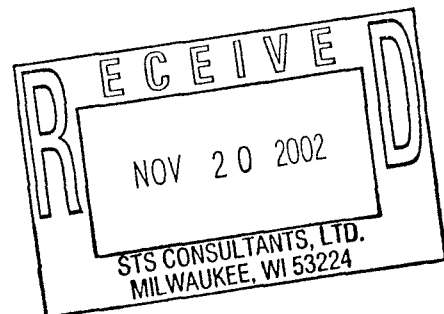
**Great Lakes Analytical**



Andrea Stathas  
Project Manager

**State of Wisconsin Certification Numbers:**

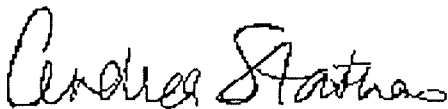
Great Lakes Analytical--Oak Creek, WI: 341000330  
Great Lakes Analytical--Buffalo Grove, IL: 999917160



STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark MejacReported:  
11/19/02 13:48**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-4	W211078-01	Water	11/08/02 00:00	11/08/02 12:45
MW-5	W211078-02	Water	11/08/02 00:00	11/08/02 12:45
MW-6	W211078-03	Water	11/08/02 00:00	11/08/02 12:45
MW-1	W211078-04	Water	11/08/02 00:00	11/08/02 12:45
MW-2	W211078-05	Water	11/08/02 00:00	11/08/02 12:45
MW-3	W211078-06	Water	11/08/02 00:00	11/08/02 12:45
MW-3D	W211078-07	Water	11/08/02 00:00	11/08/02 12:45

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

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

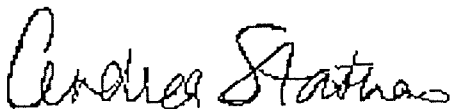
 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-4 (W211078-01) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
									<b>QC</b>
Benzene	ND	0.500	ug/l	1	2110087	11/15/02	11/15/02	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

*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

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
<b>MW-4 (W211078-01) Water</b> <b>Sampled: 11/08/02 00:00</b> <b>Received: 11/08/02 12:45</b> <span style="float:right">QC</span>									
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	2110087	11/15/02	11/15/02	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	"	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>		123 %	80-120	"	"	"	"	"	H
<i>Surrogate: 1-Cl-4-FB (PID)</i>		100 %	80-120	"	"	"	"	"	
<b>MW-5 (W211078-02) Water</b> <b>Sampled: 11/08/02 00:00</b> <b>Received: 11/08/02 12:45</b> <span style="float:right">QC</span>									
Benzene	ND	0.500	ug/l	1	2110087	11/15/02	11/16/02	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	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac


 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (W211078-02) Water Sampled: 11/08/02 00:00 Received: 11/08/02 12:45									QC
Di-isopropyl ether	ND	5.00	ug/l	1	2110087	11/15/02	11/16/02	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	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)		109 %	80-120		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		99.7 %	80-120		"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

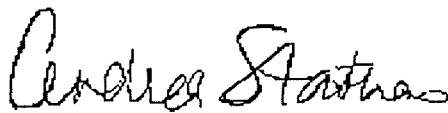
 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-6 (W211078-03) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45									
Benzene	ND	0.500	ug/l	1	2110087	11/15/02	11/15/02	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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Andrea Stathas, Project Manager



STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

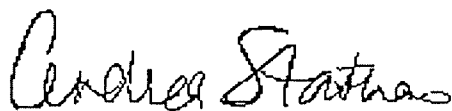
 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (W211078-03) Water</b>									<b>QC</b>
Sampled: 11/08/02 00:00		Received: 11/08/02 12:45							
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	2110087	11/15/02	11/15/02	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	"	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>		107 %	80-120	"	"	"	"	"	
<i>Surrogate: 1-Cl-4-FB (PID)</i>		101 %	80-120	"	"	"	"	"	
<b>MW-1 (W211078-04) Water</b>									<b>QC</b>
Sampled: 11/08/02 00:00		Received: 11/08/02 12:45							
Benzene	ND	0.500	ug/l	1	2110087	11/15/02	11/16/02	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	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-1 (W211078-04) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45									QC
Di-isopropyl ether	ND	5.00	ug/l	1	2110087	11/15/02	11/16/02	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	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)		108 %	80-120		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		102 %	80-120		"	"	"	"	



STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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 (W211078-05) Water									QC
Sampled: 11/08/02 00:00 Received: 11/08/02 12:45									
Benzene	ND	0.500	ug/l	1	2110087	11/15/02	11/16/02	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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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (W211078-05) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	2110087	11/15/02	11/16/02	EPA 8021B	
1,1,1-Trichloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.160	"	"	"	"	"	"	
<b>Trichloroethene</b>	<b>0.864</b>	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)		109 %		80-120	"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		103 %		80-120	"	"	"	"	
<b>MW-3 (W211078-06) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Benzene	ND	0.500	ug/l	1	2110087	11/15/02	11/16/02	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	"	"	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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 (W211078-06) Water									QC
Sampled: 11/08/02 00:00									
Received: 11/08/02 12:45									
Di-isopropyl ether	ND	5.00	ug/l	1	2110087	11/15/02	11/16/02	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	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)		108 %	80-120		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		101 %	80-120		"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
MW-3D (W211078-07) Water Sampled: 11/08/02 00:00 Received: 11/08/02 12:45									QC
Benzene	ND	0.500	ug/l	1	2110087	11/15/02	11/16/02	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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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

