

# ***WORK PLAN PROPOSAL***

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## **PROJECT**

Site Investigation Work Plan  
Town & Country Laundromat  
7513 45<sup>th</sup> Avenue  
Pleasant Prairie, Wisconsin 53142  
Activity No. 02-30-543696  
FID No. 230142990

## **CLIENT**

Craig G. Yale & Assoc. Inc.  
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## **Proposal Number**

J09007

## **Date**

December 12, 2017



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## **APPENDICES**

## **1.0 PROJECT SCOPE**

### **1.1 Project Description**

The Site (the Town & Country Laundromat) is an operating dry cleaning facility located within a strip mall located at 7513 45<sup>th</sup> Avenue in Pleasant Prairie, Wisconsin 53142. The Site is located in the northwest quarter of the northeast quarter of Section 1, Township 7 North, Range 21 East, in Milwaukee County, Wisconsin.

The findings of a Phase I Environmental Site Assessment (ESA) and Phase II ESA, conducted in November 2004, indicated that Recognized Environmental Conditions (RECs) exist at the Site. The operation of a dry cleaning business at the Site presented a REC that warranted a limited subsurface assessment to determine whether a release had occurred at the Site. The results of the limited subsurface assessment confirmed that a release had occurred and recommended a Phase II ESA that was completed in June 2005. The results of the Phase II ESA further confirmed that a release of dry cleaner solvent had occurred resulting in impacts to the soil and groundwater in the vicinity of the Site.

This Site Investigation Work Plan has been developed to delineate the degree and extent of dry cleaning contamination originating from the Site and to evaluate risk screening and case closure criteria.

The Site is eligible to apply to the Dry Cleaners Environmental Response Fund (DERF).

### **1.2 Project History**

The findings of the Phase I ESA and Phase II ESA, conducted by Environment, Inc. in November 2004, indicated that RECs existed on the Site. The presence of a dry cleaning operation on the Site constituted a REC that warranted further investigation. A limited subsurface assessment conducted by Environment, Inc. confirmed that a release had occurred at the Site and recommended further investigation. A summary of the analytical results is included in Table 1 of Appendix B.

Based on the results of the previous environmental studies, additional Phase II ESA activities were conducted in June 2005 by Drake Environmental, Inc. The Phase II ESA consisted of the advancement of five (5) soil boring and the installation of four (4) of temporary groundwater monitoring wells. A summary of the analytical results is included in Table 2 of Appendix B.

### 1.3 Site Description

The Site is situated in the central portion of a multi-tenant mall in a residential/commercial area. The property is owned by Town N' Country Mall, Inc. and is located southeast of the intersection of 75<sup>th</sup> Street and 45<sup>th</sup> Avenue in the Village of Pleasant Prairie, Wisconsin. The surrounding area includes commercial and residential properties.

According to the Phase I ESA report, the original building was constructed in 1962 with an addition constructed in 1975. The Laundromat has been in operation since at least 1975. Two (2) Leaking Underground Storage Tanks (LUST) sites (gas stations) located adjacent to the Site. The LUST sites are located to the north and to northwest of the Site respectively. Both of the LUST sites have received No Further Remediation letters from the Wisconsin Department of Natural Resources (WDNR).

### 1.4 Site Geology & Hydrogeology

The Site is depicted on the United States Geological Service (USGS) Kenosha, Wisconsin quadratic 7.5 minute topographic map at an elevation of approximately 660 feet above mean sea level (amsl). The local topography is shown to be relatively flat and level. The regional topography of the Site in the vicinity of the Site is depicted as declining generally toward the east towards Lake Michigan.

Previous site investigation activities indicate that the depth to groundwater is approximately 10 feet below ground surface (bgs). Groundwater flow direction observed at the two (2) adjacent LUST sites is to the south-southeast. The principal aquifers underlying the region are the Niagara and Sandstone aquifers. Major aquifer depth within the Niagara Dolomite is less than fifty (50) feet bgs and depth to the sandstone aquifer is greater than 1,000 feet bgs. Flow within the Niagara aquifer is generally toward the east.

### 1.5 Potential Receptors

Potable water is supplied by the Kenosha Water Utility and sewer services are provided by the Pleasant Prairie Water Utility. There is no surface water in the vicinity of the Site.

## 2.0 SITE INVESTIGATION ACTIVITIES

This proposed Site Investigation Work Plan includes field sampling activities, laboratory analytical, and documentation services required to comply with the regulatory requirements applicable to the existing soil and groundwater contamination originating from the Site.

