



January 31, 2018

QUALITY CLEANERS  
ATTN: CHARLOTTE COLLINS  
18 N TOMAHAWK AVE  
TOMAHAWK WI 54487

**KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

SUBJECT: Final Case Closure with Continuing Obligations  
Quality Cleaners, 18 North Tomahawk Avenue, Tomahawk, Wisconsin  
DNR BRRTS Activity #02-35-551789  
FID #: 735067960

Dear Ms. Collins:

The Department of Natural Resources (DNR) considers the Quality Cleaners site closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you. Certain continuing obligations also apply to rights-of-way holders. These are identified within each continuing obligation.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The DNR Northern Region Closure Committee reviewed the request for closure on December 11, 2017. The Closure Committee reviewed this environmental remediation case for compliance with state laws and standards to maintain consistency in the closure of these cases. A request for remaining actions needed was issued by the DNR on December 11, 2017, and documentation that the conditions in that letter were met was received on January 9, 2018.

This former dry-cleaning business is now operating as a laundromat facility. Soil, groundwater and vapor samples were collected to investigate a release of tetrachloroethylene (PCE). Continuing obligations will address any potential exposure to the residual soil and groundwater contamination. The conditions of closure and continuing obligations required were based on the property being used for commercial purposes.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Groundwater contamination is present at or above ch. NR 140, Wis. Adm. Code, enforcement standards.
- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- If a structural impediment that obstructed a complete site investigation and/or cleanup is removed or modified, additional environmental work must be completed.

The attached DNR fact sheet “Continuing Obligations for Environmental Protection,” RR-819, helps to explain a property owner’s responsibility for continuing obligations on their property. Additional copies of the fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

#### GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/wrrd.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program’s regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

All site information is also on file at the DNR Northern Region office at 107 Sutliff Avenue in Rhinelander. This letter and information that was submitted with your closure request application, including any maps, can be found as a Portable Document Format (PDF) in BRRTS on the Web.

#### Closure Conditions

Compliance with the requirements of this letter is a responsibility to which you, and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter are met. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wis. Stats., to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources  
Attn: Remediation and Redevelopment Program Environmental Program Assistant  
107 Sutliff Avenue  
Rhinelander, WI 54501

#### Residual Groundwater Contamination (ch. NR 140, 812, Wis. Adm. Code)

Groundwater contamination greater than enforcement standards is present both on this contaminated property and off this contaminated property, as shown on the attached Figure B.3.b, Groundwater Isoconcentration (07/10/17), prepared by REI and dated October 10, 2017. If you intend to construct a new well, or reconstruct an existing well, you’ll need prior DNR approval.

#### Residual Soil Contamination (ch. NR 718, chs. 500 to 536, Wis. Adm. Code or ch. 289, Wis. Stats.)

Soil contamination remains under the existing site building around the former dry-cleaning machine and former solvent above-ground storage tank, and under the adjacent alleyway. as indicated on the attached Figure B.2.b, Residual Soil Contamination - PCE, prepared by REI and dated August 21, 2017. If soil in the specific locations described above is excavated in the future, the property owner or right-of-way (ROW) holder at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner or ROW holder 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 standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval. This continuing obligation also applies to the City of Tomahawk as the ROW holders for the alleyway south of the site.

In addition, all current and future owners and occupants of the property and ROW holders 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 to prevent a direct contact health threat to humans.

Structural Impediments (s. 292.12 (2) (b), Wis. Stats., s. NR 726.15, s. NR 727.07, Wis. Adm. Code)  
The existing site building as shown on the attached Figure B.2.b, Residual Soil Contamination - PCE, and Attachment B.5 - Structural Impediment Photos, submitted by REI, made complete investigation and/or remediation of the soil contamination on this property impracticable. If the structural impediment is to be removed, the property owner shall notify the DNR at least 45 days before removal, and conduct an investigation of the degree and extent of PCE contamination below the structural impediment. If contamination is found at that time, the contamination shall be properly remediated in accordance with applicable statutes and rules.

In Closing

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- 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,
- if the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats., or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR 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 DNR Project Manager Carrie Stoltz at (715) 365-8942, or at [Carrie.Stoltz@Wisconsin.gov](mailto:Carrie.Stoltz@Wisconsin.gov)

Sincerely,

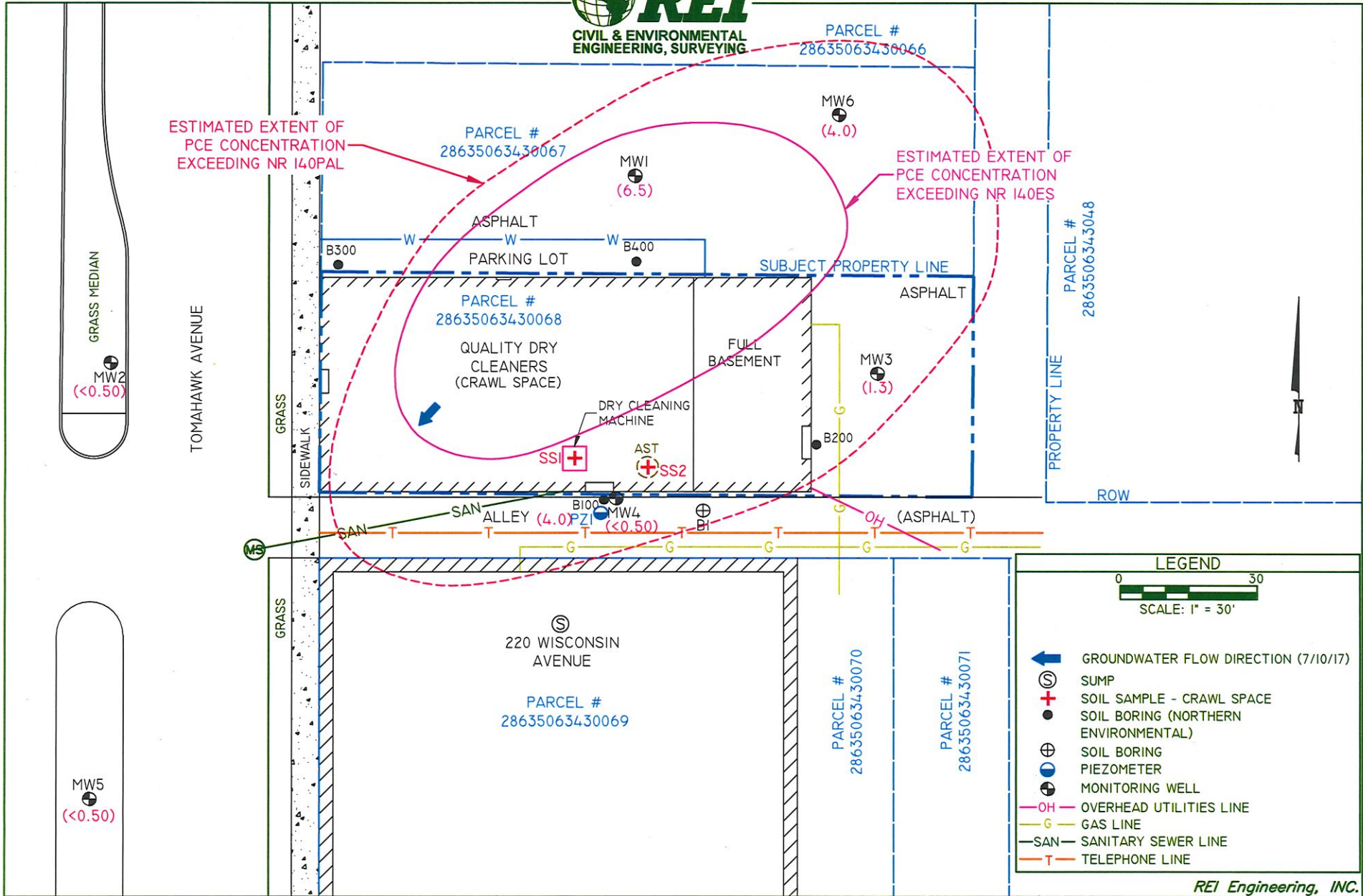


Christopher A. Saari  
Northern Region Team Supervisor  
Remediation and Redevelopment Program

Attachments:

- Figure B.3.b, Groundwater Isoconcentration (07/10/17), REI, October 10, 2017
- Figure B.2.b, Residual Soil Contamination - PCE, REI, August 21, 2017
- Attachment B.5 - Structural Impediment Photos, REI
- Continuing Obligations for Environmental Protection, DNR Publication RR-819

cc: Andy Delforge – REI (via email)  
Carrie Stoltz – DNR Rhinelander (via email)

