

State of Wisconsin  
DEPARTMENT OF NATURAL RESOURCES  
Waukesha Service Center  
141 NW Barstow Street Room 180  
Waukesha WI 53188

Scott Walker, Governor  
Cathy Stepp, Secretary  
John Hammen, Acting Regional Director  
Telephone 262-574-2100  
FAX 262-574-2128  
TTY Access via relay - 711



August 31, 2011

Ms. Jill Fitzgerald  
Jill's Dry Cleaners  
S74 W16834 Janesville Road  
Muskego, WI 53150

Subject: Final Closure with Continuing Obligations  
Jill's Dry Cleaners, S74 W16834 Janesville Road, Muskego, WI 53150  
FID# 268077480, BRRTS# 02-68-543070

Dear Ms. Fitzgerald:

The Department of Natural Resources (the Department) reviewed the above referenced case for closure. The Department reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. The Department has recently received information or documentation indicating that you have complied with the requirements for final closure. The proper site maps have been submitted and all the groundwater monitoring wells have been abandoned. The abandonment forms have been submitted to the Department.

The Department reviewed the case closure request regarding the chlorinated solvent contamination in both the soil and groundwater at this site. Based on the correspondence and data provided, it appears that your case meets the closure requirements in ch. NR 726, Wisconsin Administrative Code. The Department considers this case closed and no further investigation or remediation is required at this time. However, you and future property owners must comply with certain continuing obligations as explained in this letter.

### GIS Registry

This site will be listed on the Remediation and Redevelopment Program's internet accessible GIS Registry, to provide notice of residual contamination, and of any continuing obligations. The continuing obligations for this site are summarized below:

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- Pavement, an engineered cover or a soil barrier must be maintained over contaminated soil and the state must approve any changes to this barrier.
- Groundwater contamination is present above Chapter NR 140 enforcement standards.
- A vapor mitigation system must be operated and maintained, and inspections must be documented.

All site information, including the soil barrier maintenance and vapor mitigation plans, is on file at the Southeast Region DNR office, at 141 MW Barstow Street, Room 180, Waukesha, WI 53186. This letter and information that was submitted with your closure request application, including the maintenance plans, will be included on the GIS Registry, in a PDF attachment. To review the sites on the GIS Registry web page, visit the RR Sites Map page at <http://dnr.wi.gov/org/aw/rr/gis/index.htm>. If the property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4) (w),

Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the Department's Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/org/water/dwg/3300254.pdf> or at the web address listed above for the GIS Registry.

### Closure Conditions

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which you and any subsequent property owners must adhere. You must pass on both the information about these continuing obligations and the soil barrier and vapor mitigation maintenance plans to the next property owner or owners. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code. The Department intends to conduct inspections in the future to ensure that the conditions included in this letter, including compliance with the attached maintenance plans are met.

Pursuant to s. 292.12(2)(a), Wis. Stats., the engineered cap (consisting of asphalt and the building) that currently exists in the specific location shown on Figure 12 (attached) shall be maintained in compliance with the attached maintenance plan in order to minimize the infiltration of water and prevent additional groundwater contamination that would violate the groundwater quality standards in ch. NR 140, Wis. Adm. Code, and to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health.

Approximately 300 cubic yards of residual soil contamination remains beneath the cap between one to four feet in depth, as shown on Figure 12 (attached) and in the information submitted to the Department. If soil in the specific locations as shown on the attached map is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans.

The attached maintenance plans and inspection logs are to be kept up-to-date and on-site. Please submit the inspection log to the Department only upon request.

### Prohibited Activities

The following activities are prohibited on any portion of the property where pavement and a building foundation is required as shown on the attached map (Figure 12), unless prior written approval has been obtained from the Department: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; 6) construction or placement of a building or other structure.

Upon Department approval to replace the existing barrier, the replacement barrier must be one of similar permeability, until contaminant levels no longer exceed the applicable standards.

### Residual Groundwater Contamination

Groundwater impacted by chlorinated compound contamination greater than enforcement standards set forth in ch. NR140, Wis. Adm. Code, is present both on this contaminated property and off-site under city owned Freedom Park, as shown on Figure 11 (attached). The off-source property owner (the City of Muskego) has also been notified of the presence of groundwater contamination.

### Vapor Mitigation

Vapor intrusion is the movement of vapors coming from volatile chemicals in the soil or groundwater, into buildings where people may breathe air contaminated by the vapors. Vapor mitigation systems are used to interrupt the pathway, thereby reducing or preventing vapors from moving into the building.