### 2.1 Characterize Extent and Degree of Soil Contamination

To fully delineate and characterize the existing soil and groundwater contamination originating from the Site, additional soil and groundwater investigation activities are necessary to supplement the soil data collected during the previous investigations.

Soil samples will be collected utilizing a direct-push rig. The samples will be analyzed on-site with a photoionization detector (PID) and evaluated for geological characteristics. Selected soil samples from each boring will be preserved for off-site laboratory analysis of volatile organic compounds (VOC).

Five (5) soil borings (four (4) water table wells and one (1) piezometer) will be positioned in all four (4) compass directions around the multi-tenant mall. A soil boring will be installed between the multi-tenant mall and the adjacent trailer park property. The location of this boring may be restricted due to the close spacing of the individual trailers and numerous buried utility lines. Hand auger soil samples may be collected from between two (2) trailer units, if the area cannot be accessed by direct-push rig. Additional borings will be advanced as necessary, if the initial sample locations do not sufficiently define the horizontal extent of the soil contamination.

**Figure 1 in Appendix A** depicts the proposed soil boring locations.

### 2.2 Estimate Extent and Degree of Groundwater Contamination

To evaluate the presence of groundwater contamination, six (6) permanent groundwater monitoring wells will be installed. The groundwater monitoring wells will be installed in compliance with Wisconsin Administrative Code (WAC) Natural Resources (NR) 141.

If a drill rig is unable to access the suspected source area (adjacent to the east side of the location of Laundromat facility within the multi-tenant building), groundwater monitoring well will be installed as close as possible at a location down gradient of the suspected source area. One (1) piezometer will also be installed at the source area location to evaluate the vertical migration of the contaminants. One (1) monitoring well will be installed upgradient of the source area to determine the quality of the groundwater entering the Site, 1 groundwater monitoring well be

installed in the municipal right-of-way along 44<sup>th</sup> Avenue, and two (2) monitoring wells will be installed side gradient of the contaminated area to delineate the horizontal extent of the potential contaminant plume.

The groundwater monitoring wells will be developed and surveyed prior to the collection of groundwater samples. Groundwater will be analyzed for VOC constituents and natural attenuation parameters. The direction of groundwater flow will be determined with the use of surveying data and water level measurements.

### 2.3 Estimate Extent and Degree of Groundwater Contamination

To evaluate the potential vapor migration into the multi-tenant mall, soil vapor probes will be installed in three (3) of the mall unit spaces. The soil vapor probes will be sub-slab to assess whether VOC constituents are collecting the soil pore spaces below the building slab.

### **3.0 SITE INVESTIGATION PROCEDURES**

The procedures utilized during the site investigation activities at the Town & Country Laundromat site are discussed in the following section.

#### **3.1 Contractor and Laboratory Selection**

Drake Consulting Group, LLC (Drake) will assist the Responsible Party (RP) with the selection of contractors to provide engineering services, to provide and operate a direct-push rig, drill and install groundwater monitoring wells and provide laboratory analytical testing. Drake will establish the scope of work for each service and request bids from qualified contractors based on the proposed scope of work. Drake will then schedule and coordinate the project with the selected contractors and laboratory.

#### **3.2 Health and Safety Plan Preparation**

Drake will prepare a site-specific health and safety plan to comply with the requirements of the United States Occupational Safety and Health Administration (OSHA), prior to the implementation of fieldwork. The health and safety plan will apply to Drake staff members conducting fieldwork or providing project support at the site. A description of site characteristics, a hazards evaluation, safety requirements, and emergency procedures will be included in the plan. The health and safety plan will be available on-site during fieldwork operations.

#### **3.3 Soil Boring Procedures**

The selected contractor will collect continuous soil samples with a direct-push rig. Public underground utilities will be identified in the vicinity of the proposed soil borings, prior to the commencement of subsurface work.

Each soil sample will be collected within plastic sleeve and equipment decontamination procedures will be followed to prevent the transfer of contaminants between soil boring locations.

### 3.4 Drilling Procedures

Groundwater monitoring wells will be installed utilizing continuous-flight hollow-stem steel augers. Equipment decontamination procedures will be followed to prevent the transfer of contaminants between groundwater monitoring well locations.

### 3.5 Soil Sampling Procedures

Soil samples will be analyzed to characterize the geologic conditions beneath the Site and to estimate the horizontal and vertical extent of the soil contamination. Samples will be collected at 2-foot or 4-foot vertical intervals utilizing sampling procedures designed to recover representative, relatively undisturbed samples. The equipment utilized to collect soil samples will be decontaminated before and after each sample recovery to prevent the transfer of contaminants between soil boring locations. The recovered samples will be placed into appropriate containers for field and laboratory testing.