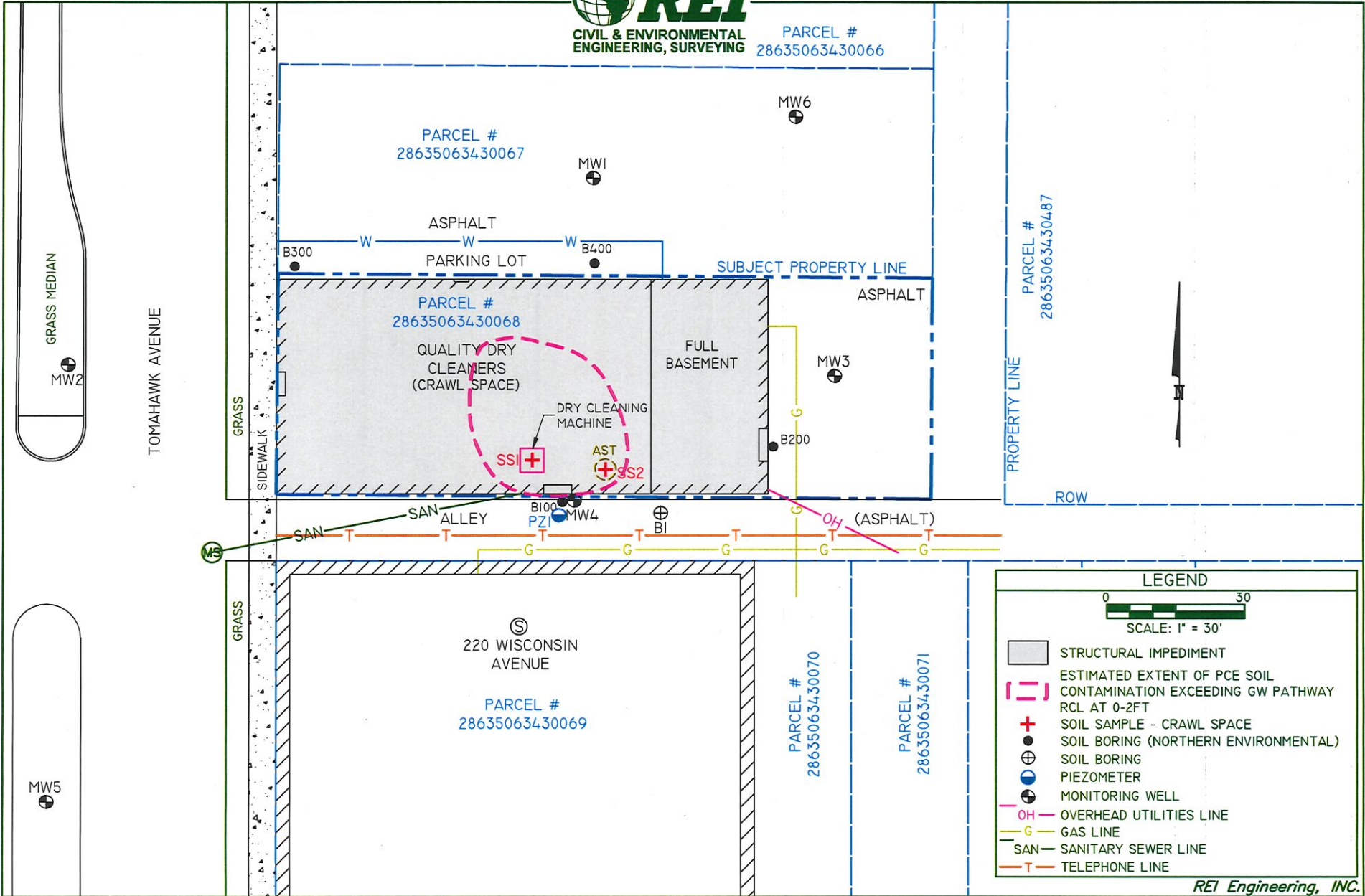


**QUALITY DRY CLEANERS**  
 18 NORTH TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN 54487

**FIGURE B.3.b : GROUNDWATER ISOCONCENTRATION (07/10/17)**

PROJECT NO.	6345	DRAWN BY:	TAW	DATE:	10/10/2017
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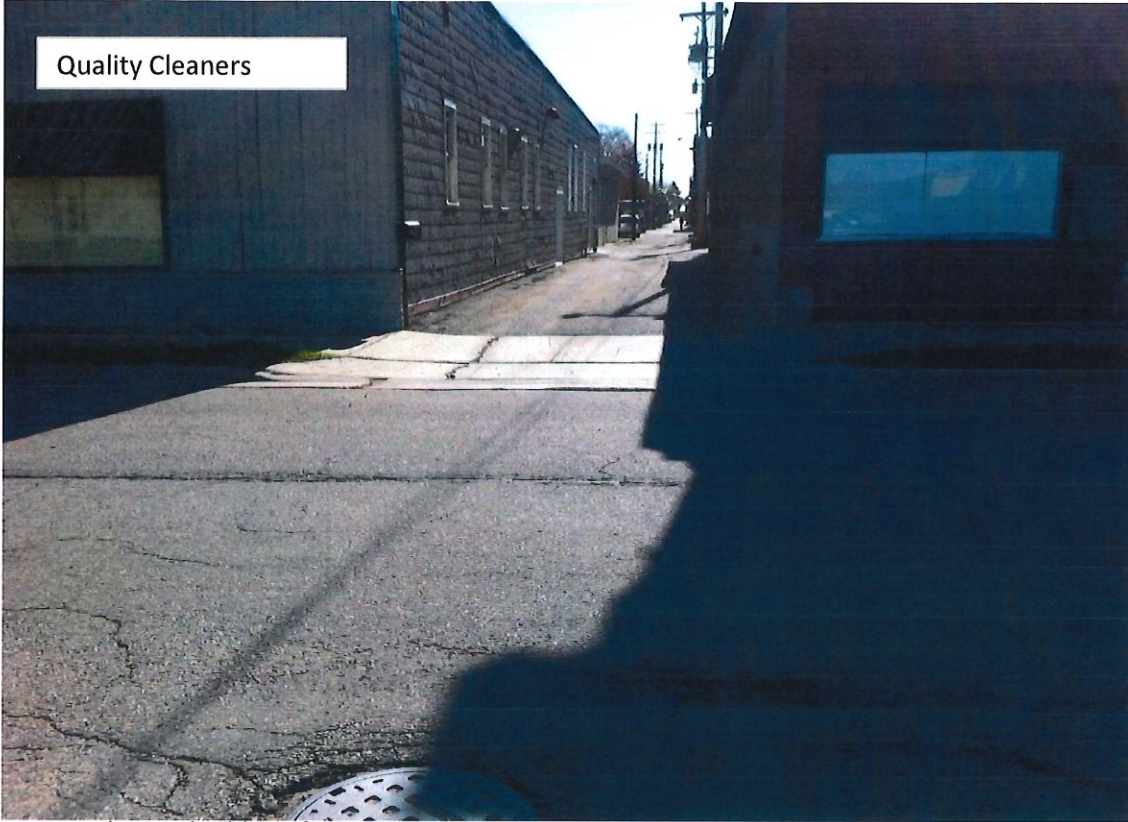
QUALITY DRY CLEANERS  
 18 NORTH TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN 54487

FIGURE B.2.b :RESIDUAL SOIL CONTAMINATION – PCE

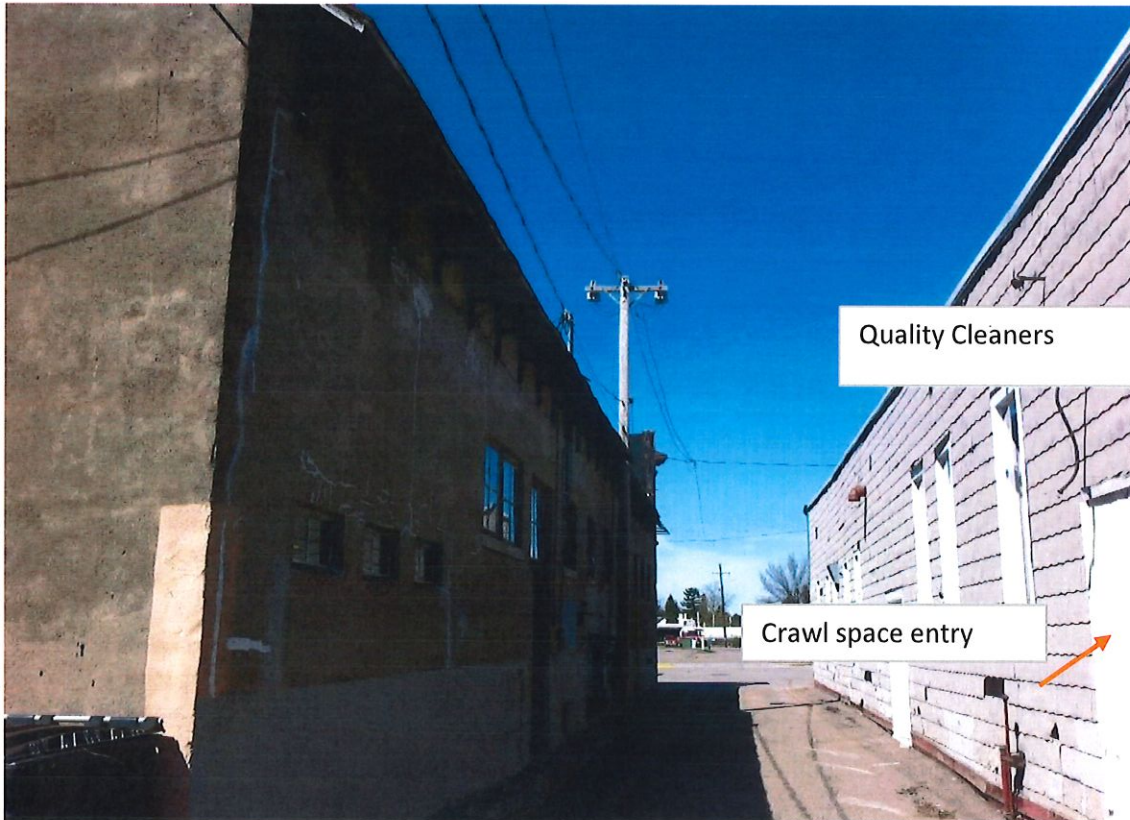
PROJECT NO.	6345	DRAWN BY:	TAW	DATE:	8/21/2017
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REI Engineering, INC.

B.5 - Structural Impediment Photos



Dry cleaner building, facing east through alley



Dry cleaner building, facing west through alley



**SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN**

**Notice:** Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.). Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided.

Site Information			
BRRTS No.	VPLE No.		
02-35-551789			
Parcel ID No.	28635063430068 and 28635063430067		
FID No.	WTM Coordinates		
	X	Y	
735067960	540856	555376	
BRRTS Activity (Site) Name	WTM Coordinates Represent:		
Quality Dry Cleaners	<input checked="" type="checkbox"/> Source Area <input type="checkbox"/> Parcel Center		
Site Address	City	State	ZIP Code
	18 N Tomahawk Ave	WI	54487
Acres Ready For Use	0.5		

Responsible Party (RP) Name			
Charlotte Collins			
Company Name			
Quality Dry Cleaners			
Mailing Address	City	State	ZIP Code
	18 N Tomahawk Ave	WI	54487
Phone Number	Email		
(715) 612-2627			

Check here if the RP is the owner of the source property.

Environmental Consultant Name			
Andrew Delforge			
Consulting Firm			
REI Engineering, Inc.			
Mailing Address	City	State	ZIP Code
	4080 N 20th Ave	WI	54401
Phone Number	Email		
(715) 675-9784	adelforge@reiengineering.com		

**Fees and Mailing of Closure Request**

- Send a copy of page one of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR Regional EPA (Environmental Program Associate) at <http://dnr.wi.gov/topic/Brownfields/Contact.html#tabx3>. Check all fees that apply:
 

<input type="checkbox"/> \$1,050 Closure Fee	<input type="checkbox"/> \$300 Database Fee for Soil
<input type="checkbox"/> \$350 Database Fee for Groundwater or Monitoring Wells (Not Abandoned)	Total Amount of Payment \$ _____
	<input type="checkbox"/> Resubmittal, Fees Previously Paid
- Send one paper copy and one e-copy on compact disk of the entire closure package to the Regional Project Manager assigned to your site. Submit as unbound, separate documents in the order and with the titles prescribed by this form. For electronic document submittal requirements, see <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

### Site Summary

*If any portion of the Site Summary Section is not relevant to the case closure request, you must fully explain the reasons why in the relevant section of the form. All information submitted shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected.*

#### 1. General Site Information and Site History

- A. Site Location: Describe the physical location of the site, both generally and specific to its immediate surroundings.  
The site is located in the NW 1/4 of the SW 1/4 of Section 34, Township 35 North, Range 06 East in the City of Tomahawk, Lincoln County, WI. The site is surrounded by commercial and industrial properties.
- B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use.  
The site is currently operated as a laundromat facility. The site was previously used to perform dry cleaning services from approximately 1962 through 2009.
- C. Current zoning (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).  
The site is zoned commercial. Surrounding properties are primarily commercial and industrial.
- D. Describe how and when site contamination was discovered.  
Site contamination was discovered in 2008 during a Phase II Environmental Site Assessment by Northern Environmental. Soil and groundwater analytical results revealed levels of Tetrachloroethylene (PCE) above state standards.
- E. Describe the type(s) and source(s) or suspected source(s) of contamination.  
Historical usage of dry cleaner chemicals at the site while it was operated as a dry cleaning operation is the suspected source of the contamination.
- F. Other relevant site description information (or enter Not Applicable).  
Not applicable.
- G. List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases.  
The only BRRTS number for the site is 02-35-551789.
- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property.  
There are no BRRTS activities adjacent to the property.

#### 2. General Site Conditions

- A. Soil/Geology
  - i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.  
Soils at the site consist of fine to coarse grained sands with varying amounts of gravel, layers of silt and silty sand.
  - ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.  
There are no known fill or waste deposits at the site.
  - iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation.  
Granite bedrock is anticipated to be present at depths of approximately fifty (50) feet below land surface (bls) but was not encountered during the site investigation.
  - iv. Describe the nature and locations of current surface cover(s) across the site (e.g., natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).  
Outside of the building foundation, the surface cover at the site is primarily asphalt parking surface, with a few sparse trees.
- B. Groundwater
  - i. Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.  
Groundwater at the site is present at depth of eight to eleven (8-11) feet bls. Free product is not present at the site and thus does not affect groundwater measurements. The water table is found in a mixture of sands, silts and gravel.
  - ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.  
Shallow groundwater flow at the site has been consistently documented to flow to the west/southwest toward the Wisconsin River. Deep groundwater flow at the site was not evaluated as only one (1) piezometer was installed.



- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.  
Hydraulic conductivity testing at the site was conducted on monitoring well MW4 and piezometer PZ1. The calculated hydraulic conductivity value at MW4 was 0.95 feet/day and 3.05 feet/day at PZ1. The estimated groundwater flow velocity is 3.5 to 11 feet/year. The hydraulic gradient at the site is estimated at 0.01 ft/ft.
- iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).  
There are no potable or municipal wells within 1,200 feet of the site.

