

**SITE INVESTIGATION WORKPLAN
FORMER JERRY'S SERVICE
2477 NORTH HOLTON STREET
MILWAUKEE, WISCONSIN 53212**

PREPARED FOR:

RILEY NEUMANN
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2300 NORTH DOCTOR MARTIN LUTHER KING DRIVE
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SEYMOUR ENVIRONMENTAL SERVICES, INC.

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1.0 INTRODUCTION

This work plan describes the approach to conduct contamination assessment activities at the former Jerry's Service located at 2477 North Holton Street in Milwaukee, Wisconsin. Seymour Environmental Services, Inc. (Seymour) is conducting this investigation in response to petroleum-related compounds identified during a tank removal assessment performed in early November 2011. The soil contamination was detected during removal of three underground storage tanks. The tanks had been out of use for several years. No other tanks are known to be present at the site.

The objective of this phase of the work is to delimit the extent of the previously-identified soil contamination and determine whether groundwater in the water-table aquifer has been impacted by the petroleum release. We intend to conduct the majority of the investigation utilizing direct push drilling.

1.1 Site and Consultant Information

Site Location: Former Jerry's Service
2477 North Holton Avenue
Milwaukee, Wisconsin 53203
Parcel #: 32113340000
SW ¼ of the SW ¼ of Section 16, Township 7 North, Range 22 East
WTM: X: 690537 Y: 290020

Owner/
Responsible Party KP Ventures
P.O. Box 511834
Milwaukee, Wisconsin 53203
Contact: Ms. Sujin Lee (414) 745-8790

Consultant: Seymour Environmental Services, Inc.
2531 Dyreson Road
McFarland, Wisconsin 53558
Contact: Robyn Seymour (608) 838-9120

Geoprobe/Driller: On-site Environmental Services, Inc
P.O. Box 280
Sun Prairie, Wisconsin 53590
Contact: Kim Kapugi (608) 837-8992

Laboratory:
(soil/water) Pace Analytical
1241 Bellevue Street, Suite 9
Green Bay, Wisconsin 54302
Contact: Dan Milewsky (920) 469-2436

1.2 Description of Surrounding Area

The site is located in the near north site of the City of Milwaukee (Figure 1). The property is bounded to the north by E. Wright Street and the east by N. Holton Avenue. The subject parcel (PN: 3211334000) is 4,000 square feet. A single building approximately 1,300 square feet in size is present in the southwest portion of the property (Figure 2). The remainder of the property is covered by pavement with the exception of a thin strip of grass along the southern margin of the property ~8 feet wide. The legal description is J L Pierce's subdivision of lots 47-55 included in the SW ¼ Section 16, Township 7, Range 22 East V2P125 Block 42 E 8-0' Lot 1.

The area surrounding the site is highly developed. Property uses include a mix of residential and commercial properties.

1.3 Site Ownership and Usage

The property has been owned by KP Ventures since 2004. The site is currently occupied by Waheed's Tire Center. Jerry's Tire was a previous tenant.

1.4 Regional Information

The parcel is located at an elevation of ~698 feet msl. The surface topography slopes slightly toward the east. The Milwaukee River is located approximately 3,000 feet east of the site. Local surface water drainage is controlled primarily by the Milwaukee storm sewer system.

Native surficial materials at the site are glacial till deposits. These materials are comprised primarily of fine-grained sediments with thin, discontinuous sandy seams. The glacially-derived sediments extend to a depth of approximately 90 feet where bedrock is encountered. The bedrock at the site is Devonian-aged carbonates (Milwaukee Formation). This bedrock is typically a silty dolomite which contains numerous fossils.

Groundwater in the area is present within the glacial till deposits at a depth of about 15 feet. Flow in the shallow groundwater generally is reported to be southerly in the area. However, local variation in the groundwater flow is common.

1.5 Summary Previous Environmental Activities

In November 2011 the fuel storage tank system was removed. The system consisted of three underground storage tanks, two 1,000 gallon leaded gasoline tanks and one 500 gallon waste oil tank, and associated gasoline dispensers. Confirmation samples were collected during the tank removal. Laboratory analyses showed that all of the soil samples contained at least one compound in excess of the Wisconsin Department of Natural Resources soil standards (Table 1). The sampling locations and identified soil contamination are shown on Figure 3.

2.0 PROPOSED SITE INVESTIGATION ACTIVITIES

Soil and groundwater sampling will be conducted at the site using direct push sampling methods. The primary objective of the work is to characterize the extent and degree of the contamination since data from the tank closure confirmed that contaminant levels in the soils exceed groundwater pathway RCLs. Additionally, sampling will be conducted in the area of the dispensers to determine whether direct contact hazard soils are present at the site. Details of the proposed assessment are discussed below.

Initial borings will be located near the center of the areas where soil contamination has been identified to evaluate the vertical extent of soil contamination in each area. At these locations soil samples will be collected continuously from the surface to groundwater. The soil samples will be screened for organic vapors in the field using a photo ionization detector equipped with a 10.6 eV lamp. A single soil sample will be selected for laboratory analysis from the borings in the former tank beds; the soil analytical sample will be selected from just below the soil contamination based on organic vapor screening or, immediately above the saturated soils. In the area of the former dispenser a shallow soil sample also will be submitted for laboratory analysis to evaluate direct contact hazards. The direct contact sample will be analyzed for PVOCs+naphthalene. Additionally, a grab groundwater sample will be collected from each of the borings for analysis of PVOCs+naphthalene.