Soil boring holes will be backfilled with bentonite material to prohibit surface water infiltration in accordance with WAC NR 141. Borehole abandonment forms will be completed and submitted to the WDNR per WAC NR 141.

### 3.6 Soil Sample Screening and Classification

Soil samples will be evaluated in the field to identify indicators of soil contaminants. The samples will be screened with a PID following the WDNR “headspace” method. PID screening will detect the presence of volatile organic vapors commonly emitted by VOCs.

Following PID screening, the soil samples will be visually examined and classified in general accordance with the Unified Soil Classification System (USCS) and evaluated to identify the presence of staining and odors indicative of contamination. The description and accompanying USCS classification for each sample will be presented on soil boring logs. The soil boring logs (*WDNR Form 4400-122*) will be utilized to prepare geologic cross section diagrams depicting the stratigraphy of the Site.

Investigative wastes generated during the investigation will be stored on-site in 55-gallon steel drums, pending characterization for proper disposal.



### 3.7 Soil Sample Analytical Testing

Selected soil samples will be submitted to an independent WDNR-certified laboratory for VOC analysis. A quality control trip blank will be included with the soil samples, and chain-of-custody (COC) documentation will be maintained for the samples.

Analytical Parameter	Analytical Method
Volatile Organic Compounds (VOC)	EPA Method 8260B

Two (2) soil samples are typically preserved from each soil boring and submitted for laboratory analyses. One (1) soil sample will be submitted from a potentially contaminated subsurface interval and the second sample will be submitted from a deeper interval. The sample depth of the deeper soil sample we determined based on soil characteristics and observations of shallower soils in an attempt to collect uncontaminated soil samples. The collection of the deeper “uncontaminated soil sample” will provide essential data for determining the vertical extent of the soil contamination.

The soil analytical data provided by the WDNR-certified laboratory will be summarized and compared to the WAC NR 720 generic Residual Contaminant Levels (RCL) and/or site-specific standards to evaluate the extent and degree of soil contamination.

### 3.8 Monitoring Well Construction

Groundwater monitoring wells will be utilized to collect data to characterize the hydrogeologic conditions, assess groundwater quality and evaluate natural attenuation factors. Groundwater monitoring well construction procedures will be documented to prepare WDNR groundwater monitoring well construction forms (*WDNR Form 4400-113A*). The groundwater monitoring wells will be developed and groundwater monitoring well development forms (*WDNR Form 4400-122*) will be completed and submitted to the WDNR in accordance with WAC NR 141.

The groundwater monitoring wells will be surveyed for elevation utilizing conventional leveling methods to determine the ground surface elevations, protective cover elevations, and well casing elevations. The depth to water in each monitoring well will be measured with an electronic water level probe and a static groundwater elevation table will be developed to identify hydrogeologic characteristics including groundwater flow direction.

### 3.9 Groundwater Sampling and Analytical Testing

Groundwater samples will be collected for analysis of field parameters (Temperature, Dissolved Oxygen, pH Turbidity and Reduction/Oxidation Potential (Redox)) and submittal to a WDNR-certified laboratory for analysis of VOC constituents. The samples will be collected with disposable bailers, transferred to appropriate containers for laboratory analysis and immediately placed on ice. A quality control trip blank will be included with the groundwater samples and COC documentation will also be maintained for the samples.

Analytical Parameter	Analytical Method
Volatile Organic Compounds (VOC)	EPA Method 8260B

The groundwater analytical data provided by the WDNR-certified laboratory will be summarized and compared to the WAC NR 140 Enforcement Standards (ES) and Preventative Action Limits (PAL) to evaluate the extent and degree of soil contamination.

### 3.10 Indoor Air Sampling and Analytical Testing

Eight (8) Indoor air samples will be collected and submitted to a WDNR-certified laboratory for analysis of VOC constituents. The samples will be collected in Summa canisters on a time-interval basis over a 30-minute period. An ambient air/background air sample will be collected concurrently with the indoor air samples outside and upwind of the facility. COC documentation will be maintained for the samples.

Analytical Parameter	Analytical Method
Volatile Organic Compounds (VOC)	EPA Method TO15

### 3.11 Sub-Slab Vapor Probe Installation

Three (3) sub-slab vapor probes will be installed through the floor of the dry cleaner facility and the adjacent spaces to facilitate the collection and submittal of the sub-slab vapor samples. The sample sub-slab probes will be installed following the guidelines outlined in the WDNR guidance *Sub-Slab Vapor Sampling Procedures* (RR-984).