Soil vapor beneath the building contains chlorinated VOC compounds at levels that would pose a long-term risk to human health, if allowed to migrate into an occupied building on the property. The vapor mitigation system, installed on April 23 –24, 2009, must be operated, maintained and inspected in accordance with the attached vapor system maintenance plan. System components must be repaired or replaced immediately upon discovery of a malfunction. Annual inspections and any system repairs must be documented in the inspection log. The inspection log shall be maintained on site and made available to the DNR or its contractors, upon request.

The integrity of the floor, building, and pavement or other impervious cap that exists on the property, shown on the Figure 12 (attached), must be maintained in compliance with the attached maintenance plans. This will help ensure proper functioning of the vapor mitigation system, limiting vapor intrusion to indoor air spaces.

In addition, depending on site-specific conditions, construction over contaminated materials may result in vapor migration of contaminants into enclosed structures or migration along newly placed underground utility lines. The potential for vapor inhalation and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

### Post-Closure Notification Requirements

In accordance with ss, 292.12 and 292.13, Wis. Stats., you must notify the Department before making changes that affect or relate to the conditions of closure in this letter. For this case, examples of changed conditions requiring prior notification include, but are not limited to:

- Disturbance, construction on, change or removal in whole or part of pavement, an engineered cover or a soil barrier that must be maintained over contaminated soil.
- Disturbance, construction on, change or removal in whole or part of the Vapor Mitigation System.

Please send written notifications in accordance with the above requirements (with the site FID# and BRRTS# noted) to: Victoria Stovall, Wisconsin Department of Natural Resources, 2300 N. Dr. ML King Dr., Milwaukee, WI 53212

### Operating Dry Cleaners

You should know that in order to remain eligible for future reimbursement of cleanup costs from the Dry Cleaner Environmental Response Fund (DERF), within 90 days of the date of this letter, the owner or

operator of the dry cleaning facility must implement enhanced pollution prevention measures found in Section 292.65(5)(a)2, Wis. Statutes, and NR 169.11(2), Wis Adm. Code. Currently, in accordance with Section 292.65(8)(f), Wis. Stats., the maximum amount of money that DERF can reimburse to any facility is \$500,000. The enhanced pollution prevention measures that must be implemented to remain eligible for DERF include:

- all wastes must be managed in accordance with federal and state hazardous waste rules;
- dry cleaning product or wastewater may not be discharged into any sanitary sewers, septic tanks, or any waters of the State;
- a containment structure must entirely surround and be capable of containing any spill or release of a dry cleaning product from a dry cleaning machine or other equipment;
- the floor within any containment structure must be sealed and be impervious to dry cleaning product;
- perchloroethene must be delivered to the dry cleaning facility by means of a closed, direct coupled delivery system.

In order to retain eligibility, you will need to verify that you have implemented these pollution prevention measures. You may wish to keep documentation in your files, such as invoices and photographs, of any enhanced pollution prevention measures you implement, in order to provide future verification.

The Department fact sheet, RR-819, "Continuing Obligations for Environmental Protection" helps to explain a property owner's responsibility for continuing obligations on their property. You may obtain a copy at <http://dnr.wi.gov/org/aw/rr/archives/pubs/RR819.pdf>.

Please be aware that the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Jim Delwiche at the Waukesha Service Center at (262) 574-2145.

Sincerely,



Frances Koonce  
Team Supervisor  
Southeast Region, Remediation & Redevelopment Program

Attachments: Figure 12 – Remaining Soil Contamination and Extent of Cap Map  
Figure 11 – Remaining Groundwater Contamination Map  
Maintenance Plans – Barrier/Cap and Vapor Mitigation System  
Inspection Logs – Barrier/Cap and Vapor Mitigation System

cc: Jim Delwiche – WDNR Waukesha  
Patrick Allenstein - KPRG  
SER Case File

PAVEMENT COVER, BUILDING BARRIER and VENTING SYSTEM  
MAINTENANCE PLAN

April, 2010

Property Located at:  
S74 W16834 Janesville Road  
Muskego, Wisconsin 53150

FID # 268077480, WDNR BRRTS # 02-68-543070

Legal Description: PT. NW ¼ SEC 10 T5N R20E COM SW COR S1 E 109.75 FT N62 27' E 1020.69 FT N56 01' E 411.95 FT N33 58' W60 FT THE BGN N33 58' W200 FT N56 01' E 75 FT S33 58' E200 FT S56 01' W 75 FT TO BGN R253/670 R999/133 WD 5/88 in the City of Muskego, County of Waukesha, State of Wisconsin.