### 3. Site Investigation Summary

#### A. General

- i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.
  - June 9, 2008 Northern Environmental conducts site scoping/initial Phase II investigation
  - June 19, 2008 Notification, results submitted to WDNR
  - August 13, 2008 WDNR submits Responsible Party letter to Dawn Collins
  - February 13, 2013 REI submits proposal/work plan
  - April 5, 2013 REI retained by the WDNR to complete investigation
  - May 15, 2013 REI on site to oversee the installation of monitoring wells MW1-MW4, PZ1 and B1
  - July 2, 2013 REI on site to develop, sample and survey monitoring wells and piezometer, and collect crawl space surface sample SS1
  - August 13, 2013 REI on site to collect crawl space surface sample SS2
  - October 16, 2013 REI on site to collect second round of groundwater samples from MW1-MW4 and PZ1
  - November 19-20, 2013 REI on site to collect ambient air sample from crawl space and sub-slab sample from 220 Wisconsin Ave.
- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.  
Soil contamination exceeding groundwater pathway protection levels are present on the subject property, extending into the alleyway to the south of the on-site building. Groundwater contamination exceeding the preventative action limits also extends off of the source property into the alleyway south of the property and likely beneath the building at 220 Wisconsin Ave. There is potential that PAL exceedances also may extend onto the properties north and northeast of the subject property (parcel #'s 28635063430487 and 28635063430066).
- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.  
The subject property building is a structural impediment to the complete remediation of the property. Impacted soil exists from 0-2 feet in the crawl space beneath the subject property, but due to the presence of the building, cannot be removed.

#### B. Soil

- i. Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.  
Soil contamination is present beneath the foundation of the on site building near the location of the former dry cleaning machine and the former dry cleaning solvent AST, and southward beneath the alleyway. The extent of soil contamination in the alley is defined by PZ1.
- ii. Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column.  
Levels of Tetrachloroethylene exceeding the Groundwater pathway protection level are present near the area of the former dry cleaning machine and the former dry cleaning solvent AST. This area is primarily covered by the building foundation, but does extend into the alleyway to the south of the source area. Sample locations B-100 (collected by Northern Environmental), SS1 and SS2 revealed these areas of impact. Methylene chloride and chloroform above the groundwater pathway protection level were also present in samples in the upper four (4) feet of the soil column, but are

not expected to be attributable to the former dry cleaning service. Methylene chloride was detected in sample B1, but was also detected in the trip blank. Chloroform exceeding the groundwater pathway protection level was detected in samples B1 and SS1.

- iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/information in Attachment C.  
Current standards were used.

C. Groundwater

- i. Describe degree and extent of groundwater contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

Tetrachloroethylene (PCE) contamination exceeding the enforcement standard is present in MW1. This area is north of the building and of the suspected source. MW3, northeast of the source area and PZ1, just south of the source area also display preventative action limit exceedances of tetrachloroethylene. These detections may be due to improper storage or disposal practices associated with the former dry cleaning operation. MW4 had previously contained exceedances of PCE exceeding the PAL, but the most recent sampling event at MW4 was non-detect. Groundwater contamination exceeding the PAL likely extends to the southwest of suspected source area, beneath the alleyway and potentially beneath the foundation of the building at 220 Wisconsin Avenue.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Identify the depth and location of the smear zone.  
There is no free product present at the site.

D. Vapor

- i. Describe how the vapor migration pathway was assessed, including locations where vapor, soil gas, or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.

Ambient air vapor sampling was conducted in the crawl space of the on site structure and in the basement (out of the sump) of the property located at 220 Wisconsin Avenue. The sample at 220 Wisconsin Avenue was non-detect for all analyzed compounds. The sample collected in the crawl space of the on-site structure revealed levels of PCE at 31.3 ppm in the November of 2013 and 56.8 ppm in February of 2014. These levels were well below the Small Commercial Screening Level of 180 ppm.

- ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both).  
Current vapor risk screening levels (June 2017) were used. Vapor sample results were compared to the small commercial screening levels.

E. Surface Water and Sediment

- i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why.

Surface water and sediment was not assessed at the site as it was not a concern.

- ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.

Surface water and sediment was not assessed at the site as it was not a concern.

4. Remedial Actions Implemented and Residual Levels at Closure

- A. General: Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

There has been no remedial activity that has taken place at the site. Soil, groundwater and air sampling are the only activities that have taken place at the site.

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.  
There were no immediate or interim actions.



- C. Describe the *active* remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.  
There were no active remedial actions taken at the source property.
- D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.  
All purge water was taken to the City of Wausau Wastewater treatment plant for treatment and reuse. All soil cuttings were taken to the Lincoln County Landfill for treatment on the biopile and reuse as daily cover.
- E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case closure.  
PCE groundwater contamination exceeding the enforcement standard will remain on the source property after closure. Only monitoring well MW1, north of the building, has consistently exceeded the ES.
- F. Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact.  
There is no soil contamination exceeding the direct contact standard.
- G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.  
PCE contamination near the source area, extending into the alleyway south of the site, exceeds the groundwater pathway protection standard.
- H. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.  
Natural attenuation will be relied upon going forward following closure.
- I. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration (e.g., stable or receding groundwater plume).  
Impacted well MW1 is the only monitoring point with an ES exceedance. It has been mostly stable throughout the investigation just above the ES of 5.0 ppb. MW3 has consistently had PAL exemptions during the investigation and appears to be stable. MW4 near the source area appears to be receding as it has gone from consistently exceeding the PAL to non-detect in the last sampling event. PZ1 initially contained an exceedance of the ES, but has shown to be receding as it has had events with non-detect and most recently a PAL exceedance.
- J. Identify how all exposure pathways (soil, groundwater, vapor) were removed and/or adequately addressed by immediate, interim and/or remedial action(s).  
There were no immediate, interim or remedial actions performed at the site.
- K. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.  
Not applicable.
- L. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.  
There will not be a need for exemptions at the site as it will be listed on the WDNR BRRTS GIS Registry with residual contamination.
- M. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.  
Vapor sampling revealed that levels at both sample points were below DNR action levels.
- N. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.  
Surface water and sediment were not assessed at the site as they were not a concern.



**5. Continuing Obligations: Situations where sites, including all affected properties and rights-of-way (ROWs), are included on the DNR's GIS Registry. In certain situations, maintenance plans are also required, and must be included in Attachment D.**

Directions: For each of the 3 property types below, check all situations that apply to this closure request.

(NOTE: Monitoring wells to be transferred to another site are addressed in Attachment E.)

This situation applies to the following property or Right of Way (ROW):			Case Closure Situation - Continuing Obligation Inclusion on the GIS Registry is Required (ii. - xiv.)	Maintenance Plan Required	
Property Type:					
Source Property	Affected Property (Off-Source)	ROW			
i.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	None of the following situations apply to this case closure request.	NA
ii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual groundwater contamination exceeds ch. NR 140 ESs.	NA
iii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Residual soil contamination exceeds ch. NR 720 RCLs.	NA
iv.				Monitoring Wells Remain:	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Not Abandoned (filled and sealed)	NA
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Continued Monitoring (requested or required)	Yes
v.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) direct contact pathways (includes vapor barriers)	Yes
vi.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) groundwater infiltration pathway	Yes
vii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structural Impediment: impedes completion of investigation or remedial action (not as a performance standard cover)	NA
viii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination meets NR 720 industrial soil RCLs, land use is classified as industrial	NA
ix.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor Mitigation System (VMS) required due to exceedances of vapor risk screening levels or other health based concern	Yes
x.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Dewatering System needed for VMS to work effectively	Yes
xi.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Compounds of Concern in use: full vapor assessment could not be completed	NA
xii.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Commercial/industrial exposure assumptions used.	NA
xiii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vapor: Residual volatile contamination poses future risk of vapor intrusion	NA
xiv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site-specific situation: (e. g., fencing, methane monitoring, other) (discuss with project manager before submitting the closure request)	Site specific

**6. Underground Storage Tanks**

- A. Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action?  Yes  No
- B. Do any upgraded tanks meeting the requirements of ch. ATCP 93, Wis. Adm. Code, exist on the property?  Yes  No
- C. If the answer to question 6.B. is yes, is the leak detection system currently being monitored?  Yes  No

### General Instructions

All information shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected. For each attachment (A-G), provide a Table of Contents page, listing all 'applicable' and 'not applicable' items by Closure Form titles (e.g., A.1. Groundwater Analytical Table, A.2. Soil Analytical Results Table, etc.). If any item is 'not applicable' to the case closure request, you must fully explain the reasons why.

### Data Tables (Attachment A)

#### Directions for Data Tables:

- Use **bold** and italics font for information of importance on tables and figures. Use **bold** font for ch. NR 140, Wis. Adm. Code ES attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, PAL attainments or exceedances.
- Use **bold** font to identify individual ch. NR 720 Wis. Adm. Code RCL exceedances. Tables should also include the corresponding groundwater pathway and direct contact pathway RCLs for comparison purposes. Cumulative hazard index and cumulative cancer risk exceedances should also be tabulated and identified on Tables A.2 and A.3.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e., do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data must include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15 (3)(c), Wis. Adm. Code, in the format required in s. NR 716.15(4)(e), Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Soil Analytical Results Table, etc.).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate Portable Document Format (PDF).

#### A. Data Tables

- A.1. **Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates for all groundwater sampling points (e.g., monitoring wells, temporary wells, sumps, extraction wells, potable wells) for which samples have been collected.
- A.2. **Soil Analytical Results Table(s):** Table(s) showing all soil analytical results and collection dates. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated).
- A.3. **Residual Soil Contamination Table(s):** Table(s) showing the analytical results of only the residual soil contamination at the time of closure. This table shall be a subset of table A.2 and should include only the soil sample locations that exceed an RCL. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated). Table A.3 is optional only if a total of fewer than 15 soil samples have been collected at the site.
- A.4. **Vapor Analytical Table(s):** Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.
- A.5. **Other Media of Concern (e.g., sediment or surface water):** Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, and time period for sample collection.
- A.6. **Water Level Elevations:** Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.
- A.7. **Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

### Maps, Figures and Photos (Attachment B)

#### Directions for Maps, Figures and Photos:

- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11 x 17 inches, in a PDF readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis. Adm. Code.
- Include all sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a., etc.) should be a separate PDF.
- Maps, figures and photos should be dated to reflect the most recent revision.

#### B.1. Location Maps

- B.1.a. **Location Map:** A map outlining all properties within the contaminated site boundaries on a United States Geological Survey (U.S.G.S.) topographic map or plat map in sufficient detail to permit easy location of all affected and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.
- B.1.b. **Detailed Site Map:** A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for all affected properties, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination attaining or exceeding a ch. NR 140 ES, and/or in relation to the boundaries of soil contamination attaining or exceeding a RCL. Provide parcel identification numbers for all affected properties.
- B.1.c. **RR Sites Map:** From RR Sites Map ([http://dnrm.wi.gov/sl/?Viewer=RR Sites](http://dnrm.wi.gov/sl/?Viewer=RR%20Sites)) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.



**B.2. Soil Figures**

- B.2.a. **Soil Contamination:** Figure(s) showing the location of all identified unsaturated soil contamination. Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720.Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedances (0-4 foot depth).
- B.2.b. **Residual Soil Contamination:** Figure(s) showing only the locations of soil samples where unsaturated soil contamination remains at the time of closure (locations represented in Table A.3). Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720 Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedance (0-4 foot depth).

**B.3. Groundwater Figures**

- B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
- Source location(s) and vertical extent of residual soil contamination exceeding an RCL. Distinguish between direct contact and the groundwater pathway RCLs.
  - Source location(s) and lateral and vertical extent if groundwater contamination exceeds ch. NR 140 ES.
  - Surface features, including buildings and basements, and show surface elevation changes.
  - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
  - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1.b.)
- B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, PAL and/or an ES. Indicate the date and direction of groundwater flow based on the most recent sampling data.
- B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been abandoned.
- B.4. Vapor Maps and Other Media**
- B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway in relation to residual soil and groundwater contamination, including sub-slab, indoor air, soil vapor, soil gas, ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.
- B.4.b. **Other media of concern (e.g., sediment or surface water):** Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.
- B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank).
- B.5. Structural Impediment Photos:** One or more photographs documenting the structural impediment feature(s) which precluded a complete site investigation or remediation at the time of the closure request. The photographs should document the area that could not be investigated or remediated due to a structural impediment. The structural impediment should be indicated on Figures B.2.a and B.2.b.