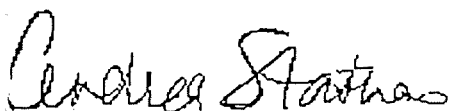
 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3D (W211078-07) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45 <span style="float:right">QC</span>									
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	2110087	11/15/02	11/16/02	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)		111 %	80-120		"	"	"	"	
Surrogate: 1-Cl-4-FB (PID)		103 %	80-120		"	"	"	"	

Great Lakes Analytical--Oak Creek

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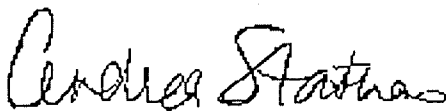
Andrea Stathas, Project Manager

STS Consultants 11425 S. Lake Park Dr. Milwaukee WI, 53224	Project: 87185EA Southeast Project Number: [none] Project Manager: Mark Mejac	Reported: 11/19/02 13:48
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**Dissolved Metals by EPA 6000/7000 Series Methods  
Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
<b>MW-4 (W211078-01) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Lead	ND	0.00500	mg/l	1	2110294	11/15/02	11/15/02	EPA 7421	
<b>MW-5 (W211078-02) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Lead	ND	0.00500	mg/l	1	2110294	11/15/02	11/15/02	EPA 7421	
<b>MW-6 (W211078-03) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Lead	ND	0.00500	mg/l	1	2110294	11/15/02	11/15/02	EPA 7421	
<b>MW-1 (W211078-04) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Lead	ND	0.00500	mg/l	1	2110294	11/15/02	11/15/02	EPA 7421	
<b>MW-2 (W211078-05) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Lead	ND	0.00500	mg/l	1	2110294	11/15/02	11/15/02	EPA 7421	
<b>MW-3 (W211078-06) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Lead	ND	0.00500	mg/l	1	2110294	11/15/02	11/15/02	EPA 7421	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager




STS Consultants 11425 S. Lake Park Dr. Milwaukee WI, 53224	Project: 87185EA Southeast Project Number: [none] Project Manager: Mark Mejac	Reported: 11/19/02 13:48
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**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-4 (W211078-01) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Acenaphthene	ND	5.62	ug/l	1	2110220	11/12/02	11/16/02	EPA 8310	
Acenaphthylene	ND	5.62	"	"	"	"	"	"	
Anthracene	ND	5.62	"	"	"	"	"	"	
Benz (a) anthracene	ND	0.112	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0225	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0225	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	5.62	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.112	"	"	"	"	"	"	
Chrysene	ND	0.0225	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.112	"	"	"	"	"	"	
Fluoranthene	ND	5.62	"	"	"	"	"	"	
Fluorene	ND	5.62	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.225	"	"	"	"	"	"	
1-Methylnaphthalene	ND	5.62	"	"	"	"	"	"	
2-Methylnaphthalene	ND	5.62	"	"	"	"	"	"	
Naphthalene	ND	5.62	"	"	"	"	"	"	
Phenanthrene	ND	5.62	"	"	"	"	"	"	
Pyrene	ND	5.62	"	"	"	"	"	"	
<i>Surrogate: Carbazole</i>		46.7 %		25-129	"	"	"	"	
<b>MW-5 (W211078-02) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Acenaphthene	ND	5.00	ug/l	1	2110220	11/12/02	11/16/02	EPA 8310	
Acenaphthylene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benz (a) anthracene	ND	0.100	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0200	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0200	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.100	"	"	"	"	"	"	
Chrysene	ND	0.0200	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.100	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.200	"	"	"	"	"	"	
1-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
2-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: Carbazole</i>		66.8 %		25-129	"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-6 (W211078-03) Water</b> Sampled: 11/08/02 00:00 Received: 11/08/02 12:45									
Acenaphthene	ND	5.00	ug/l	1	2110220	11/12/02	11/16/02	EPA 8310	
Acenaphthylene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benz (a) anthracene	ND	0.100	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0200	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0200	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.100	"	"	"	"	"	"	
Chrysene	ND	0.0200	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.100	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.200	"	"	"	"	"	"	
1-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
2-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

*Surrogate: Carbazole* 61.7 % 25-129 " " " "

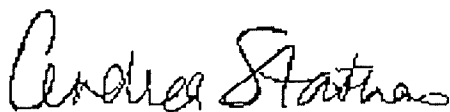
**MW-1 (W211078-04) Water** Sampled: 11/08/02 00:00 Received: 11/08/02 12:45