Parcel ID # MSKC 2198981

Introduction

This document is the Maintenance Plan for an asphalt/pavement/building barrier at the above referenced property in accordance with the requirements of s. NR 724.13(2), Wisconsin Administrative Code, The maintenance activities relate to the existing barriers occupying the area over the impacted soil on-site.

More site-specific information about this property may be found in:

- The case file in the DNR Southeast regional office
- BRRTS on the web
- GIS Registry file; and
- The DNR project manager.

Cover and Building Barrier Purpose

The paved surfaces and the building foundation over the contaminated soil serve as a barrier to minimize future soil-to-groundwater migration that would violate the groundwater standards in ch. NR 140, Wisconsin Administrative Code and potential direct contact hazards. Based on the current and future use of the property, the barrier should function as intended unless disturbed.

Sub-Slab Depressurization System Purpose

Since site closure includes residual PCE impacts to soils beneath the building, an active depressurization system has been installed to mitigate the potential for vapor intrusion of volatile organic compounds from beneath the building into the interior space. The soil venting system includes two RadonAway Model GP501 fans that were installed in accordance with manufacturer requirements. A vacuum tube is installed on the inside of

the facility directly opposite from the fans of the exterior of the building. At installation and system start-up the readings on each tube were 0.7 inches of water column (IWC) indicating that the system is operating at maximum capacity of approximately 115 cubic feet per minute (cfm) of air draw. The minimum required air draw to meet vapor intrusion mitigation objectives is estimated at 10 cfm.

#### Annual Inspection – Cover and Building Barrier

The paved surfaces and building slab/foundation overlying the impacted soil will be inspected once a year, normally in the spring after all snow and ice is gone, for deterioration, cracks and other potential problems that can cause additional infiltration into underlying soils. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where soils have become or are likely to become exposed will be documented. A log of the inspections and any repairs will be maintained by the property owner and is included as **Exhibit A**. The log shall include recommendations for necessary repair of any areas where underlying soils are exposed. Once repairs are completed, they will be documented in the inspection log. A copy of the inspection log will be provided to the Wisconsin Department of Natural Resources (WDNR) upon request.

#### Maintenance Activities – Cover and Building Barrier

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs can include patching and filling operations or they can include larger resurfacing or construction operations. In the event that necessary maintenance activities expose the underlying soil, the owner must inform maintenance workers of the direct contact exposure hazard and provide them with appropriate personal protection equipment (“PPE”). The owner must also sample any soil that is excavated from the site prior to disposal to ascertain if contamination remains. The soil must be treated, stored and disposed of by the owner in accordance with applicable local, state and federal law. In the event the paved surfaces and/or the building overlying the impacted soil are removed or replaced, the replacement barrier must be equally impervious. Any replacement barrier will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the WDNR or its successor.

The property owner, in order to maintain the integrity of the paved surfaces and/or the building, will maintain a copy of this Maintenance Plan on-site and make it available to all interested parties (i.e. on-site employees, contractors, future property owners, etc.) for viewing.

#### Inspection – Venting System

The venting system should be inspected on a semi-annual basis. The inspection will be visual to check for any piping damage or other readily observable changes (i.e., sound of

the blower, etc.). The reading on the vacuum tube will be checked. The inspection observations and vacuum readings will be recorded on the inspection sheet provided in **Exhibit B**. A copy of the inspection log will be provided to the WDNR upon request.

#### Maintenance Activities – Venting System

If problems are noted during the semi-annual inspection, or at any other time during the year, with regard to cracks in the piping or blower malfunction, the required repairs will be initiated as soon as the problem is detected. If the blower efficiency is noted to drop below 10 cfm (i.e., a reading of greater than 4 IWC on the magnehelic gauge), the manufacturer will be contact to determine appropriate potential repairs and/or the blower unit will be replaced with an equivalent new unit.

#### Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of WDNR.

#### Contact Information – April 2010

Owner and Operator: Jill's Dry Cleaners  
Ms. Jill Fitzgerald  
S74 W16834 Janesville Road  
Muskego, Wisconsin 53150  
262-679-2121