**Documentation of Remedial Action (Attachment C)**

**Directions for Documentation of Remedial Action:**

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc.).
- If the documentation requested below has already been submitted to the DNR, please note the title and date of the report for that particular document requested.
  - C.1. **Site investigation documentation**, that has not otherwise been submitted with the Site Investigation Report.
  - C.2. **Investigative waste** disposal documentation.
  - C.3. Provide a **description of the methodology** used along with all supporting documentation if the RCLs are different than those contained in the Department's RCL Spreadsheet available at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html>.
  - C.4. **Construction documentation** or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.
  - C.5. **Decommissioning of Remedial Systems.** Include plans to properly abandon any systems or equipment.
  - C.6. **Other.** Include any other relevant documentation not otherwise noted above (This section may remain blank).

**Maintenance Plan(s) and Photographs (Attachment D)**

**Directions for Maintenance Plans and Photographs:**

Attach a maintenance plan for each affected property (source property, each off-source affected property) with continuing obligations requiring future maintenance (e.g., direct contact, groundwater protection, vapor intrusion). See Site Summary section 5 for all affected property(s) requiring a maintenance plan. Maintenance plan guidance and/or templates for: 1) Cover/barrier systems; 2) Vapor intrusion; and 3) Monitoring wells, can be found at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html#tabx3>

- D.1. **Descriptions of maintenance action(s) required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required:**
- Provide brief descriptions of the type, depth and location of residual contamination.



- Provide a description of the system/cover/barrier/monitoring well(s) to be maintained.
  - Provide a description of the maintenance actions required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
  - Provide contact information, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.2. **Location map(s) which show(s):** (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance - on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) all property boundaries.
- D.3. **Photographs** for site or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernible. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter. The inspection and maintenance log is found at: <http://dnr.wi.gov/files/PDF/forms/4400/4400-305.pdf>.

**Monitoring Well Information (Attachment E)**

**Directions for Monitoring Well Information:**

For all wells that will remain in use, be transferred to another party, or that could not be located; attach monitoring well construction and development forms (DNR Form 4400-113 A and B: [http://dnr.wi.gov/topic/groundwater/documents/forms/4400\\_113\\_1\\_2.pdf](http://dnr.wi.gov/topic/groundwater/documents/forms/4400_113_1_2.pdf))

**Select One:**

- No monitoring wells were installed as part of this response action.
- All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site

**Select One or More:**

- Not all monitoring wells can be located, despite good faith efforts. Attachment E must include a description of efforts made to locate the wells.
- One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason (s) the well(s) will remain in use. When one or more monitoring wells will remain in use this is considered a continuing obligation and a maintenance plan will be required and must be included in Attachment D.
- One or more monitoring wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s). Provide documentation from the party accepting future responsibility for monitoring well(s).

**Source Legal Documents (Attachment F)**

**Directions for Source Legal Documents:**

Label documents with the specific closure form titles (e.g., F.1. Deed, F.2. Certified Survey Map, etc.). Include all of the following documents, in the order listed:

- F.1. **Deed:** The most recent deed with legal description clearly listed.  
*Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*
- F.2. **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- F.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- F.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties. This section applies to the source property only. Signed statements for Other Affected Properties should be included in Attachment G.

**Notifications to Owners of Affected Properties (Attachment G)**

**Directions for Notifications to Owners of Affected Properties:**

Complete the table on the following page for sites which require notification to owners of affected properties pursuant to ch. 292, Wis. Stats. and ch. NR 725 and 726, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31- 19.39, Wis. Stats.]. The DNR's "Guidance on Case Closure and the Requirements for Managing Continuing Obligations" (PUB-RR-606) lists specific notification requirements <http://dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf>.

State law requires that the responsible party provide a 30-day, written advance notification to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned. Use form 4400-286, Notification of Continuing Obligations and Residual Contamination, at <http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf>

Include a copy of each notification sent and accompanying proof of delivery, i.e., return receipt or signature confirmation. (These items will not be placed on the GIS Registry.)

Include the following documents for each property, keeping each property's documents grouped together and labeled with the letter G and the corresponding ID number from the table on the following page. (Source Property documents should only be included in Attachment F):

- **Deed:** The most recent deed with legal descriptions clearly listed for all affected properties.  
*Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*
- **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes the attached legal description(s) accurately describe(s) the correct contaminated property or properties.





**Signatures and Findings for Closure Determination**

Check the correct box for this case closure request, and have either a professional engineer or a hydrogeologist, as defined in ch. NR 712, Wis. Adm. Code, sign this document.

A response action(s) for this site addresses groundwater contamination (including natural attenuation remedies).

The response action(s) for this site addresses media other than groundwater.

**Engineering Certification**

I \_\_\_\_\_ hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this case closure request has been prepared by me or prepared under my supervision in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this case closure request is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

\_\_\_\_\_  
Printed Name Title

\_\_\_\_\_  
Signature Date P.E. Stamp and Number

**Hydrogeologist Certification**

I Andrew Delforge hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this case closure request is correct and the document was prepared by me or prepared under my supervision and, in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. Specifically, with respect to compliance with the rules, in my professional opinion a site investigation has been conducted in accordance with ch. NR 716, Wis. Adm. Code, and all necessary remedial actions have been completed in accordance with chs. NR 140, NR 718, NR 720, NR 722, NR 724 and NR 726, Wis. Adm. Codes."

Andrew Delforge \_\_\_\_\_  
Printed Name Hydrogeologist Title

*[Signature]* \_\_\_\_\_  
Signature Date 11/8/07



## **TABLE OF CONTENTS**

### **Attachment A: Data Tables**

#### **A.1. Groundwater Analytical Tables**

**A.1.a – VOC Groundwater Analytical Results – MW1**

**A.1.b – VOC Groundwater Analytical Results – MW2**

**A.1.c – VOC Groundwater Analytical Results – MW3**

**A.1.d – VOC Groundwater Analytical Results – MW4**

**A.1.e – VOC Groundwater Analytical Results – MW5**

**A.1.f – VOC Groundwater Analytical Results – MW6**

**A.1.g – VOC Groundwater Analytical Results – PZ1**

**A.1.h – VOC Groundwater Analytical Results - Geoprobes**

#### **A.2. Soil Analytical Tables**

**A.2.a Soil Analytical Results**

**A.2.b Soil Analytical Results**

#### **A.3. Residual Soil Analytical Table**

#### **A.4. Vapor Analytical Table**

A.5 Other Media of Concern – Not applicable, no other media of concern was identified during investigation

#### **A.6. Water Level Elevations**

A.7. Other – Not applicable

**TABLE A.1.a**  
**VOC GROUNDWATER ANALYTICAL RESULTS - MW1**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

PARAMETER	ES	PAL	MW1									
			7/2/13	10/16/13	11/4/15	4/29/16	7/12/16	10/3/16	1/23/17	4/25/17	7/10/17	
<b>Detected VOC's (ug/L)</b>												
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromobenzene			<0.48	<0.48	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Bromochloromethane			<0.49	<0.49	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Bromodichloromethane	0.6	0.06	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	4.4	0.44	<0.23	<0.23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	10	1	<0.43	<0.43	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4
n-Butylbenzene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene			<0.60	<0.60	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene			<0.42	<0.42	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Carbon Tetrachloride	5	0.5	<0.37	<0.37	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene			<0.36	<0.36	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	400	80	<0.44	<0.44	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
Chloroform	6	0.6	<0.69	<0.69	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloromethane	30	3	<0.39	<0.39	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-Chlorotoluene			<0.48	<0.48	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene			<0.48	<0.48	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dibromo-3-chloropropane	0.2	0.02	<1.5	<1.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
Dibromochloromethane	60	6	<1.9	<1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane (EDB)	0.05	0.005	<0.38	<0.38	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Dibromomethane			<0.48	<0.48	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43
1,2-Dichlorobenzene	600	60	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	600	120	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	75	15	<0.43	<0.43	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	1,000	200	<0.40	<0.40	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
1,1-Dichloroethane	850	85	<0.28	<0.28	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
1,2-Dichloroethane	5	0.5	<0.48	<0.48	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	7	0.7	<0.43	<0.43	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
cis-1,2-Dichloroethene	70	7	<0.42	<0.42	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
trans-1,2-Dichloroethene	100	20	<0.37	<0.37	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	5	0.5	<0.50	<0.50	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
1,3-Dichloropropane			<0.46	<0.46	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane			<0.37	<0.37	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
1,1-Dichloropropene			<0.51	<0.51	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44
cis-1,3-Dichloropropene	0.4	0.04	<0.29	<0.29	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	0.4	0.04	<0.26	<0.26	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
(di)Isopropyl Ether			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachloro(1,3)butadiene			<1.3	<1.3	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
Isopropylbenzene			<0.34	<0.34	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5	0.5	<0.36	<0.36	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Methyl-tert-Butyl Ether	60	12	<0.49	<0.49	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Naphthalene	100	10	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
n-Propylbenzene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100	10	<0.35	<0.35	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	70	7	<0.45	<0.45	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.38	<0.38	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	5	0.5	<b>5.0</b>	<b>6.0</b>	<b>3.5</b>	<b>4.6</b>	<b>5.7</b>	<b>4.6</b>	<b>5.5</b>	<b>4.5</b>	<b>6.5</b>	<b>6.5</b>
Toluene	800	160	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene			<0.77	<0.77	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
1,2,4-Trichlorobenzene	70	14	<2.5	<2.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
1,1,1-Trichloroethane	200	40	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5	0.5	<0.39	<0.39	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethene	5	0.5	<0.43	<0.43	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Trichlorofluoromethane	3,490	698	<0.48	<0.48	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,2,3-Trichloropropane	60	12	<0.47	<0.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Trimethylbenzenes	480	96	<3.07	<3.07	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.2	0.02	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Total Xylenes	2,000	400	<1.32	<1.32	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
<b>Field Parameters</b>												
Temperature (°F)			54.22	58.38	56.02	44.32	61.18	62.50	45.60	44.05	55.72	
Conductivity (ms/cm)			640	411	487	559	594	526	307	640	341	
Dissolved Oxygen (mg/L)			7.89	4.88	0.57	4.67	3.5	2.21	3.88	9.81	6.4	
pH			6.32	5.61	6.05	6.92	6.92	6.72	6.46	6.58	6.85	
Redox Potential (mV)			20.4	60.9	76.4	136.4	100.7	98.0	123.3	145.8	76.0	