Acenaphthene	ND	5.00	ug/l	1	2110220	11/12/02	11/16/02	EPA 8310	
Acenaphthylene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benz (a) anthracene	ND	0.100	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0200	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0200	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.100	"	"	"	"	"	"	
Chrysene	ND	0.0200	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.100	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.200	"	"	"	"	"	"	
1-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
2-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	

*Surrogate: Carbazole* 61.7 % 25-129 " " " "

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants 11425 S. Lake Park Dr. Milwaukee WI, 53224	Project: 87185EA Southeast Project Number: [none] Project Manager: Mark Mejac	Reported: 11/19/02 13:48
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**Polynuclear Aromatic Compounds by EPA Method 8310**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-2 (W211078-05) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Acenaphthene	ND	5.00	ug/l	1	2110220	11/12/02	11/16/02	EPA 8310	
Acenaphthylene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benz (a) anthracene	ND	0.100	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0200	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0200	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.100	"	"	"	"	"	"	
Chrysene	ND	0.0200	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.100	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.200	"	"	"	"	"	"	
1-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
2-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: Carbazole</i>		61.9 %	25-129		"	"	"	"	

<b>MW-3 (W211078-06) Water    Sampled: 11/08/02 00:00    Received: 11/08/02 12:45</b>									
Acenaphthene	ND	5.00	ug/l	1	2110220	11/12/02	11/16/02	EPA 8310	
Acenaphthylene	ND	5.00	"	"	"	"	"	"	
Anthracene	ND	5.00	"	"	"	"	"	"	
Benz (a) anthracene	ND	0.100	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0200	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0200	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	5.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.100	"	"	"	"	"	"	
Chrysene	ND	0.0200	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.100	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Fluorene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.200	"	"	"	"	"	"	
1-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
2-Methylnaphthalene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	5.00	"	"	"	"	"	"	
Pyrene	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: Carbazole</i>		63.7 %	25-129		"	"	"	"	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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
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**Batch 2110087 - EPA 5030B (P/T)**
**Blank (2110087-BLK1)**

Prepared &amp; Analyzed: 11/15/02

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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Andrea Stathas, Project Manager

STS Consultants 11425 S. Lake Park Dr. Milwaukee WI, 53224	Project: 87185EA Southeast Project Number: [none] Project Manager: Mark Mejac	Reported: 11/19/02 13:48
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**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
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**Batch 2110087 - EPA 5030B (P/T)**
**Blank (2110087-BLK1)**

Prepared &amp; Analyzed: 11/15/02

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	"							
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>	<i>10.5</i>		<i>"</i>	<i>10.0</i>		<i>105</i>	<i>80-120</i>			
<i>Surrogate: 1-Cl-4-FB (PID)</i>	<i>10.1</i>		<i>"</i>	<i>10.0</i>		<i>101</i>	<i>80-120</i>			