### 3.12 Sub-Slab Air Sampling and Analytical Testing

Six (6) sub-slab vapor samples will be collected concurrent with the collection of the indoor air samples and submitted to a WDNR-certified for analysis of VOC constituents. The sub-slab vapor samples will be collected over two (2) separate sampling events spaced at least four (4)

weeks apart. The sub-slab vapor samples will be collected in Summa canisters attached to an installed soil vapor probe. The sampling system/train will be leak tested prior to the collection of the sub-slab vapor samples. COC documentation will be maintained for the samples.

<b>Analytical Parameter</b>	<b>Analytical Method</b>
Volatile Organic Compounds (VOC)	EPA Method TO15

## **4.0 SITE INVESTIGATION SCHEDULE**

### **4.1 Field Investigation**

Upon approval of this work plan and selection of the environmental engineering firm, a drilling contractor and WDNR-certified analytical laboratory will be selected. The environmental engineering firm will coordinate and schedule all site investigation activities. The site investigation activities are tentatively scheduled to begin in spring 2017. If additional phases of fieldwork are necessary to complete the investigation, they will be evaluated and implemented following the collection and analysis of data collected from the previous subsurface investigations.

### **4.2 Site Investigation Report Preparation**

A Site Investigation Report will be prepared following the completion of all phases of fieldwork and the receipt of final laboratory analytical results. The Site Investigation Report will include a discussion of site characteristics, descriptions of site investigation procedures, laboratory and field results, and a detailed analysis of the project results. The report will summarize conclusions regarding the extent and degree of contamination, and recommendations for future environmental activities (e.g. natural attenuation, active remediation, etc.) that will be required for site closure. Copies of diagrams, laboratory reports, and field forms will also be provided in the Site Investigation Report.

### **4.3 Remedial Action Evaluation**

If active remediation is determined to be the most effective pathway to case closure, and Remedial Action Options Report (RAOR) will be prepared and submitted to the WDNR. The RAOR will evaluate various remedial alternatives, including non-active source control, natural attenuation monitoring, source area removal, active contaminant degradation and/or passive contaminant degradation. The RAOR will evaluate the alternatives based on technical feasibility, the presence or absence of environmental factors, economic feasibility, timeframe, effectiveness, and regulatory approval.

## **Appendix A**

Figure 1 – Soil Boring Locations Diagram

## **Appendix B**

Table 1 – Environment, Inc. Soil Analytical Results

Table 2 – Drake Environmental, Inc. Soil Analytical Results

Table 3 – Drake Environmental, Inc. Groundwater Analytical Results

# **Appendix A**

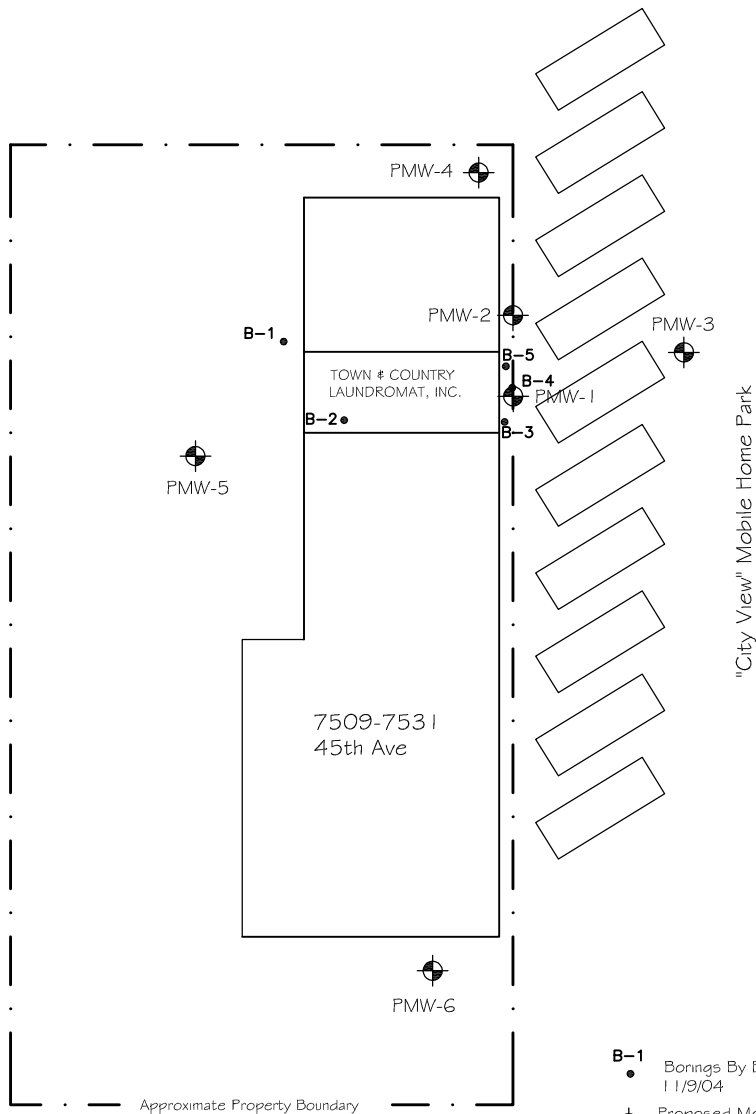
Figure 1 – Soil Boring Locations Diagram