PAL = Preventive Action Limit

ES = Enforcement Standards

**BOLD** = Exceeds Enforcement Standard  
*Italic* = Exceeds Preventative Action Limit

NA - Not Analyzed

< - Concentration less than listed detection limit



**TABLE A.1.b**  
**VOC GROUNDWATER ANALYTICAL RESULTS - MW2**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

PARAMETER	MW2										
	ES	PAL	7/2/13	10/16/13	11/4/15	4/29/16	7/12/16	10/3/16	1/23/17	4/25/17	7/10/17
<b>Detected VOC's (ug/L)</b>											
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	<0.50	<0.50	<0.50
Bromobenzene			<0.48	<0.48	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Bromochloromethane			<0.49	<0.49	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Bromodichloromethane	0.6	0.06	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	4.4	0.44	<0.23	<0.23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	10	1	<0.43	<0.43	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4
n-Butylbenzene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene			<0.60	<0.60	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene			<0.42	<0.42	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Carbon Tetrachloride	5	0.5	<0.37	<0.37	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene			<0.36	<0.36	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	400	80	<0.44	<0.44	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
Chloroform	6	0.6	<0.69	<0.69	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloromethane	30	3	<0.39	<0.39	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-Chlorotoluene			<0.48	<0.48	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene			<0.48	<0.48	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dibromo-3-chloropropane	0.2	0.02	<1.5	<1.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
Dibromochloromethane	60	6	<1.9	<1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane (EDB)	0.05	0.005	<0.38	<0.38	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Dibromomethane			<0.48	<0.48	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43
1,2-Dichlorobenzene	600	60	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	600	120	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	75	15	<0.43	<0.43	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	1,000	200	<0.40	<0.40	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
1,1-Dichloroethane	850	85	<0.28	<0.28	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
1,2-Dichloroethane	5	0.5	<0.48	<0.48	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	7	0.7	<0.43	<0.43	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
cis-1,2-Dichloroethene	70	7	<0.42	<0.42	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
trans-1,2-Dichloroethene	100	20	<0.37	<0.37	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	5	0.5	<0.50	<0.50	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
1,3-Dichloropropane			<0.46	<0.46	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane			<0.37	<0.37	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
1,1-Dichloropropene			<0.51	<0.51	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44
cis-1,3-Dichloropropene	0.4	0.04	<0.29	<0.29	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	0.4	0.04	<0.26	<0.26	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
(di)Isopropyl Ether			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50	<0.50	0.68j	<0.50	<0.50	<0.50
Hexachloro(1,3)butadiene			<1.3	<1.3	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
Isopropylbenzene			<0.34	<0.34	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5	0.5	<0.36	<0.36	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Methyl-tert-Butyl Ether	60	12	<0.49	<0.49	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Naphthalene	100	10	<2.5	<2.5	<2.5	<2.5	<2.5	36.0	<2.5	<2.5	<2.5
n-Propylbenzene			<0.50	<0.50	<0.50	<0.50	<0.50	0.70j	<2.5	<2.5	<2.5
Styrene	100	10	<0.35	<0.35	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2 - Tetrachloroethane	70	7	<0.45	<0.45	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.38	<0.38	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	5	0.5	<0.47	<0.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	800	160	<0.44	<0.44	<0.50	<0.50	<0.50	3.0	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene			<0.77	<0.77	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
1,2,4-Trichlorobenzene	70	14	<2.5	<2.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
1,1,1-Trichloroethane	200	40	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5	0.5	<0.39	<0.39	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethene	5	0.5	<0.43	<0.43	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Trichlorofluoromethane	3,490	698	<0.48	<0.48	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,2,3-Trichloropropane	60	12	<0.47	<0.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Trimethylbenzenes	480	96	<3.07	<3.07	<1	<1	<1	20.6	<1	<1	<1
Vinyl Chloride	0.2	0.02	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Total Xylenes	2,000	400	<1.32	<1.32	<1.5	<1.5	<1.5	8.9	<1.5	<1.5	<1.5
<b>Field Parameters</b>											
Temperature (°F)			53.17	60.75	58.12	45.54	56.82	60.01	48.51	45.10	55.06
Conductivity (ms/cm)			333	355	175	363	498	515	328	525	335
Dissolved Oxygen (mg/L)			6.35	5.22	0.85	2.85	2.84	0.93	5.20	9.00	5.68
pH			7.55	6.36	6.97	7.22	7.90	7.40	6.93	6.16	6.81
Redox Potential (mV)			-40.1	58.9	9.7	55.8	25.2	37.6	98.5	44.5	81.0

PAL = Preventive Action Limit

ES = Enforcement Standards

**BOLD** = Exceeds Enforcement Standard

*Italic* = Exceeds Preventative Action Limit

NA - Not Analyzed

< - Concentration less than listed detection limit

TABLE A.1.c  
VOC GROUNDWATER ANALYTICAL RESULTS - MW3  
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WI 54487

PARAMETER	ES	PAL	MW3								7/10/17
			7/2/13	10/16/13	11/4/15	4/29/16	7/12/16	10/3/16	1/23/17	4/25/17	
<b>Detected VOC's (ug/L)</b>											
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromobenzene			<0.48	<0.48	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Bromochloromethane			<0.49	<0.49	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Bromodichloromethane	0.6	0.06	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	4.4	0.44	<0.23	<0.23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	10	1	<0.43	<0.43	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4
n-Butylbenzene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene			<0.60	<0.60	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene			<0.42	<0.42	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Carbon Tetrachloride	5	0.5	<0.37	<0.37	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene			<0.36	<0.36	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	400	80	<0.44	<0.44	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
Chloroform	6	0.6	<0.69	<0.69	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloromethane	30	3	<0.39	<0.39	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-Chlorotoluene			<0.48	<0.48	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene			<0.48	<0.48	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dibromo-3-chloropropane	0.2	0.02	<1.5	<1.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
Dibromochloromethane	60	6	<1.9	<1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane (EDB)	0.05	0.005	<0.38	<0.38	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Dibromomethane			<0.48	<0.48	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43
1,2-Dichlorobenzene	600	60	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	600	120	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	75	15	<0.43	<0.43	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	1,000	200	<0.40	<0.40	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
1,1-Dichloroethane	850	85	<0.28	<0.28	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
1,2-Dichloroethane	5	0.5	<0.48	<0.48	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	7	0.7	<0.43	<0.43	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
cis-1,2-Dichloroethene	70	7	<0.42	<0.42	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
trans-1,2-Dichloroethene	100	20	<0.37	<0.37	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	5	0.5	<0.50	<0.50	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
1,3-Dichloropropane			<0.46	<0.46	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane			<0.37	<0.37	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
1,1-Dichloropropene			<0.51	<0.51	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44
cis-1,3-Dichloropropene	0.4	0.04	<0.29	<0.29	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	0.4	0.04	<0.26	<0.26	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
(di)Isopropyl Ether			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachloro(1,3)butadiene			<1.3	<1.3	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
Isopropylbenzene			<0.34	<0.34	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5	0.5	<0.36	<0.36	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Methyl-tert-Butyl Ether	60	12	<0.49	<0.49	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Naphthalene	100	10	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
n-Propylbenzene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100	10	<0.35	<0.35	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	70	7	<0.45	<0.45	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.38	<0.38	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	5	0.5	<i>1.8</i>	<i>1.3</i>	<i>2.0</i>	<i>1.7</i>	<i>2.2</i>	<i>2.7</i>	<i>2.2</i>	<i>1.3</i>	
Toluene	800	160	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene			<0.77	<0.77	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
1,2,4-Trichlorobenzene	70	14	<2.5	<2.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
1,1,1-Trichloroethane	200	40	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5	0.5	<0.39	<0.39	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethene	5	0.5	<0.43	<0.43	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Trichlorofluoromethane	3,490	698	<0.48	<0.48	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,2,3-Trichloropropane	60	12	<0.47	<0.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Trimethylbenzenes	480	96	<3.07	<3.07	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.2	0.02	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Total Xylenes	2,000	400	<1.32	<1.32	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
<b>Field Parameters</b>											
Temperature (°F)			54.57	60.58	56.42	47.91	58.09	61.05	48.16	43.69	
Conductivity (ms/cm)			750	658	560	335	517	511	315	475	
Dissolved Oxygen (mg/L)			7.31	5.74	0.73	2.70	0.74	0.82	1.49	6.07	
pH			7.64	6.07	6.31	8.09	6.79	6.78	6.61	6.23	
Redox Potential (mV)			-28.8	51.1	67.2	90.7	11.4	84.9	99.3	148.2	

Could Not Access - Disabled RV - Tire Parked Over Well

PAL = Preventive Action Limit

ES = Enforcement Standards

**BOLD** = Exceeds Enforcement Standard  
*Italic* = Exceeds Preventative Action Limit

NA - Not Analyzed

< - Concentration less than listed detection limit



**TABLE A.1.e**  
**VOC GROUNDWATER ANALYTICAL RESULTS - MW5**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

PARAMETER	ES	PAL	MW5			
			10/3/16	1/23/17	4/25/17	7/10/17
<b>Detected VOC's (ug/L)</b>						
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50
Bromobenzene			<0.23	<0.23	<0.23	<0.23
Bromochloromethane			<0.34	<0.34	<0.34	<0.34
Bromodichloromethane	0.6	0.06	<0.50	<0.50	<0.50	<0.50
Bromoform	4.4	0.44	<0.50	<0.50	<0.50	<0.50
Bromomethane	10	1	<2.4	<2.4	<2.4	<2.4
n-Butylbenzene			<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene			<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene			<0.18	<0.18	<0.18	<0.18
Carbon Tetrachloride	5	0.5	<0.50	<0.50	<0.50	<0.50
Chlorobenzene			<0.50	<0.50	<0.50	<0.50
Chloroethane	400	80	<0.37	<0.37	<0.37	<0.37
Chloroform	6	0.6	<2.5	<2.5	<2.5	<2.5
Chloromethane	30	3	<0.50	<0.50	<0.50	<0.50
2-Chlorotoluene			<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene			<0.21	<0.21	<0.21	<0.21
1,2-Dibromo-3-chloropropane	0.2	0.02	<2.2	<2.2	<2.2	<2.2
Dibromochloromethane	60	6	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane (EDB)	0.05	0.005	<0.18	<0.18	<0.18	<0.18
Dibromomethane			<0.43	<0.43	<0.43	<0.43
1,2-Dichlorobenzene	600	60	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	600	120	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	75	15	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	1,000	200	<0.22	<0.22	<0.22	<0.22
1,1-Dichloroethane	850	85	<0.24	<0.24	<0.24	<0.24
1,2-Dichloroethane	5	0.5	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	7	0.7	<0.41	<0.41	<0.41	<0.41
cis-1,2-Dichloroethene	70	7	<0.26	<0.26	<0.26	<0.26
trans-1,2-Dichloroethene	100	20	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	5	0.5	<0.23	<0.23	<0.23	<0.23
1,3-Dichloropropane			<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane			<0.48	<0.48	<0.48	<0.48
1,1-Dichloropropene			<0.44	<0.44	<0.44	<0.44
cis-1,3-Dichloropropene	0.4	0.04	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	0.4	0.04	<0.23	<0.23	<0.23	<0.23
(di)Isopropyl Ether			<0.50	<0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50
Hexachloro(1,3)butadiene			<2.1	<2.1	<2.1	<2.1
Isopropylbenzene			<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene			<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5	0.5	<0.23	<0.23	<0.23	<0.23
Methyl-tert-Butyl Ether	60	12	<0.17	<0.17	<0.17	<0.17
Naphthalene	100	10	41.9	<2.5	<2.5	<2.5
n-Propylbenzene			0.71j	<0.50	<0.50	<0.50
Styrene	100	10	<0.50	<0.50	<0.50	<0.50
1,1,1,2 - Tetrachloroethane	70	7	<0.18	<0.18	<0.18	<0.18
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	5	0.5	<0.50	<0.50	<0.50	<0.50
Toluene	800	160	2.1	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene			<2.1	<2.1	<2.1	<2.1
1,2,4-Trichlorobenzene	70	14	<2.2	<2.2	<2.2	<2.2
1,1,1-Trichloroethane	200	40	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5	0.5	<0.20	<0.20	<0.20	<0.20
Trichloroethene	5	0.5	<0.33	<0.33	<0.33	<0.33
Trichlorofluoromethane	3,490	698	<0.18	<0.18	<0.18	<0.18
1,2,3-Trichloropropane	60	12	<0.50	<0.50	<0.50	<0.50
Total Trimethylbenzenes	480	96	24.4	<1	<1	<1
Vinyl Chloride	0.2	0.02	<0.18	<0.18	<0.18	<0.18
Total Xylenes	2,000	400	8.4	<1.5	<1.5	<1.5
<b>Field Parameters</b>						
Temperature (°F)			61.23	52.13	47.46	55.04
Conductivity (ms/cm)			1986	1355	1798	1182
Dissolved Oxygen (mg/L)			5.97	0.91	4.65	3.11
pH			7.44	6.98	6.47	6.78
Redox Potential (mV)			55.7	41.7	41.2	76.0

PAL = Preventive Action Limit

ES = Enforcement Standards

<b>BOLD</b>	= Exceeds Enforcement Standard
<i>Italic</i>	= Exceeds Preventative Action Limit