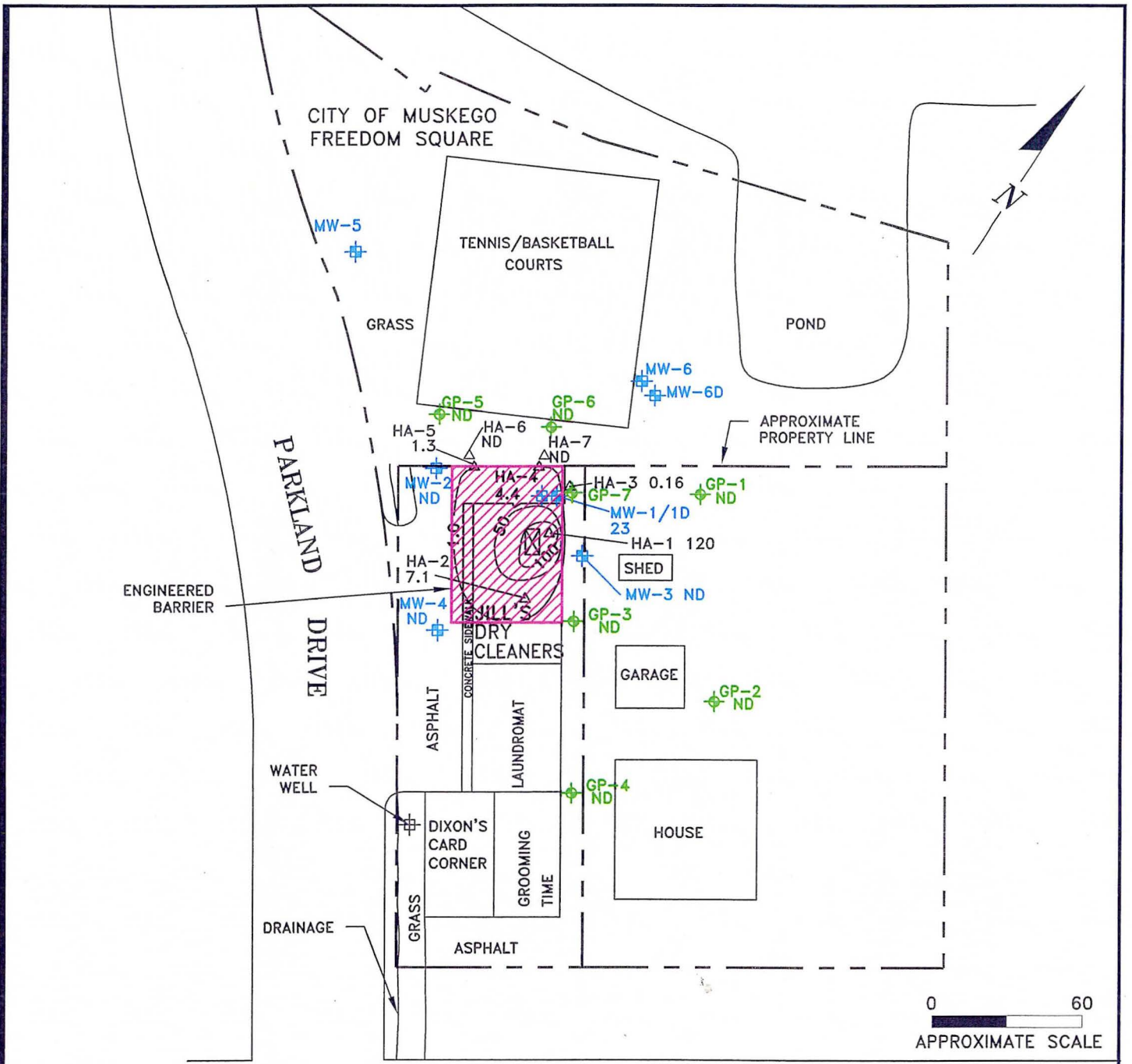
Consultant: KPRG and Associates, Inc.  
Richard R. Gnat, P.G.  
14665 W. Lisbon Road, Suite 2B  
Brookfield, Wisconsin 53005  
262-781-0475

WDNR: Mr. Jim Delwiche  
141 NW Barstow Street, Room 180  
Waukesha, Wisconsin 53188  
262-574-2145









**LEGEND**

- LOCATION OF DRY CLEANING MACHINE
- SOIL PCE ISOCONCENTRATION CONTOUR LINE (mg/kg)
- ENGINEERED BARRIER
- GP-2 GEOPROBE BORING
- MW-4 MONITORING WELL LOCATION
- HA-1 HAND AUGER BORING

ENVIRONMENTAL CONSULTATION & REMEDIATION

**K P R G**

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 28 Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