75TH STREET

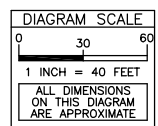


SERVICE STATION  
LUST SITE

45TH AVENUE



- B-1 Borings By Environment, Inc.  
11/9/04
- Proposed Monitoring Well  
(PMW-1)



7509-7531 45th Ave  
Pleasant Prairie, WI

PROJECT NO: J05039	PM: MRG
DRAWN BY: AAM	DATE: 06/06/05
REVISED BY: CMC	DATE: 03/01/18
APPRVD BY: BB	DATE: 03/01/18
BRRTS: 02-30-543696	

Proposed Monitoring  
Location Plan

FIGURE  
1

## **Appendix B**

Table 1 – Environment, Inc. Soil Analytical Results

Table 2 – Drake Environmental, Inc. Soil Analytical Results

Table 3 – Drake Environmental, Inc. Groundwater Analytical Results



**TABLE 1**  
**Environment, Inc.**  
**SOIL SAMPLE ANALYTICAL RESULTS:**  
**Collected 11-09-04**  
**7509-7531 45th Street**

<i>Compound</i>			VOCs (ppb)	Perchloroethylene	trichloroethene	1,2 dichloroethene
Sample ID	Depth	Collection Date				
<b>B-1</b>	8'	11/9/04		ND	ND	ND
<b>B-2</b>	2'	11/9/04		281	6	8
<b>B-2</b>	4'	11/9/04		173	ND	5
<b>B-3</b>	6'	11/9/04		1,740	114	66
<b>B-4</b>	6'	11/9/04		5,750	360	154
<b>B-5</b>	4'	11/9/04		12,400	4,560	2,070
<b>B-5</b>	6'	11/9/04		5690	233	85
<i><b>NR 720 Generic RCL</b></i>				NS	NS	NS
<i><b>NR 746.01 Table 1</b></i>				NS	NS	NS

results reported in ppb unless otherwise noted

ND no detect

NS no established standard

ppb parts per billion

RCL residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720

bold type indicates concentration exceeds the NR 720 or NR 746.01

**TABLE 2 (page 1 of 3)**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**7509-7531 45th Street J05039**

Compound			VOCs (ppb)	Benzene	Bromobenzene	Bromodichloromethane	sec-butylbenzene	tert-butylbenzene	carbon tetrachloride	chlorobenzene	chloroethane	chloroform	chloromethane	2-chlorotoluene	4-chlorotoluene	dibromochloromethane	1,2-dibromo-3-chloropropane	dichlorodifluoromethane	1,2-dichlorobenzene
Sample ID	Depth	Collection Date																	
P-1	8-10'	6/7/05		<16	<18	<22	<19	<17	<15	<15	<37	<14	<28	<17	<15	<23	<19	<15	<20
P-2	2-4'	6/7/05		<17	<20	<25	<22	<19	<17	<17	<41	<16	<32	<19	<17	<26	<21	<17	<22
P-3	8-10'	6/7/05		<15	<18	<22	<19	<17	<15	<15	<36	<14	<28	<17	<15	<23	<19	<15	<20
P-4	8-10'	6/7/05		<16	<19	<23	<20	<18	<16	<16	<38	<14	<29	<18	<16	<24	<20	<16	<20
P-5	8-10'	6/7/05		<17	<19	<24	<21	<19	<16	<16	<39	<15	<30	<18	<16	<25	<20	<16	<21
<b>NR 720 Generic RCL</b>				5.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>NR 746.01 Table 1</b>				8.500	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Results reported in ppb unless otherwise noted

- NS no established standard
- NM not measured for indicated para
- NA not analyzed for indicated para
- ppm parts per million
- ppb parts per billion
- RCL residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720

- GRO gasoline range organics
- DRO diesel range organics
- VOCs volatile organic compounds
- < less than the specified detection limit
- bold type indicates concentration exceeds the NR 720 or NR 746.01