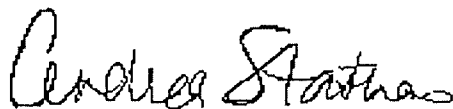
**LCS (2110087-BS1)**

Prepared &amp; Analyzed: 11/15/02

Benzene	9.94	0.500	ug/l	10.0		99.4	85-115			
Bromobenzene	10.4	0.500	"	10.0		104	85-115			
Bromodichloromethane	9.20	0.500	"	10.0		92.0	85-115			
n-Butylbenzene	9.81	0.500	"	10.0		98.1	85-115			
sec-Butylbenzene	10.1	0.500	"	10.0		101	85-115			
tert-Butylbenzene	10.2	0.500	"	10.0		102	85-115			
Carbon tetrachloride	9.43	0.500	"	10.0		94.3	85-115			
Chlorobenzene	10.1	0.500	"	10.0		101	85-115			
Chloroethane	8.59	0.500	"	10.0		85.9	85-115			
Chloroform	8.99	0.140	"	10.0		89.9	85-115			
Chloromethane	8.79	0.600	"	10.0		87.9	85-115			
2-Chlorotoluene	10.1	0.500	"	10.0		101	85-115			
4-Chlorotoluene	10.2	0.500	"	10.0		102	85-115			
Dibromochloromethane	8.67	0.500	"	10.0		86.7	85-115			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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
<b>Batch 2110087 - EPA 5030B (P/T)</b>										
<b>LCS (2110087-BS1)</b>										
Prepared & Analyzed: 11/15/02										
1,2-Dibromo-3-chloropropane	9.06	0.390	ug/l	10.0		90.6	85-115			
1,2-Dibromoethane	8.84	0.380	"	10.0		88.4	85-115			
1,2-Dichlorobenzene	10.4	0.500	"	10.0		104	85-115			
1,3-Dichlorobenzene	10.3	0.500	"	10.0		103	85-115			
1,4-Dichlorobenzene	9.94	0.500	"	10.0		99.4	85-115			
Dichlorodifluoromethane	6.75	0.500	"	10.0		67.5	85-115			L
1,1-Dichloroethane	9.04	0.500	"	10.0		90.4	85-115			
1,2-Dichloroethane	9.44	0.500	"	10.0		94.4	85-115			
1,1-Dichloroethene	10.3	0.500	"	10.0		103	85-115			
cis-1,2-Dichloroethene	10.5	0.500	"	10.0		105	85-115			
trans-1,2-Dichloroethene	10.5	0.500	"	10.0		105	85-115			
1,2-Dichloropropane	9.12	0.500	"	10.0		91.2	85-115			
1,3-Dichloropropane	8.64	0.500	"	10.0		86.4	85-115			
2,2-Dichloropropane	9.78	0.500	"	10.0		97.8	85-115			
Di-isopropyl ether	9.94	5.00	"	10.0		99.4	85-115			
Ethylbenzene	9.90	0.500	"	10.0		99.0	85-115			
Hexachlorobutadiene	10.0	5.00	"	10.0		100	85-115			
Isopropylbenzene	10.6	0.500	"	10.0		106	85-115			
p-Isopropyltoluene	9.66	0.500	"	10.0		96.6	85-115			
Methylene chloride	10.5	0.530	"	10.0		105	85-115			
Methyl tert-butyl ether	10.6	0.500	"	10.0		106	85-115			
Naphthalene	9.29	2.00	"	10.0		92.9	85-115			
n-Propylbenzene	10.3	0.500	"	10.0		103	85-115			
1,1,2,2-Tetrachloroethane	8.99	0.350	"	10.0		89.9	85-115			
Tetrachloroethene	10.5	0.500	"	10.0		105	85-115			
Toluene	10.0	0.500	"	10.0		100	85-115			
1,2,3-Trichlorobenzene	9.42	2.00	"	10.0		94.2	85-115			
1,2,4-Trichlorobenzene	10.9	2.00	"	10.0		109	85-115			
1,1,1-Trichloroethane	9.84	0.500	"	10.0		98.4	85-115			
1,1,2-Trichloroethane	9.38	0.160	"	10.0		93.8	85-115			
Trichloroethene	10.3	0.500	"	10.0		103	85-115			
Trichlorofluoromethane	9.52	0.500	"	10.0		95.2	85-115			
1,2,4-Trimethylbenzene	10.1	1.00	"	10.0		101	85-115			
1,3,5-Trimethylbenzene	10.4	1.00	"	10.0		104	85-115			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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
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**Batch 2110087 - EPA 5030B (P/T)**
**LCS (2110087-BS1)**

Prepared &amp; Analyzed: 11/15/02

Vinyl chloride	8.77	0.170	ug/l	10.0		87.7	85-115			
Total Xylenes	31.0	0.500	"	30.0		103	85-115			
Surrogate: 1-Cl-4-FB (ELCD)	10.1		"	10.0		101	80-120			
Surrogate: 1-Cl-4-FB (PID)	9.91		"	10.0		99.1	80-120			