NA - Not Analyzed

< - Concentration less than listed detection limit



**TABLE A.1.f**  
**VOC GROUNDWATER ANALYTICAL RESULTS - MW6**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

PARAMETER	ES	PAL	MW6			
			10/3/16	1/23/17	4/25/17	7/10/17
<b>Detected VOC's (ug/L)</b>						
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50
Bromobenzene			<0.23	<0.23	<0.23	<0.23
Bromochloromethane			<0.34	<0.34	<0.34	<0.34
Bromodichloromethane	0.6	0.06	<0.50	<0.50	<0.50	<0.50
Bromoform	4.4	0.44	<0.50	<0.50	<0.50	<0.50
Bromomethane	10	1	<2.4	<2.4	<2.4	<2.4
n-Butylbenzene			<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene			<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene			<0.18	<0.18	<0.18	<0.18
Carbon Tetrachloride	5	0.5	<0.50	<0.50	<0.50	<0.50
Chlorobenzene			<0.50	<0.50	<0.50	<0.50
Chloroethane	400	80	<0.37	<0.37	<0.37	<0.37
Chloroform	6	0.6	<2.5	<2.5	<2.5	<2.5
Chloromethane	30	3	<0.50	<0.50	<0.50	<0.50
2-Chlorotoluene			<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene			<0.21	<0.21	<0.21	<0.21
1,2-Dibromo-3-chloropropane	0.2	0.02	<2.2	<2.2	<2.2	<2.2
Dibromochloromethane	60	6	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane (EDB)	0.05	0.005	<0.18	<0.18	<0.18	<0.18
Dibromomethane			<0.43	<0.43	<0.43	<0.43
1,2-Dichlorobenzene	600	60	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	600	120	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	75	15	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	1,000	200	<0.22	<0.22	<0.22	<0.22
1,1-Dichloroethane	850	85	<0.24	<0.24	<0.24	<0.24
1,2-Dichloroethane	5	0.5	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	7	0.7	<0.41	<0.41	<0.41	<0.41
cis-1,2-Dichloroethene	70	7	<0.26	<0.26	<0.26	<0.26
trans-1,2-Dichloroethene	100	20	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	5	0.5	<0.23	<0.23	<0.23	<0.23
1,3-Dichloropropane			<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane			<0.48	<0.48	<0.48	<0.48
1,1-Dichloropropene			<0.44	<0.44	<0.44	<0.44
cis-1,3-Dichloropropene	0.4	0.04	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	0.4	0.04	<0.23	<0.23	<0.23	<0.23
(di)Isopropyl Ether			<0.50	<0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50
Hexachloro(1,3)butadiene			<2.1	<2.1	<2.1	<2.1
Isopropylbenzene			<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene			<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5	0.5	<0.23	<0.23	<0.23	<0.23
Methyl-tert-Butyl Ether	60	12	<0.17	<0.17	<0.17	<0.17
Naphthalene	100	10	<i>13.0</i>	<2.5	<2.5	<2.5
n-Propylbenzene			0.71j	<0.50	<0.50	<0.50
Styrene	100	10	<0.50	<0.50	<0.50	<0.50
1,1,1,2 - Tetrachloroethane	70	7	<0.18	<0.18	<0.18	<0.18
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	5	0.5	<i>0.79j</i>	<i>1.1</i>	<0.50	<i>4.0</i>
Toluene	800	160	0.79j	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene			<2.1	<2.1	<2.1	<2.1
1,2,4-Trichlorobenzene	70	14	<2.2	<2.2	<2.2	<2.2
1,1,1-Trichloroethane	200	40	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5	0.5	<0.20	<0.20	<0.20	<0.20
Trichloroethene	5	0.5	<0.33	<0.33	<0.33	<0.33
Trichlorofluoromethane	3,490	698	<0.18	<0.18	<0.18	<0.18
1,2,3-Trichloropropane	60	12	<0.50	<0.50	<0.50	<0.50
Total Trimethylbenzenes	480	96	7.7	<1	<1	<1
Vinyl Chloride	0.2	0.02	<0.18	<0.18	<0.18	<0.18
Total Xylenes	2,000	400	3.3	<1.5	<1.5	<1.5
<b>Field Parameters</b>						
Temperature (°F)			61.55	47.82	42.87	57.24
Conductivity (ms/cm)			455	2.51	411	285
Dissolved Oxygen (mg/L)			4.38	3.73	12.87	7.73
pH			7.13	6.36	6.23	6.84
Redox Potential (mV)			95.6	121.9	163.8	96.6

PAL = Preventive Action Limit

ES = Enforcement Standards

<b>BOLD</b>	= Exceeds Enforcement Standard
<i>Italic</i>	= Exceeds Preventative Action Limit

NA - Not Analyzed

< - Concentration less than listed detection limit

**TABLE A.1.g**  
**VOC GROUNDWATER ANALYTICAL RESULTS - PZI**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

PARAMETER	ES	PAL	PZI								
			7/2/13	10/16/13	11/4/15	4/29/16	7/12/16	10/3/16	1/23/17	4/25/17	7/10/17
<b>Detected VOC's (ug/L)</b>											
Benzene	5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromobenzene			<0.48	<0.48	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Bromochloromethane			<0.49	<0.49	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
Bromodichloromethane	0.6	0.06	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	4.4	0.44	<0.23	<0.23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	10	1	<0.43	<0.43	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4
n-Butylbenzene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
sec-Butylbenzene			<0.60	<0.60	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
tert-Butylbenzene			<0.42	<0.42	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Carbon Tetrachloride	5	0.5	<0.37	<0.37	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chlorobenzene			<0.36	<0.36	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	400	80	<0.44	<0.44	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37	<0.37
Chloroform	6	0.6	<0.69	<0.69	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chloromethane	30	3	<0.39	<0.39	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-Chlorotoluene			<0.48	<0.48	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4-Chlorotoluene			<0.48	<0.48	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-Dibromo-3-chloropropane	0.2	0.02	<1.5	<1.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
Dibromochloromethane	60	6	<1.9	<1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane (EDB)	0.05	0.005	<0.38	<0.38	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Dibromomethane			<0.48	<0.48	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43	<0.43
1,2-Dichlorobenzene	600	60	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	600	120	<0.45	<0.45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	75	15	<0.43	<0.43	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	1,000	200	<0.40	<0.40	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
1,1-Dichloroethane	850	85	<0.28	<0.28	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24
1,2-Dichloroethane	5	0.5	<0.48	<0.48	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
1,1-Dichloroethene	7	0.7	<0.43	<0.43	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41	<0.41
cis-1,2-Dichloroethene	70	7	<0.42	<0.42	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
trans-1,2-Dichloroethene	100	20	<0.37	<0.37	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
1,2-Dichloropropane	5	0.5	<0.50	<0.50	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
1,3-Dichloropropane			<0.46	<0.46	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,2-Dichloropropane			<0.37	<0.37	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
1,1-Dichloropropene			<0.51	<0.51	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44
cis-1,3-Dichloropropene	0.4	0.04	<0.29	<0.29	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	0.4	0.04	<0.26	<0.26	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
(di)Isopropyl Ether			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	700	140	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachloro(1,3)butadiene			<1.3	<1.3	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
Isopropylbenzene			<0.34	<0.34	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
p-Isopropyltoluene			<0.40	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5	0.5	<0.36	<0.36	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23
Methyl-tert-Butyl Ether	60	12	<0.49	<0.49	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Naphthalene	100	10	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
n-Propylbenzene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100	10	<0.35	<0.35	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2 - Tetrachloroethane	70	7	<0.45	<0.45	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.38	<0.38	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Tetrachloroethene	5	0.5	<b>6.5</b>	<b>6.2</b>	<b>4.7</b>	<b>4.4</b>	<0.50	3.6	<0.50	3.3	4.0
Toluene	800	160	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2,3-Trichlorobenzene			<0.77	<0.77	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
1,2,4-Trichlorobenzene	70	14	<2.5	<2.5	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2
1,1,1-Trichloroethane	200	40	<0.44	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5	0.5	<0.39	<0.39	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethene	5	0.5	<i>1.2</i>	<i>0.75j</i>	<i>0.38j</i>	<i>0.41j</i>	<i>0.41j</i>	<0.33	<0.33	<0.33	<0.33
Trichlorofluoromethane	3,490	698	<0.48	<0.48	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
1,2,3-Trichloropropane	60	12	<0.47	<0.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Trimethylbenzenes	480	96	<3.07	<3.07	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.2	0.02	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Total Xylenes	2,000	400	<1.32	<1.32	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
<b>Field Parameters</b>											
Temperature (°F)			53	53.86	54.54	49.87	58.44	58.20	52.72	50.79	55.34
Conductivity (ms/cm)			725	838	591	487	374	451	359	495	281
Dissolved Oxygen (mg/L)			3.31	0.62	1.14	0.32	3.28	0.91	8.11	2.55	5.11
pH			8.21	5.02	6.56	7.29	8.10	7.54	7.14	6.97	7.18
Redox Potential (mV)			-36.3	170.8	64.5	121.6	25.0	66.9	108.3	154.0	53.3

PAL = Preventive Action Limit

ES = Enforcement Standards

**BOLD** = Exceeds Enforcement Standard  
*Italic* = Exceeds Preventative Action Limit

NA - Not Analyzed

< - Concentration less than listed detection limit

j - Estimated concentration between Method Detection Limit and Limit of Quantification

**TABLE A.1.h**  
**VOC GROUNDWATER ANALYTICAL RESULTS - GEOPROBES**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

PARAMETER	ES	PAL	<i>B100</i>	<i>B300</i>	<i>B400</i>
			<i>6/9/08</i>	<i>6/9/08</i>	<i>6/9/08</i>
<b>Detected VOC's (ug/L)</b>					
Benzene	5	0.5	<0.24	<0.24	<0.24
Bromobenzene			<0.44	<0.44	<0.44
Bromochloromethane			NA	NA	NA
Bromodichloromethane	0.6	0.06	<0.3	<0.3	<0.3
Bromoform	4.4	0.44	<0.7	<0.7	<0.7
Bromomethane	10	1	NA	NA	NA
n-Butylbenzene			<0.55	<0.55	<0.55
sec-Butylbenzene			<0.73	<0.73	<0.73
tert-Butylbenzene			<0.32	<0.32	<0.32
Carbon Tetrachloride	5	0.5	<0.3	<0.3	<0.3
Chlorobenzene			<0.39	<0.39	<0.39
Chloroethane	400	80	<0.97	<0.97	<0.97
Chloroform	6	0.6	<i>0.70j</i>	<0.47	<0.47
Chloromethane	30	3	<i>0.59j</i>	<0.5	<0.5
2-Chlorotoluene			<0.41	<0.41	<0.41
4-Chlorotoluene			<0.3	<0.3	<0.3
1,2-Dibromo-3-chloropropane	0.2	0.02	<1.7	<1.7	<1.7
Dibromochloromethane	60	6	<0.4	<0.4	<0.4
1,2-Dibromoethane (EDB)	0.05	0.005	<0.76	<0.76	<0.76
Dibromomethane			NA	NA	NA
1,2-Dichlorobenzene	600	60	<0.88	<0.88	<0.88
1,3-Dichlorobenzene	600	120	<0.67	<0.67	<0.67
1,4-Dichlorobenzene	75	15	<0.74	<0.74	<0.74
Dichlorodifluoromethane	1,000	200	<0.76	<0.76	<0.76
1,1-Dichloroethane	850	85	<0.59	<0.59	<0.59
1,2-Dichloroethane	5	0.5	<0.41	<0.41	<0.41
1,1-Dichloroethene	7	0.7	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	70	7	<0.44	<0.44	<0.44
trans-1,2-Dichloroethene	100	20	<0.61	<0.61	<0.61
1,2-Dichloropropane	5	0.5	<0.27	<0.27	<0.27
1,3-Dichloropropane			<0.4	<0.4	<0.4
2,2-Dichloropropane			<0.53	<0.53	<0.53
1,1-Dichloropropene			NA	NA	NA
cis-1,3-Dichloropropene	0.4	0.04	NA	NA	NA
trans-1,3-Dichloropropene	0.4	0.04	NA	NA	NA
(di)Isopropyl Ether			<0.37	<0.37	<0.37
Ethylbenzene	700	140	<0.35	<0.35	<0.35
Hexachloro(1,3)butadiene			<1.7	<1.7	<1.7
Isopropylbenzene			<0.6	<0.6	<0.6
p-Isopropyltoluene			<0.77	<0.77	<0.77
Methylene Chloride	5	0.5	<0.99	<0.99	<0.99
Methyl-tert-Butyl Ether	60	12	<0.7	<0.7	<0.7
Naphthalene	100	10	<1.8	<1.8	<1.8
n-Propylbenzene			<0.54	<0.54	<0.54
Styrene	100	10	NA	NA	NA
1,1,1,2 - Tetrachloroethane	70	7	<0.32	<0.32	<0.32
1,1,1,2,2-Tetrachloroethane	0.2	0.02	<0.5	<0.5	<0.5
Tetrachloroethene	5	0.5	<b>10.1</b>	<0.5	<b>5.3</b>
Toluene	800	160	<0.39	<0.39	<0.39
1,2,3-Trichlorobenzene			<1.6	<1.6	<1.6
1,2,4-Trichlorobenzene	70	14	<1.1	<1.1	<1.1
1,1,1-Trichloroethane	200	40	<0.28	<0.28	<0.28
1,1,2-Trichloroethane	5	0.5	<0.39	<0.39	<0.39
Trichloroethene	5	0.5	<0.47	<0.47	<0.47
Trichlorofluoromethane	3,490	698	<0.81	<0.81	<0.81
1,2,3-Trichloropropane	60	12	NA	NA	NA
Total Trimethylbenzenes	480	96	<0.74	<0.74	<0.74
Vinyl Chloride	0.2	0.02	<0.2	<0.2	<0.2
Total Xylenes	2,000	400	<1.67	<1.67	<1.67