**TABLE 2 (page 2 of 3)**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**7509-7531 45TH Street J05039**

Compound			1,3-dichlorobenzene	1,4-dichlorobenzene	1,1-dichloroethane	1,1-dichloroethene	1,2-dichloroethane	cis-1,2-dichloroethene	trans-1,2-dichloroethene	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	ethylbenzene	hexachlorobutadiene	isopropylbenzene	isopropyl ether	p-isopropyltoluene	methylene chloride	methyl tert-butyl ether	
Sample ID	Depth	Collection Date																		
P-1	8-10'	6/7/05	<15	<21	<18	<20	<20	<16	<15	<19	<22	<16	<15	<24	<19	<17	<18	<17	<23	
P-2	2-4'	6/7/05	<17	<23	<21	<22	<22	<17	<16	<21	<25	<18	<16	<27	<21	<19	<20	<20	<25	
P-3	8-10'	6/7/05	<22	<20	<18	<20	<20	<16	<15	<19	<22	<16	<15	<24	<19	<17	<18	<17	<22	
P-4	8-10'	6/7/05	<16	<21	<19	<20	<21	<16	<15	<19	<23	<16	<15	<25	<20	<18	<19	<18	<23	
P-5	8-10'	6/7/05	<16	<22	<20	<21	<21	<17	<16	<20	<24	<17	<16	<26	<20	<18	<19	<19	<24	
<b>NR 720 Generic RCL</b>			NS	NS	NS	NS	4.9	NS	NS	NS	NS	NS	2,900	NS	NS	NS	NS	NS	NS	
<b>NR 746.01 Table 1</b>			NS	NS	NS	NS	600	NS	NS	NS	NS	NS	4,600	NS	NS	NS	NS	NS	NS	

Results reported in ppb unless otherwise noted  
NS no established standard  
NM not measured for indicated parameter  
NA not analyzed for indicated parameter  
ppm parts per million  
ppb parts per billion  
RCL residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720

GRO gasoline range organics  
DRO diesel range organics  
VOCs volatile organic compounds  
< less than the specified detection limit  
**bold type indicates concentration exceeds the NR 720 or NR 746.01**

**TABLE 2 (page 3 of 3)**  
**SOIL SAMPLE ANALYTICAL RESULTS**  
**7509-7531 45th Street J05039**

Compound			naphthalene	n-butylbenzene	n-propylbenzene	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	tetrachloroethene	toluene	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	trichloroethene	trichlorofluoromethane	vinyl chloride	total xylenes
Sample ID	Depth	Collection Date																
P-1	8-10'	6/7/05	<43	<21	<16	<18	<25	<25	<18	<17	<29	<27	<17	<20	<20	<14	<b>107</b>	<31
P-2	2-4'	6/7/05	<49	<23	<18	<20	<28	<28	<20	<19	<32	<30	<19	<22	<22	<16	<14	<34
P-3	8-10'	6/7/05	<43	<21	<16	<18	<25	<25	<18	<17	<29	<27	<17	<20	<20	<14	<12	<31
P-4	8-10'	6/7/05	<45	<21	<17	<19	<26	<26	<18	<17	<30	<28	<18	<20	<21	<14	<13	<32
P-5	8-10'	6/7/05	<46	<22	<17	<19	<27	<27	<19	<18	<31	<29	<18	<21	<21	<15	<13	<33
<b>NR 720 Generic RCL</b>			NS	NS	NS	NS	NS	NS	NS	1,500	NS	NS	NS	NS	NS	NS	NS	4,100
<b>NR 746.01 Table 1</b>			2,700	NS	NS	NS	NS	NS	NS	38,000	NS	NS	83,000	11,000	NS	NS	NS	42,000

Results reported in ppb unless otherwise noted

- NS no established standard
- NM not measured for indicated parameter
- NA not analyzed for indicated parameter
- ppm parts per million
- ppb parts per billion
- RCL residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720