**Matrix Spike (2110087-MS1)**

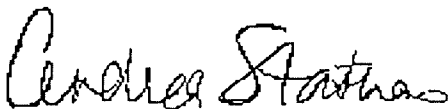
Source: W211060-01

Prepared &amp; Analyzed: 11/15/02

Benzene	8.99	0.500	ug/l	10.0	ND	89.9	75-125			
Bromobenzene	8.74	0.500	"	10.0	ND	87.4	75-125			
Bromodichloromethane	7.73	0.500	"	10.0	ND	77.3	75-125			
n-Butylbenzene	8.98	0.500	"	10.0	ND	89.8	75-125			
sec-Butylbenzene	9.09	0.500	"	10.0	ND	90.9	75-125			
tert-Butylbenzene	8.87	0.500	"	10.0	ND	88.7	75-125			
Carbon tetrachloride	7.77	0.500	"	10.0	ND	77.7	75-125			
Chlorobenzene	8.64	0.500	"	10.0	ND	86.4	75-125			
Chloroethane	5.09	0.500	"	10.0	ND	50.9	75-125			L
Chloroform	6.95	0.140	"	10.0	ND	69.5	75-125			L
Chloromethane	6.11	0.600	"	10.0	ND	61.1	75-125			L
2-Chlorotoluene	8.64	0.500	"	10.0	ND	86.4	75-125			
4-Chlorotoluene	8.44	0.500	"	10.0	ND	84.4	75-125			
Dibromochloromethane	7.52	0.500	"	10.0	ND	75.2	75-125			
1,2-Dibromo-3-chloropropane	6.71	0.390	"	10.0	ND	67.1	75-125			L
1,2-Dibromoethane	6.70	0.380	"	10.0	ND	67.0	75-125			L
1,2-Dichlorobenzene	10.2	0.500	"	10.0	ND	102	75-125			
1,3-Dichlorobenzene	8.26	0.500	"	10.0	ND	82.6	75-125			
1,4-Dichlorobenzene	8.06	0.500	"	10.0	ND	80.6	75-125			
Dichlorodifluoromethane	5.73	0.500	"	10.0	ND	57.3	75-125			L
1,1-Dichloroethane	7.96	0.500	"	10.0	ND	79.6	75-125			
1,2-Dichloroethane	8.08	0.500	"	10.0	ND	80.8	75-125			
1,1-Dichloroethene	8.84	0.500	"	10.0	ND	88.4	75-125			
cis-1,2-Dichloroethene	8.77	0.500	"	10.0	ND	87.7	75-125			
trans-1,2-Dichloroethene	8.76	0.500	"	10.0	ND	87.6	75-125			
1,2-Dichloropropane	7.12	0.500	"	10.0	ND	71.2	75-125			L
1,3-Dichloropropane	7.75	0.500	"	10.0	ND	77.5	75-125			
2,2-Dichloropropane	7.75	0.500	"	10.0	ND	77.5	75-125			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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
<b>Batch 2110087 - EPA 5030B (P/T)</b>										
<b>Matrix Spike (2110087-MS1)</b>	<b>Source: W211060-01</b>			<b>Prepared &amp; Analyzed: 11/15/02</b>						
Di-isopropyl ether	8.41	5.00	ug/l	10.0	ND	84.1	75-125			
Ethylbenzene	8.39	0.500	"	10.0	ND	83.9	75-125			
Hexachlorobutadiene	10.6	5.00	"	10.0	ND	106	75-125			
Isopropylbenzene	8.94	0.500	"	10.0	ND	89.4	75-125			
p-Isopropyltoluene	9.44	0.500	"	10.0	ND	94.4	75-125			
Methylene chloride	8.68	0.530	"	10.0	ND	86.8	75-125			
Methyl tert-butyl ether	8.73	0.500	"	10.0	ND	87.3	75-125			
Naphthalene	9.81	2.00	"	10.0	ND	98.1	75-125			
n-Propylbenzene	8.47	0.500	"	10.0	ND	84.7	75-125			
1,1,2-Tetrachloroethane	8.30	0.350	"	10.0	ND	83.0	75-125			
Tetrachloroethene	8.89	0.500	"	10.0	ND	88.9	75-125			
Toluene	8.89	0.500	"	10.0	ND	88.9	75-125			
1,2,3-Trichlorobenzene	8.90	2.00	"	10.0	ND	89.0	75-125			
1,2,4-Trichlorobenzene	11.5	2.00	"	10.0	ND	115	75-125			
1,1,1-Trichloroethane	7.93	0.500	"	10.0	ND	79.3	75-125			
1,1,2-Trichloroethane	8.29	0.160	"	10.0	ND	82.9	75-125			
Trichloroethene	8.85	0.500	"	10.0	ND	88.5	75-125			
Trichlorofluoromethane	7.93	0.500	"	10.0	ND	79.3	75-125			
1,2,4-Trimethylbenzene	8.86	1.00	"	10.0	ND	88.6	75-125			
1,3,5-Trimethylbenzene	8.95	1.00	"	10.0	ND	89.5	75-125			
Vinyl chloride	8.81	0.170	"	10.0	ND	88.1	75-125			
Total Xylenes	26.1	0.500	"	30.0	ND	87.0	75-125			
<i>Surrogate: 1-Cl-4-FB (ELCD)</i>	<i>10.8</i>		<i>"</i>	<i>10.0</i>		<i>108</i>	<i>80-120</i>			
<i>Surrogate: 1-Cl-4-FB (PID)</i>	<i>10.0</i>		<i>"</i>	<i>10.0</i>		<i>100</i>	<i>80-120</i>			

<b>Matrix Spike Dup (2110087-MSD1)</b>	<b>Source: W211060-01</b>			<b>Prepared &amp; Analyzed: 11/15/02</b>						
Benzene	9.73	0.500	ug/l	10.0	ND	97.3	75-125	7.91	20	
Bromobenzene	10.3	0.500	"	10.0	ND	103	75-125	16.4	20	
Bromodichloromethane	8.18	0.500	"	10.0	ND	81.8	75-125	5.66	20	
n-Butylbenzene	10.6	0.500	"	10.0	ND	106	75-125	16.5	20	
sec-Butylbenzene	10.8	0.500	"	10.0	ND	108	75-125	17.2	20	
tert-Butylbenzene	10.6	0.500	"	10.0	ND	106	75-125	17.8	20	
Carbon tetrachloride	8.16	0.500	"	10.0	ND	81.6	75-125	4.90	20	
Chlorobenzene	10.0	0.500	"	10.0	ND	100	75-125	14.6	20	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager



STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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
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**Batch 2110087 - EPA 5030B (P/T)**