**AREAL EXTENT OF SOIL IMPACT-PCE AND ENGINEERED BARRIER**

JILL'S DRY CLEANERS  
MUSKEGO, WISCONSIN

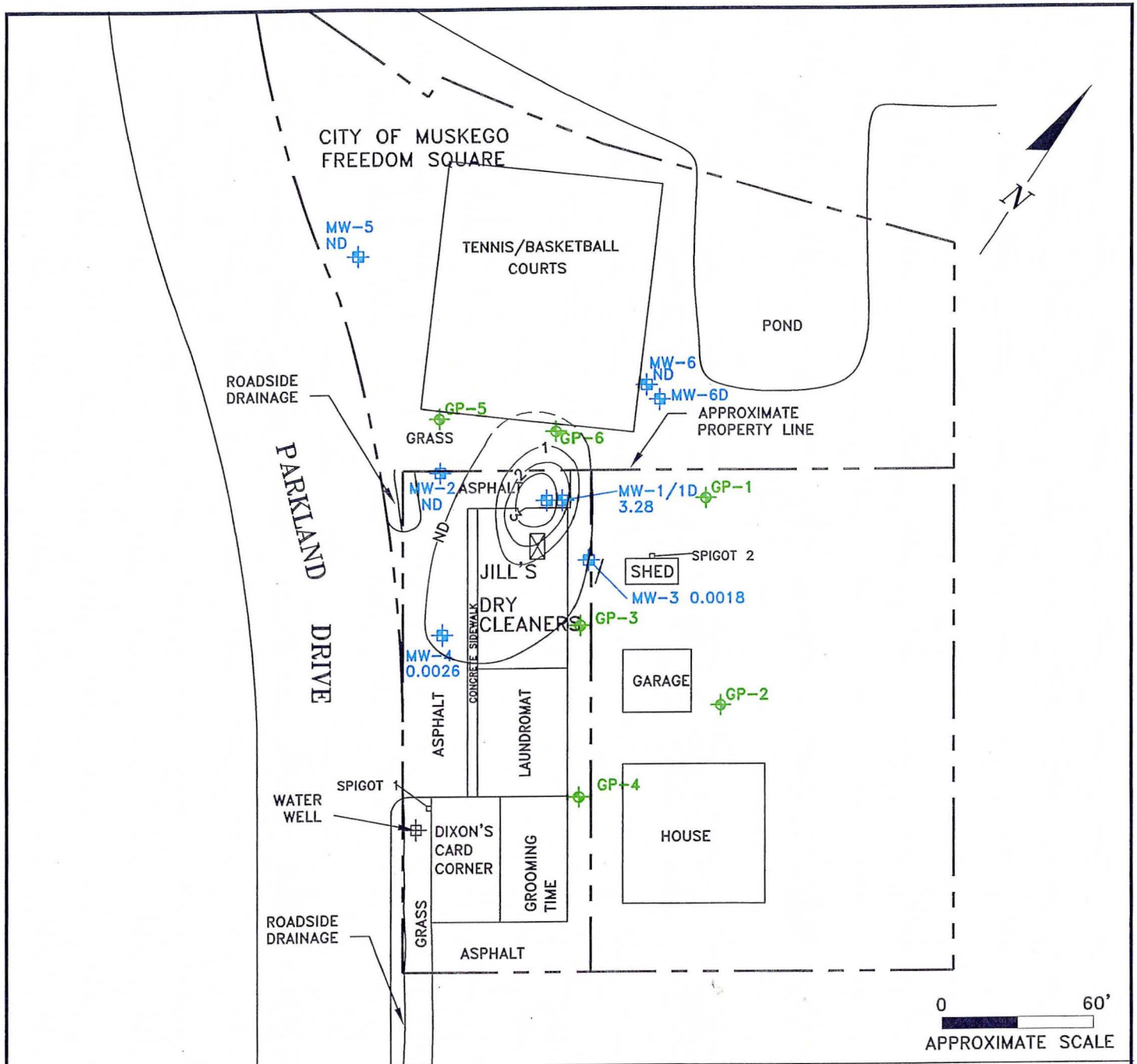
Scale: 1" = 60'

Date: March 25, 2011

KPRG Project No. 13905

FIGURE 12

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**LEGEND**

- LOCATION OF DRY CLEANING MACHINE
- GROUNDWATER PCE ISOCONCENTRATION CONTOUR LINE (mg/l)
- INFERRED BASED ON AT DEPTH SOIL DATA AT GP-6
- GP-2 GEOPROBE BORING
- MW-4 MONITORING WELL LOCATION

ENVIRONMENTAL CONSULTATION & REMEDIATION		<b>AREAL EXTENT OF GROUNDWATER IMPACTS-PCE - FEBRUARY 9, 2010</b>	
		JILL'S DRY CLEANERS MUSKEGO, WISCONSIN	
14665 West Lisbon Road, Suite 28 Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478		Scale: 1" = 60'	Date: July 18, 2011
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593		KPRG Project No. 13905	FIGURE 11

KPRG and Associates, inc.