PAL = Preventive Action Limit

ES = Enforcement Standards

<b>BOLD</b>	= Exceeds Enforcement Standard
<i>Italic</i>	= Exceeds Preventative Action Limit

NA - Not Analyzed

< - Concentration less than listed detection limit



**TABLE A.2.a**  
**SOIL ANALYTICAL RESULTS**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

Date-->		6/9/08	6/9/08	5/15/13	5/15/13	5/15/13	5/15/13	5/15/13	5/15/13	5/15/13	5/15/13
Boring-->		B100	B200	MW1	MW1	MW1	MW2	MW2	MW2	MW3	MW3
Sample Depth--(Feet)-->		0-2	0-2	3-4	8-9	13-14	3-4	8-9	13-14	3-4	8-9
Field Screening--(PID Instrument Units)-->		-	-	0	0	0	0	0	0	0	2.9
Sampler-->		Northern	Northern	REI	REI	REI	REI	REI	REI	REI	REI
VOC's (ug/kg)	NTEDC	GW									
Benzene	7,410	5.1	<20	<20	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Bromobenzene	679,000	NS	<34	<34	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Bromochloromethane	976,000	NS	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Bromodichloromethane	1,960	0.3	<16	<16	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Bromoform	218,000	2.3	<23	<23	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Bromomethane	46,000	5.1	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
n-Butylbenzene	108,000	NS	<35	<35	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
sec-Butylbenzene	145,000	NS	<25	<25	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
tert-Butylbenzene	183,000	NS	<23	<23	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Carbon Tetrachloride	NS	3.9	<21	<21	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Chlorobenzene	761,000	NS	<16	<16	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Chloroethane	NS	226.6	<23	<23	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Chloroform	2,130	3.3	<50	<50	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Chloromethane	72,000	15.5	<43	<43	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
2-Chlorotoluene	NS	NS	<31	<31	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
4-Chlorotoluene	NS	NS	<24	<24	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2-Dibromo-3-chloropropane	99	0.2	<37	<37	<49.8	<49.8	<53.6	<49.8	<49.8	<49.8	<49.8
Dibromochloromethane	4,400	32	<21	<21	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2-Dibromoethane	230	0.0282	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Dibromomethane	NS	NS	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2-Dichlorobenzene	376,000	1,168	<32	<32	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,3-Dichlorobenzene	297,000	1,152.2	<41	<41	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,4-Dichlorobenzene	17,500	144	<42	<42	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Dichlorodifluoromethane	571,000	3,073.9	<33	<33	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,1-Dichloroethane	23,700	482.6	<22	<22	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2-Dichloroethane	3,030	2.8	<24	<24	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,1-Dichloroethylene	1,190,000	5	<27	<27	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
cis-1,2-Dichloroethylene	2,040,000	41.2	<24	<24	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
trans-1,2-Dichloroethylene	976,000	58.8	<29	<29	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2-Dichloropropane	6,620	3.3	<19	<19	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,3-Dichloropropane	1,490,000	0.3	<21	<21	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
2,2-Dichloropropane	NS	NS	<115	<115	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,1-Dichloropropylene	NS	NS	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
cis-1,3-Dichloropropylene	1,220,000	0.3	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
trans-1,3-Dichloropropylene	1,570,000	0.3	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
(di)isopropyl ether	2,230,000	NS	<15	<15	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Ethylbenzene	37,000	1,570	<16	<16	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Hexachloro (1,3) butadiene	NS	NS	<50	<50	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Isopropylbenzene	NS	NS	<30	<30	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
p-Isopropyltoluene	162,000	NS	<30	<30	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Methylene Chloride	72,100	2.6	<44	<44	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Methyl tert Butyl Ether	293,000	27	<23	<23	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Naphthalene	26,000	658.7	<117	<117	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
n-Propylbenzene	NS	NS	<29	<29	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Styrene	867,000	220	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,1,1,2-Tetrachloroethane	12,900	53.4	<27	<27	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,1,1,2,2-Tetrachloroethane	3,690	0.2	<25	<25	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Tetrachloroethene	3,120	4.5	<b>286</b>	<18	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Toluene	818,000	1,107.2	<23	<23	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2,3-Trichlorobenzene	151,000	NS	<87	<87	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2,4-Trichlorobenzene	98,700	408	<53	<53	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,1,1-Trichloroethane	640,000	140.2	<27	<27	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,1,2-Trichloroethane	7,340	3.2	<30	<30	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Trichloroethene	8,810	3.6	<20	<20	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Trichlorofluoromethane	1,230,000	4,474.8	<16	<16	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2,3-Trichloropropane	95	NS	NA	NA	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,2,4-Trimethylbenzene	219,000	1,378.2	<20	<20	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
1,3,5-Trimethylbenzene	182,000		<24	<24	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Vinyl Chloride	2,030	0.1	<17	<17	<25.0	<25.0	<26.9	<25.0	<25.0	<25.0	<25.0
Xylenes (Total)	258,000	3,940	<48	<48	<75	<75	<80.7	<75	<75	<75	<75

**Notes:**

NTEDC - Not To Exceed Direct Contact Residual Contaminant Level (RCL)

GW - RCL Protective of Groundwater Quality

< - Concentration below listed laboratory detection limit

GW RCL exceedances are bold

**Bold**

NTEDC RCL exceedances are outlined in bold

**Bold**

NS - No Standard

j- Estimated Value between detection limit and quantification limit



**TABLE A.3  
RESIDUAL SOIL CONTAMINATION  
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WI 54487**

Date-->		6/9/08	5/15/13	5/15/13	7/2/13	8/13/13	
Boring-->		B100	B1	B1	SS1	SS2	
Sample Depth--(Feet)>		0-2	3-4	13-14	0.5	0.5	
Field Screening--(PID Instrument Units)>		-	0	0	0	0	
Sampler>		Northern	REI	REI	REI	REI	
VOC's (ug/kg)	NTEDC	GW					
Benzene	7,410	5.1	<20	<25.0	<25.0	<25.0	<25.0
Bromobenzene	679,000	NS	<34	<25.0	<25.0	<25.0	<25.0
Bromochloromethane	976,000	NS	NA	<25.0	<25.0	<25.0	<25.0
Bromodichloromethane	1,960	0.3	<16	<25.0	<25.0	<25.0	<25.0
Bromoform	218,000	2.3	<23	<25.0	<25.0	<25.0	<25.0
Bromomethane	46,000	5.1	NA	<25.0	<25.0	<25.0	<25.0
n-Butylbenzene	108,000	NS	<35	<25.0	<25.0	<25.0	<25.0
sec-Butylbenzene	145,000	NS	<25	<25.0	<25.0	<25.0	<25.0
tert-Butylbenzene	183,000	NS	<23	<25.0	<25.0	<25.0	<25.0
Carbon Tetrachloride	NS	3.9	<21	<25.0	<25.0	<25.0	<25.0
Chlorobenzene	761,000	NS	<16	<25.0	<25.0	<25.0	<25.0
Chloroethane	NS	226.6	<23	<25.0	<25.0	<25.0	<25.0
Chloroform	2,130	3.3	<50	<b>54.3j</b>	<25.0	<b>25.7j</b>	<25.0
Chloromethane	72,000	15.5	<43	<25.0	<25.0	<25.0	<25.0
2-Chlorotoluene	NS	NS	<31	<25.0	<25.0	<25.0	<25.0
4-Chlorotoluene	NS	NS	<24	<25.0	<25.0	<25.0	<25.0
1,2-Dibromo-3-chloropropane	99	0.2	<37	<49.8	<49.8	<49.8	<49.8
Dibromochloromethane	4,400	32	<21	<25.0	<25.0	<25.0	<25.0
1,2-Dibromoethane	230	0.0282	NA	<25.0	<25.0	<25.0	<25.0
Dibromomethane	NS	NS	NA	<25.0	<25.0	<25.0	<25.0
1,2-Dichlorobenzene	376,000	1,168	<32	<25.0	<25.0	<25.0	<25.0
1,3-Dichlorobenzene	297,000	1,152.2	<41	<25.0	<25.0	<25.0	<25.0
1,4-Dichlorobenzene	17,500	144	<42	<25.0	<25.0	<25.0	<25.0
Dichlorodifluoromethane	571,000	3,073.9	<33	<25.0	<25.0	<25.0	<25.0
1,1-Dichloroethane	23,700	482.6	<22	<25.0	<25.0	<25.0	<25.0
1,2-Dichloroethane	3,030	2.8	<24	<25.0	<25.0	<25.0	<25.0
1,1-Dichloroethylene	1,190,000	5	<27	<25.0	<25.0	<25.0	<25.0
cis-1,2-Dichloroethylene	2,040,000	41.2	<24	<25.0	<25.0	<25.0	<25.0
trans-1,2-Dichloroethylene	976,000	58.8	<29	<25.0	<25.0	<25.0	<25.0
1,2-Dichloropropane	6,620	3.3	<19	<25.0	<25.0	<25.0	<25.0
1,3-Dichloropropane	1,490,000	0.3	<21	<25.0	<25.0	<25.0	<25.0
2,2-Dichloropropane	NS	NS	<115	<25.0	<25.0	<25.0	<25.0
1,1-Dichloropropylene	NS	NS	NA	<25.0	<25.0	<25.0	<25.0
cis-1,3-Dichloropropylene	1,220,000	0.3	NA	<25.0	<25.0	<25.0	<25.0
trans-1,3-Dichloropropylene	1,570,000	0.3	NA	<25.0	<25.0	<25.0	<25.0
(di)isopropyl ether	2,230,000	NS	<15	<25.0	<25.0	<25.0	<25.0
Ethylbenzene	37,000	1,570	<16	<25.0	<25.0	<25.0	<25.0
Hexachloro (1,3) butadiene	NS	NS	<50	<25.0	<25.0	<25.0	<25.0
Isopropylbenzene	NS	NS	<30	<25.0	<25.0	<25.0	<25.0
p-Isopropyltoluene	162,000	NS	<30	<25.0	<25.0	<25.0	<25.0
Methylene Chloride	72,100	2.6	<44	<b>61.1j</b>	<b>37.2j</b>	<25.0	<25.0
Methyl tert Butyl Ether	293,000	27	<23	<25.0	<25.0	<25.0	<25.0
Naphthalene	26,000	658.7	<117	<25.0	<25.0	<25.0	<25.0
n-Propylbenzene	NS	NS	<29	<25.0	<25.0	<25.0	<25.0
Styrene	867,000	220	NA	<25.0	<25.0	<25.0	<25.0
1,1,1,2-Tetrachloroethane	12,900	53.4	<27	<25.0	<25.0	<25.0	<25.0
1,1,1,2-Tetrachloroethane	3,690	0.2	<25	<25.0	<25.0	<25.0	<25.0
Tetrachloroethene	3,120	4.5	<b>286</b>	<25.0	<25.0	<b>90.2</b>	<b>170</b>
Toluene	818,000	1,107.2	<23	<25.0	<25.0	<25.0	<25.0
1,2,3-Trichlorobenzene	151,000	NS	<87	<25.0	<25.0	<25.0	<25.0
1,2,4-Trichlorobenzene	98,700	408	<53	<25.0	<25.0	<25.0	<25.0
1,1,1-Trichloroethane	640,000	140.2	<27	<25.0	<25.0	<25.0	<25.0
1,1,2-Trichloroethane	7,340	3.2	<30	<25.0	<25.0	<25.0	<25.0
Trichloroethene	8,810	3.6	<20	<25.0	<25.0	<25.0	<25.0
Trichlorofluoromethane	1,230,000	4,474.8	<16	<25.0	<25.0	<25.0	<25.0
1,2,3-Trichloropropane	95	NS	NA	<25.0	<25.0	<25.0	<25.0
1,2,4-Trimethylbenzene	219,000	1,378.2	<20	<25.0	<25.0	<25.0	<25.0
1,3,5-Trimethylbenzene	182,000		<24	<25.0	<25.0	<25.0	<25.0
Vinyl Chloride	2,030	0.1	<17	<25.0	<25.0	<25.0	<25.0
Xylenes (Total)	258,000	3,940	<48	<75	<75	<75	<75