Matrix Spike Dup (2110087-MSD1)	Source: W211060-01			Prepared & Analyzed: 11/15/02						
Chloroethane	8.03	0.500	ug/l	10.0	ND	80.3	75-125	44.8	20	H
Chloroform	7.79	0.140	"	10.0	ND	77.9	75-125	11.4	20	
Chloromethane	8.95	0.600	"	10.0	ND	89.5	75-125	37.7	20	H
2-Chlorotoluene	9.68	0.500	"	10.0	ND	96.8	75-125	11.4	20	
4-Chlorotoluene	9.62	0.500	"	10.0	ND	96.2	75-125	13.1	20	
Dibromochloromethane	7.74	0.500	"	10.0	ND	77.4	75-125	2.88	20	
1,2-Dibromo-3-chloropropane	7.96	0.390	"	10.0	ND	79.6	75-125	17.0	20	
1,2-Dibromoethane	7.42	0.380	"	10.0	ND	74.2	75-125	10.2	20	L
1,2-Dichlorobenzene	10.3	0.500	"	10.0	ND	103	75-125	0.976	20	
1,3-Dichlorobenzene	11.3	0.500	"	10.0	ND	113	75-125	31.1	20	H
1,4-Dichlorobenzene	9.88	0.500	"	10.0	ND	98.8	75-125	20.3	20	H
Dichlorodifluoromethane	7.13	0.500	"	10.0	ND	71.3	75-125	21.8	20	LH
1,1-Dichloroethane	7.90	0.500	"	10.0	ND	79.0	75-125	0.757	20	
1,2-Dichloroethane	8.96	0.500	"	10.0	ND	89.6	75-125	10.3	20	
1,1-Dichloroethene	9.78	0.500	"	10.0	ND	97.8	75-125	10.1	20	
cis-1,2-Dichloroethene	9.87	0.500	"	10.0	ND	98.7	75-125	11.8	20	
trans-1,2-Dichloroethene	9.68	0.500	"	10.0	ND	96.8	75-125	9.98	20	
1,2-Dichloropropane	7.92	0.500	"	10.0	ND	79.2	75-125	10.6	20	
1,3-Dichloropropane	8.58	0.500	"	10.0	ND	85.8	75-125	10.2	20	
2,2-Dichloropropane	8.47	0.500	"	10.0	ND	84.7	75-125	8.88	20	
Di-isopropyl ether	9.56	5.00	"	10.0	ND	95.6	75-125	12.8	20	
Ethylbenzene	9.91	0.500	"	10.0	ND	99.1	75-125	16.6	20	
Hexachlorobutadiene	10.1	5.00	"	10.0	ND	101	75-125	4.83	20	
Isopropylbenzene	10.3	0.500	"	10.0	ND	103	75-125	14.1	20	
p-Isopropyltoluene	10.5	0.500	"	10.0	ND	105	75-125	10.6	20	
Methylene chloride	9.24	0.530	"	10.0	ND	92.4	75-125	6.25	20	
Methyl tert-butyl ether	9.57	0.500	"	10.0	ND	95.7	75-125	9.18	20	
Naphthalene	9.84	2.00	"	10.0	ND	98.4	75-125	0.305	20	
n-Propylbenzene	9.78	0.500	"	10.0	ND	97.8	75-125	14.4	20	
1,1,2,2-Tetrachloroethane	9.27	0.350	"	10.0	ND	92.7	75-125	11.0	20	
Tetrachloroethene	10.2	0.500	"	10.0	ND	102	75-125	13.7	20	
Toluene	9.91	0.500	"	10.0	ND	99.1	75-125	10.9	20	
1,2,3-Trichlorobenzene	10.3	2.00	"	10.0	ND	103	75-125	14.6	20	
1,2,4-Trichlorobenzene	9.80	2.00	"	10.0	ND	98.0	75-125	16.0	20	

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

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 Milwaukee WI, 53224

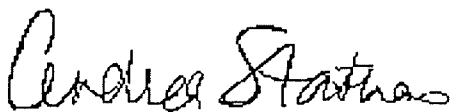
 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**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
<b>Batch 2110087 - EPA 5030B (P/T)</b>										
<b>Matrix Spike Dup (2110087-MSD1)</b>										
Source: W211060-01 Prepared & Analyzed: 11/15/02										
1,1,1-Trichloroethane	8.82	0.500	ug/l	10.0	ND	88.2	75-125	10.6	20	
1,1,2-Trichloroethane	9.11	0.160	"	10.0	ND	91.1	75-125	9.43	20	
Trichloroethene	9.91	0.500	"	10.0	ND	99.1	75-125	11.3	20	
Trichlorofluoromethane	8.16	0.500	"	10.0	ND	81.6	75-125	2.86	20	
1,2,4-Trimethylbenzene	10.3	1.00	"	10.0	ND	103	75-125	15.0	20	
1,3,5-Trimethylbenzene	10.7	1.00	"	10.0	ND	107	75-125	17.8	20	
Vinyl chloride	10.1	0.170	"	10.0	ND	101	75-125	13.6	20	
Total Xylenes	29.9	0.500	"	30.0	ND	99.7	75-125	13.6	20	
Surrogate: 1-Cl-4-FB (ELCD)	10.7		"	10.0		107	80-120			
Surrogate: 1-Cl-4-FB (PID)	10.9		"	10.0		109	80-120			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants 11425 S. Lake Park Dr. Milwaukee WI, 53224	Project: 87185EA Southeast Project Number: [none] Project Manager: Mark Mejac	Reported: 11/19/02 13:48
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**Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control  
 Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2110294 - General Prep Metals**