GRO gasoline range organics

DRO diesel range organics

VOCs volatile organic compounds

< less than the specified detection limit

bold type indicates concentration exceeds the NR 720 or NR 746.01

**TABLE 3 (page 1 of 3)**  
**TEMPORARY MONITORING WELL SAMPLE ANALYTICAL RESULTS**  
**7509-7531 45th Street J05039**

Compound				VOCs (ppb)	Benzene	Bromobenzene	Bromodichloromethane	Bromochloromethane	Bromoform	Bromomethane	2-butanone	sec-buty/benzene	tert-buty/benzene	carbon tetrachloride	chlorobenzene	chloroethane	chloroform	chloromethane	2-chloroethyl vinyl ether	2-chlorotoluene	4-chlorotoluene	dibromochloromethane	Dibromomethane	1,2-dibromo-3-chloropropane
Sample ID	Depth to Water	Depth to Bottom	Collection Date																					
P-1			6/7/05		<0.270	<0.310	<0.380	<0.370	<0.390	<0.650	<1.380	<0.340	<0.300	<0.270	<0.260	<0.640	<0.240	<0.490	<0.700	<0.300	<0.260	<0.410	<0.460	<0.330
P-2			6/7/05		<0.270	<0.310	<0.380	<0.370	<0.390	<0.650	<1.380	<0.340	<0.300	<0.270	<0.260	<0.640	<0.240	<0.490	<0.700	<0.300	<0.260	<0.410	<0.460	<0.330
P-3			6/7/05		<0.270	<0.310	<0.380	<0.370	<0.390	<0.650	<1.380	<0.340	<0.300	<0.270	<0.260	<0.640	<0.240	<0.490	<0.700	<0.300	<0.260	<0.410	<0.460	<0.330
P-4			6/7/05		<0.270	<0.310	<0.380	<0.370	<0.390	<0.650	<1.380	<0.340	<0.300	<0.270	<0.260	<0.640	<0.240	<0.490	<0.700	<0.300	<0.260	<0.410	<0.460	<0.330
P-5			6/7/05		<0.270	<0.310	<0.380	<0.370	<0.390	<0.650	<1.380	<0.340	<0.300	<0.270	<0.260	<0.640	<0.240	<0.490	<0.700	<0.300	<0.260	<0.410	<0.460	<0.330
<b>NR 140 PAL</b>					0.50	NS	0.06	NS	0.44	1	NS	NS	NS	0.5	NS	80	0.6	0.3	NS	NS	NS	6	NS	0.02
<b>NR 140 ES</b>					5	NS	0.6	NS	4.4	10	NS	NS	NS	5	NS	400	6	3	NS	NS	NS	60	NS	0.2

Results reported in ppb unless otherwise noted

VOCs volatile organic compounds

RCL residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720

ES enforcement standard as established in Wisconsin Administrative Code Chapter NR 140

PAL preventive action limit as established in Wisconsin Administrative Code Chapter NR 140

bold type indicates concentration exceeds the RCL or PAL

bold and underlined type indicates concentration exceeds the ES

**TABLE 3 (page 2 of 3)**  
**TEMPORARY MONITORING WELL SAMPLE ANALYTICAL RESULTS**  
**7509-7531 45th Street J05039**

Compound				dichlorodifluoromethane	1,2-dibromomethane	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropane	1,2-dichloroethane	cis-1,2-dichloroethene	cis-1,3-dichloropropane	trans-1,2-dichloroethene	trans-1,3-dichloropropene	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	ethylbenzene	hexachlorobutadiene	isopropylbenzene	isopropyl ether	p-isopropyltoluene
Sample ID	Depth to Water	Depth to Bottom	Collection Date																					
P-1			6/7/05	<0.270	<0.460	<0.340	<0.260	<0.360	<0.320	<0.340	<0.430	<0.350	<0.270	<0.370	<0.250	<0.260	<0.320	<0.390	<0.270	<0.250	<0.420	<0.330	<0.300	<0.310
P-2			6/7/05	<0.270	<0.460	<0.340	<0.260	<0.360	<0.320	<0.340	<0.430	<0.350	<0.270	<0.370	<0.250	<0.260	<0.320	<0.390	<0.270	<0.250	<0.420	<0.330	<0.300	<0.310
P-3			6/7/05	<0.270	<0.460	<0.340	<0.260	<0.360	<0.320	<0.340	<0.430	<0.350	<0.270	<0.370	<0.250	<0.260	<0.320	<0.390	<0.270	<0.250	<0.420	<0.330	<0.300	<0.310
P-4			6/7/05	<0.270	<0.460	<0.340	<0.260	<0.360	<0.320	<0.340	<0.430	<0.350	<0.270	<0.370	<0.250	<0.260	<0.320	<0.390	<0.270	<0.250	<0.420	<0.330	<0.300	<0.310
P-5			6/7/05	<0.270	<0.460	<0.340	<0.260	<0.360	<0.320	<0.340	<0.430	<0.350	<0.270	<0.370	<0.250	<0.260	<0.320	<0.390	<0.270	<0.250	<0.420	<0.330	<0.300	<0.310
<b>NR 140 PAL</b>				200	0.005	60	125	15	85	NS	NS	0.5	NS	0.02	NS	0.02	0.5	0.02	NS	140	NS	NS	7	NS
<b>NR 140 ES</b>				1000	0.05	600	1250	75	850	NS	NS	5	NS	0	NS	0	5	0	NS	700	NS	NS	70	NS