After the vertical extent of the petroleum impacts are identified in the source areas additional borings will be installed around each source area to determine the extent of soil contamination. Anticipated boring locations are shown on Figure 4. We estimate that we will install 10 to 12 borings around the site.

Upon completion of the proposed activities a Site Investigation Report will be prepared. The report will include a description of site work, maps of sampling locations, and tables of analytical data. Additionally, recommendations for additional assessment or remedial activities will be included in the report.

3.0 QUALITY ASSURANCE PLAN

All sampling equipment will be decontaminated between samples by washing in a solution of ALCONOX and water and rinsing with clean water. We will label all samples with the sample identification, date, and time of collection. Appropriate chain of custody forms provided by the laboratory will be prepared. Samples will be stored on ice with the appropriate preservative, as indicated in the Tables. Pace Analytical will perform the requested analyses on the samples.

Sample preservation and analytical methods are compiled in the following table. Soil samples will be analyzed for volatile organic compounds (VOC). Groundwater samples will be analyzed for volatile organic compounds (VOC).

Soil Sample Containers, Preservation, and Analytical Methods Former Jerry's Tire - Milwaukee, WI			
Parameter	Container	Preservation	Analytical Method
PVOC+ naphthalene	(1) 40-ml glass vial with Teflon septa	methanol, 4 °C	SW-846 8020B
PAH	(1) 60-ml amber glass jar with Teflon septa	ice, 4 °C	SW-846 8020B

Groundwater Sample Containers, Preservation, and Analytical Methods Former Jerry's Tire - Milwaukee, WI			
Parameter	Container	Preservation	Analytical Method
VOC/PVOCs	(3) 40-ml VOA vials	HCl, 4 °C	SW-846 8260 B (GC/MS)
PAH	(2) 1-liter amber glass bottles	ice, 4 °C	SW-846 8270 (MS)

The photo ionization meter will be calibrated before use with a known concentration of isobutylene.

Questions about this work plan should be directed to Robyn Seymour at (608) 838-9120.

Sincerely,
Seymour Environmental Services, Inc.



Robyn Seymour

FIGURES

TABLE

APPENDIX A

HEALTH AND SAFETY PLAN

1.1 Hazard Evaluation

Potential health and safety hazards to be encountered during the site investigation include the physical hazards associated with drilling and the chemical hazards associated with petroleum hydrocarbons. Additionally, hazards associated with working in the vicinity of utilities (natural gas pipelines, electrical lines) will be a concern during site work. To minimize the potential hazard from utilities Digger's Hotline will be contacted prior to conducting site work and utilities will be located. Neither heat nor cold stress is anticipated since the work will be conducted during the springtime. The contaminants at the site include benzene, ethylbenzene, toluene, xylenes and other motor fuel related hydrocarbons. The exposure limits for the contaminants of concern are summarized in Table 1.

Following safe work practices and wearing appropriate personal protective equipment (PPE) as described in Section 1.3 will minimize physical hazards associated with drilling. Monitoring site conditions (section 1.2) and wearing appropriate PPE (section 1.3) will minimize chemical hazards.

TABLE 1: Exposure Limits

Contaminant	Threshold Limit Value (8-hr TWA)	Short Term Exposure Limit (15-min TWA)	Skin Designation	Ionization Potential (eV)	Odor Threshold
Benzene	1 ppm	5 ppm	Y	9.25	4 ppm
Ethylbenzene	100 ppm	125 ppm	N	8.76	200 ppm
Toluene	100 ppm	150 ppm	N	8.82	2 ppm
Xylenes	100 ppm	150 ppm	N	8.45-8.56	--

1.2 Exposure Monitoring Plan and Action Levels

Breathing zone air monitoring will be performed during potentially hazardous site activities in accordance with the schedule summarized in Table 2.

TABLE 2: Exposure Monitoring Plan and Action Levels

Hazard Type	Monitoring Method	Action Level	Action
Organic Vapors	OVM	During drilling	Monitor breathing zone at 15-min. intervals. Level D PPE.
		> 10 ppm	Increase to continuous monitoring.
		> 20 ppm	Change to Level C PPE and continue monitoring.
		> 200 ppm	Wait for levels to decrease before continuing.

1.3 Personal Protective Equipment

Site workers will begin work with Level D PPE, as described in Table 3. PPE may be upgraded to Level C (Table 3) based on the results of the exposure monitoring.

TABLE 3: Personal Protective Equipment

PPE Level	PPE Description
Level D	<ul style="list-style-type: none"> • Hardhat (to be worn during site activities with potential overhead hazards) • Steel-toe shoes • Chemical resistant gloves • Safety glasses
Level C	<ul style="list-style-type: none"> • Air-purifying respirator • Chemical-resistant clothing (e.g., Tyvek coveralls, splash suit) • Inner and outer chemical-resistant gloves • Boot covers • Hardhat • Steel-toe shoes • Safety glasses, if half-face respirator is used

1.4 Contingency Plan

Site Information and Emergency Contacts

Site Name and Address: Former Jerry's Service
2477 North Holton
Milwaukee, Wisconsin 53212

Owner Contact: Ms. Sujin Lee
(414) 745-8790

Project Manager: Ms. Robyn Seymour
(608) 225-9407

Emergency Numbers: Ambulance 911
Police 911
Fire 911

Area Hospital: Columbia/Saint Mary's
2301 North Lake Drive
Milwaukee, Wisconsin
(414) 326-1800

Directions from Site to Hospital

Go south on Holton to North Avenue (0.25 mile)
East (left) on North Avenue (1.35 miles)
Northeast (left) on North Lake Drive (200 feet)