**Blank (2110294-BLK1)**

Prepared & Analyzed: 11/15/02

Lead ND 0.00500 mg/l

**LCS (2110294-BS1)**

Prepared & Analyzed: 11/15/02

Lead 0.0209 0.00500 mg/l 0.0240 87.1 63.2-127

**Matrix Spike (2110294-MS1)**

Source: B211125-13

Prepared & Analyzed: 11/15/02

Lead 0.0234 0.00500 mg/l 0.0240 ND 97.5 24.5-184

**Matrix Spike Dup (2110294-MSD1)**

Source: B211125-13

Prepared & Analyzed: 11/15/02

Lead 0.0249 0.00500 mg/l 0.0240 ND 104 24.5-184 6.21 9.72



STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2110220 - EPA 3510C**
**Blank (2110220-BLK1)**

Prepared: 11/12/02 Analyzed: 11/14/02

Acenaphthene	ND	5.00	ug/l							
Acenaphthylene	ND	5.00	"							
Anthracene	ND	5.00	"							
Benz (a) anthracene	ND	0.100	"							
Benzo (a) pyrene	ND	0.0200	"							
Benzo (b) fluoranthene	ND	0.0200	"							
Benzo (ghi) perylene	ND	5.00	"							
Benzo (k) fluoranthene	ND	0.100	"							
Chrysene	ND	0.0200	"							
Dibenz (a,h) anthracene	ND	0.100	"							
Fluoranthene	ND	5.00	"							
Fluorene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	0.200	"							
1-Methylnaphthalene	ND	5.00	"							
2-Methylnaphthalene	ND	5.00	"							
Naphthalene	ND	5.00	"							
Phenanthrene	ND	5.00	"							
Pyrene	ND	5.00	"							

*Surrogate: Carbazole*

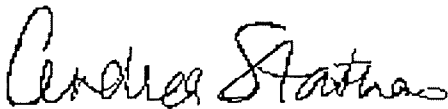
1.20 " 2.00 60.0 25-129

**LCS (2110220-BS1)**

Prepared: 11/12/02 Analyzed: 11/14/02

Acenaphthene	2.34	0.500	ug/l	4.00		58.5	10-114			
Acenaphthylene	1.89	0.500	"	4.00		47.2	21.1-123			
Anthracene	2.77	0.500	"	4.00		69.2	17.9-119			
Benz (a) anthracene	3.22	0.0100	"	4.00		80.5	34.3-124			
Benzo (a) pyrene	2.69	0.00200	"	4.00		67.2	13.4-120			
Benzo (b) fluoranthene	3.00	0.00200	"	4.00		75.0	36.7-124			
Benzo (ghi) perylene	2.28	0.500	"	4.00		57.0	18.7-118			
Benzo (k) fluoranthene	2.88	0.0100	"	4.00		72.0	42.3-117			
Chrysene	3.09	0.00200	"	4.00		77.2	43.2-116			
Dibenz (a,h) anthracene	1.93	0.0100	"	4.00		48.2	18.7-110			
Fluoranthene	3.00	0.500	"	4.00		75.0	38.3-119			
Fluorene	2.46	0.500	"	4.00		61.5	20.8-123			
Indeno (1,2,3-cd) pyrene	2.64	0.0200	"	4.00		66.0	29.9-114			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

STS Consultants  
 11425 S. Lake Park Dr.  
 Milwaukee WI, 53224

 Project: 87185EA Southeast  
 Project Number: [none]  
 Project Manager: Mark Mejac

 Reported:  
 11/19/02 13:48

**Polynuclear Aromatic Compounds by EPA Method 8310 - Quality Control**  
**Great Lakes Analytical--Buffalo Grove**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2110220 - EPA 3510C**
**LCS (2110220-BS1)**

Prepared: 11/12/02 Analyzed: 11/14/02

1-Methylnaphthalene	1.71	0.500	ug/l	4.00		42.8	17.4-113			
2-Methylnaphthalene	1.94	0.500	"	4.00		48.5	17.6-116			
Naphthalene	2.40	0.500	"	4.00		60.0	10-135			
Phenanthrene	2.89	0.500	"	4.00		72.2	28.5-120			
Pyrene	3.25	0.500	"	4.00		81.2	22.6-125			
<i>Surrogate: Carbazole</i>	<i>1.22</i>		<i>"</i>	<i>2.00</i>		<i>61.0</i>	<i>25-129</i>			