Results reported in ppb unless otherwise noted

VOCs volatile organic compounds  
RCL residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720  
ES enforcement standard as established in Wisconsin Administrative Code Chapter NR 140  
PAL preventive action limit as established in Wisconsin Administrative Code Chapter NR 140  
bold type indicates concentration exceeds the RCL or PAL  
bold and underlined type indicates concentration exceeds the ES

**TABLE 3 (page 3 of 3)**  
**TEMPORARY MONITORING WELL SAMPLE ANALYTICAL RESULTS**  
**7509-7531 45th Street J05039**

Compound				methylene chloride	methyl tert-butyl ether	4-methyl-2-pentanone	naphthalene	n-butylbenzene	n-propylbenzene	Styrene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	tetrachloroethene	toluene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	trichloroethane	trichlorofluoromethane	vinyl chloride	Total Xylenes
Sample ID	Depth to Water	Depth to Bottom	Collection Date																						
P-1			6/7/05	<0.300	<0.390	<0.800	<0.750	<0.360	<0.280	<0.250	<0.220	<0.310	<0.440	<0.440	<0.310	<0.290	<0.500	<0.510	<0.470	<0.300	<0.340	<0.340	<0.240	<0.200	<0.530
P-2			6/7/05	<0.300	<0.390	<0.800	<0.750	<0.360	<0.280	<0.250	<0.220	<0.310	<0.440	<0.440	<0.310	<0.290	<0.500	<0.510	<0.470	<0.300	<0.340	<0.340	<0.240	<0.200	<0.530
P-3			6/7/05	<0.300	<0.390	<0.800	<0.750	<0.360	<0.280	<0.250	<0.220	<0.310	<0.440	<0.440	<0.310	<0.290	<0.500	<0.510	<0.470	<0.300	<0.340	<0.340	<0.240	<0.200	<0.530
P-4			6/7/05	<0.300	<0.390	<0.800	<0.750	<0.360	<0.280	<0.250	<0.220	<0.310	<0.440	<0.440	<0.310	<0.290	<0.500	<0.510	<0.470	<0.300	<0.340	<0.340	<0.240	<0.200	<0.530
P-5			6/7/05	<0.300	<0.390	<0.800	<0.750	<0.360	<0.280	<0.250	<0.220	<0.310	<0.440	<0.440	<0.310	<0.290	<0.500	<0.510	<0.470	<0.300	<0.340	<0.340	<0.240	<0.200	<0.530
<b>NR 140 PAL</b>				0.5	12	NS	8	0.5	NS	10	7	40	0.02	NS	0.5	200	NS	12	14	96	96	NS	NS	14	1,000
<b>NR 140 ES</b>				5	60	NS	40	5	NS	100	70	200	0.2	5	5	1,000	NS	60	70	480	480	NS	NS	0.20	10,000

Results reported in ppb unless otherwise noted

- VOCS volatile organic compounds
- RCL residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720
- ES enforcement standard as established in Wisconsin Administrative Code Chapter NR 140
- PAL preventive action limit as established in Wisconsin Administrative Code Chapter NR 140

bold type indicates concentration exceeds the RCL or PAL  
bold and underlined type indicates concentration exceeds the ES

### Data Table Abbreviations

ppm	parts per million
ppb	parts per billion
GRO	gasoline range organics
DRO	diesel range organics
PVOCs	petroleum volatile organic compounds
VOCs	volatile organic compounds
PAHs	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
MTBE	methyl tert-butyl ether
TMB	trimethylbenzenes (combined 1,2,4- and 1,3,5-trimethylbenzene)
RCL	residual contaminant level as established in Wisconsin Administrative Code Chapter NR 720
ES	enforcement standard as established in Wisconsin Administrative Code Chapter NR 140
PAL	preventive action limit as established in Wisconsin Administrative Code Chapter NR 140
<b>bold type</b>	concentration exceeds PAL or RCL
<b><u>bold and underlined type</u></b>	concentration exceeds ES
NS	no established standard
NM	not measured for indicated parameter
NA	not analyzed for indicated parameter
NR	no recovery for this interval
PID	photoionization detector
iu	instrument units
bgs	below ground surface
DO	dissolved oxygen
mV	millivolts
ORP	oxidation-reduction potential
uS/cm	microSiemens per centimeter
<	less than the specified detection limit