**LCS Dup (2110220-BSD1)**

Prepared: 11/12/02 Analyzed: 11/14/02

Acenaphthene	2.61	0.500	ug/l	4.00		65.2	10-114	10.9	53.8	
Acenaphthylene	2.42	0.500	"	4.00		60.5	21.1-123	24.6	104	
Anthracene	2.92	0.500	"	4.00		73.0	17.9-119	5.27	59.5	
Benz (a) anthracene	3.10	0.0100	"	4.00		77.5	34.3-124	3.80	40.4	
Benzo (a) pyrene	2.61	0.00200	"	4.00		65.2	13.4-120	3.02	48.5	
Benzo (b) fluoranthene	2.92	0.00200	"	4.00		73.0	36.7-124	2.70	48.8	
Benzo (ghi) perylene	2.50	0.500	"	4.00		62.5	18.7-118	9.21	65.5	
Benzo (k) fluoranthene	2.94	0.0100	"	4.00		73.5	42.3-117	2.06	54.2	
Chrysene	3.03	0.00200	"	4.00		75.8	43.2-116	1.96	77.1	
Dibenz (a,h) anthracene	2.18	0.0100	"	4.00		54.5	18.7-110	12.2	53.5	
Fluoranthene	2.91	0.500	"	4.00		72.8	38.3-119	3.05	57.8	
Fluorene	2.87	0.500	"	4.00		71.8	20.8-123	15.4	74.7	
Indeno (1,2,3-cd) pyrene	2.69	0.0200	"	4.00		67.2	29.9-114	1.88	35.7	
1-Methylnaphthalene	2.31	0.500	"	4.00		57.8	17.4-113	29.9	81.5	
2-Methylnaphthalene	2.38	0.500	"	4.00		59.5	17.6-116	20.4	63.5	
Naphthalene	3.22	0.500	"	4.00		80.5	10-135	29.2	60.4	
Phenanthrene	3.08	0.500	"	4.00		77.0	28.5-120	6.37	71.4	
Pyrene	3.14	0.500	"	4.00		78.5	22.6-125	3.44	47.2	
<i>Surrogate: Carbazole</i>	<i>1.12</i>		<i>"</i>	<i>2.00</i>		<i>56.0</i>	<i>25-129</i>			

Great Lakes Analytical--Oak Creek

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Andrea Stathas, Project Manager

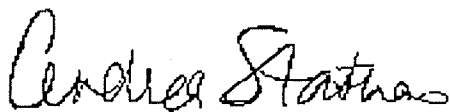
STS Consultants  
11425 S. Lake Park Dr.  
Milwaukee WI, 53224

Project: 87185EA Southeast  
Project Number: [none]  
Project Manager: Mark Mejac

Reported:  
11/19/02 13:48

### 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.



**CHAIN OF CUSTODY REPORT**

Client: <u>STS Consultants</u>		Bill To: <u>Sane</u>		TAT: <u>STD</u> 4 DAY 3 DAY 2 DAY 1 DAY <24 HRS.	
Address: <u>11425 W. Lake Park Dr.</u>		Address:		<input type="checkbox"/> YES - TAT is critical <input type="checkbox"/> NO - TAT is not critical	
<u>Milwaukee WI 53224</u>				Received: <input checked="" type="checkbox"/> ice <input type="checkbox"/> ambient <input type="checkbox"/> refrigerator	
Report to: <u>Mark Mejac</u>		State & Program:		Deliverable Package: <input type="checkbox"/> STD <input type="checkbox"/> Other	
Phone #: <u>(414) 359-3030</u>		Phone #: ( )		Delivery Method: GLA <input type="checkbox"/> Client <input type="checkbox"/> Shipped <input type="checkbox"/> Courier <input type="checkbox"/>	
Fax #: <u>(414) 359-0822</u>		Fax #: ( )			

Project Name: <u>Tandem Development</u>	Project #/PO#: <u>87185 EA</u>	Sampler: <u>Adam Florin</u>	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	# of Bottles Preservative Used							TOTAL # OF BOTTLES	DO NOT DRY-WEIGHT CORRECT RESULTS <input type="checkbox"/>	SAMPLER FIELD FILTERED <input checked="" type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>	VOCs (8021)	PAH (8310)	Dissolved lead (7421)	SAMPLE CONTROL	LABORATORY ID NUMBER
						MeOH	NH4SO4	HCl	HNO3	H2SO4	NaOH	NONE									
FIELD ID, LOCATION																					
1	<u>MW-4</u>	PID:	<u>11/8/02</u>		<u>W</u>		<u>3</u>	<u>1</u>		<u>1</u>	<u>5</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<u>W21078-01</u>	
2	<u>MW-5</u>	PID:																		<u>-02</u>	
3	<u>MW-6</u>	PID:																		<u>-03</u>	
4	<u>MW-1</u>	PID:																		<u>-04</u>	
5	<u>MW-2</u>	PID:																		<u>-05</u>	
6	<u>MW-3</u>	PID:																		<u>-06</u>	
7	<u>MW-3D</u>	PID:								<u>3</u>										<u>-07</u>	
8		PID:																			
9		PID:																			
10		PID:																			

RELINQUISHED <u>Adam Florin</u> <u>11/8/02 PM</u>	RECEIVED <u>[Signature]</u> <u>11/8/02 12:45</u>	RELINQUISHED	RECEIVED
RELINQUISHED <u>[Signature]</u> <u>11/8/02 (5:00)</u>	RECEIVED <u>[Signature]</u> <u>11/8/02 1:50</u>	RELINQUISHED	RECEIVED