**Notes:**

NTEDC - Not To Exceed Direct Contact Residual Contaminant Level (RCL)

GW - RCL Protective of Groundwater Quality

< - Concentration below listed laboratory detection limit

GW RCL exceedances are bold

**Bold**

NTEDC RCL exceedances are outlined in bold

**Bold**

NS - No Standard

j - Estimated Value between detection limit and quantification limit



**TABLE A.4**  
**VAPOR ANALYTICAL TABLE**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

Detected VOCs (ug/m <sup>3</sup> )		Crawl Space	
Small Commercial Indoor Air Vapor Action Levels (ug/M <sup>3</sup> )		11/20/13	2/24/14
cis-1,2 Dichloroethene	NS	<1.2	<1.1
Trans-1,2-Dichloroethene	NS	<1.2	<1.1
Tetrachloroethene	180	31.3	56.8
Trichloroethene	8.8	1.6	3.2

NS - No Standard

**Exceeds** Small Commercial Indoor Air Vapor Action Level

Detected VOCs (ug/m <sup>3</sup> )		Sump-220 WI Ave.
Sub-Slab Vapor Vapor Risk Screening Level		2/24/14
cis-1,2 Dichloroethene	NS	<1.3
Trans-1,2-Dichloroethene	NS	<1.3
Tetrachloroethene	6,000	<1.1
Trichloroethene	290	<0.89

NS - No Standard

**Exceeds** Small Commercial Sub-Slab Vapor Risk Screening Level

A.5  
OTHER MEDIA OF CONCERN  
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WI 54487

**Not Applicable, no other media of concern was identified during investigation**

**TABLE A.6**  
**WATER LEVEL ELEVATIONS**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

	MW1	MW2	MW3	MW4	MW5	MW6	PZ1
<b>Ground Elevation</b>	1447.54	1448.18	1447.83	1447.61	1448.47	1447.30	1447.63
<b>Top of Casing Elevation</b>	1447.03	1447.74	1447.38	1447.23	1448.21	1446.91	1447.40
<b>Top of Screen Elevation</b>	1442.59	1443.34	1442.64	1442.65	1443.10	1441.90	1424.44
<b>Bottom of Screen Elevation</b>	1432.59	1433.34	1432.64	1432.65	1433.10	1431.90	1419.44
<b>Depth to Water (feet)</b>							
7/2/13	8.44	10.35	8.58	9.26	NI	NI	10.33
10/16/13	9.27	10.80	9.38	9.70	NI	NI	10.77
11/4/15	9.01	10.62	9.40	9.71	NI	NI	11.04
4/29/16	8.25	9.34	8.45	9.26	NI	NI	10.55
7/12/16	8.46	10.41	8.84	9.30	NI	NI	9.68
10/3/16	9.89	10.54	9.29	9.56	11.28	8.65	10.70
1/23/17	9.24	10.75	9.52	9.55	11.54	9.03	10.23
4/25/17	7.77	10.15	8.08	9.09	10.60	7.11	10.16
7/10/17	8.31	10.33	NM	9.26	10.90	7.99	10.37
<b>Groundwater Elevation</b>							
7/2/13	1438.59	1436.68	1438.45	1437.77	NI	NI	1436.70
10/16/13	1437.76	1436.23	1437.65	1437.33	NI	NI	1436.26
11/4/15	1438.02	1436.41	1437.63	1437.32	NI	NI	1435.99
4/29/16	1438.78	1437.69	1438.58	1437.77	NI	NI	1436.48
7/12/16	1438.57	1437.33	1438.54	1437.93	NI	NI	1437.72
10/3/16	1437.14	1437.20	1438.09	1437.67	1436.93	1438.26	1436.70
1/23/17	1437.79	1436.99	1437.86	1437.68	1436.67	1437.88	1437.17
4/25/17	1439.26	1437.59	1439.30	1438.14	1437.61	1439.80	1437.24
7/10/17	1438.72	1437.41	NM	1437.97	1437.31	1438.92	1437.03

NM = Not Measured

NI = Not Installed



A.7  
OTHER  
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WI 54487

**Not Applicable, there is no other relevant data**

## **TABLE OF CONTENTS**

### **Attachment B: Maps and Figures**

#### **B.1. Location Maps**

**B.1.a. Location Map**

**B.1.b Detailed Site Map**

**B.1.c RR Sites Map**

#### **B.2. Soil Figures**

**B.2.a. Soil Contamination**

**B.2.b. Residual Soil Contamination**

#### **B.3. Groundwater Figures**

**B.3.a Geologic Cross Section Figures**

**B.3.b Groundwater Isoconcentration**

**B.3.c Groundwater Flow Direction Figures**

**B.3.c. Groundwater Flow Map (7/10/2017)**

**B.3.d Monitoring Wells**

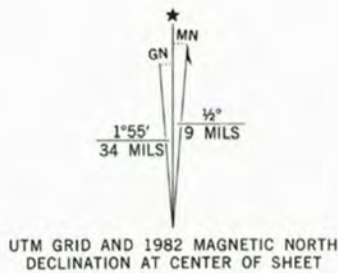
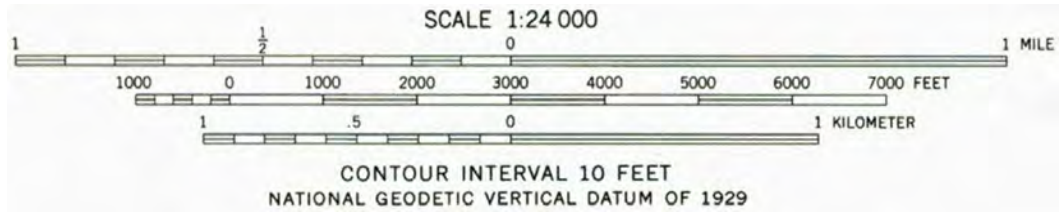
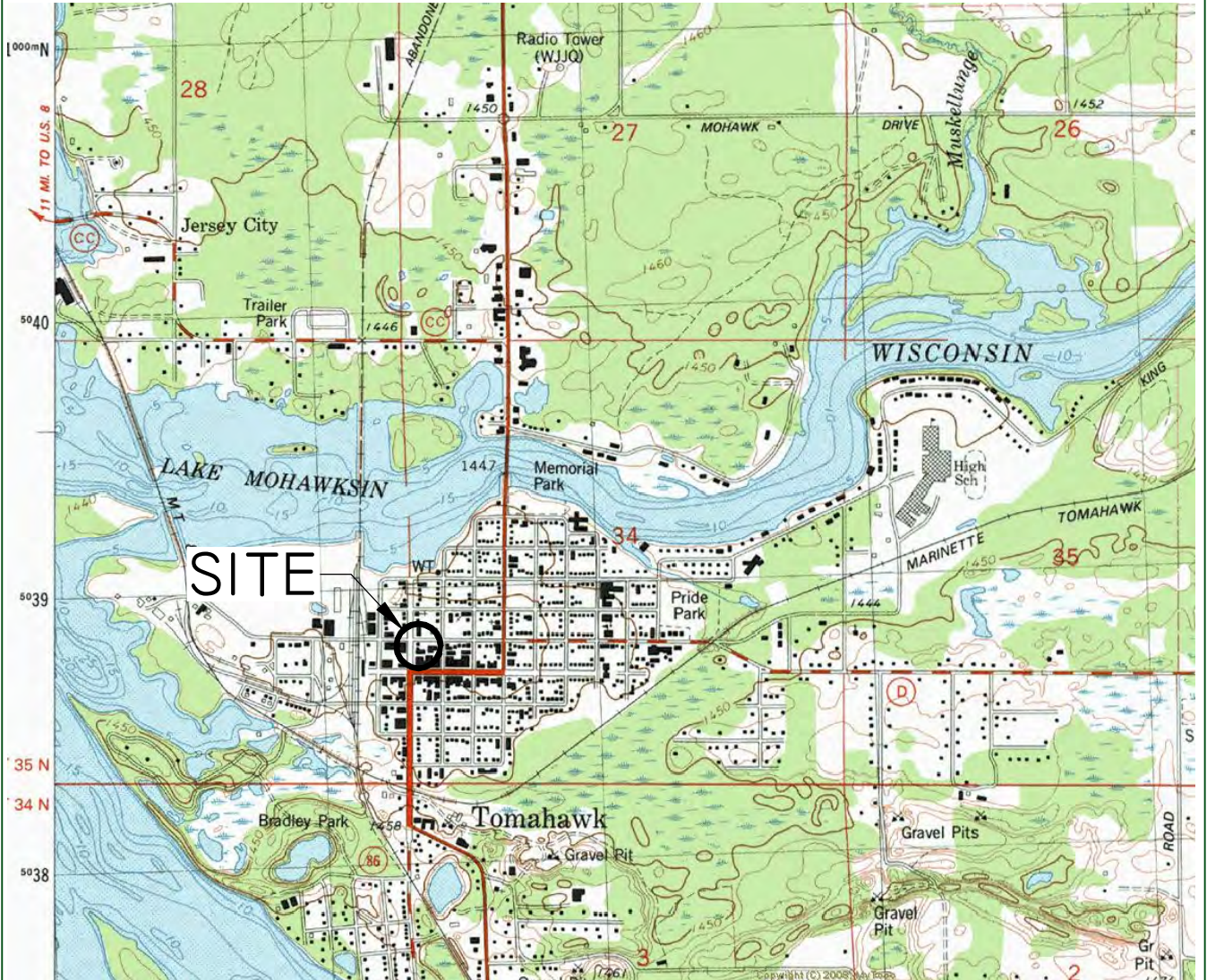
#### **B.4.a Vapor Maps and Other Media – Vapor Intrusion Map**

B.4.b Other Media of Concern – Not applicable, there was no other affected media

B.4.c Other: Not applicable, there is no other relevant data

#### **B.5. Structural Impediment Photos**

DRAWING FILE: P:\6300-6399\6345-WDNR-QUALITYCLEANERS\DWG\6345-LOCATION.DWG LAYOUT: VicN PLOTTED: Aug 21, 2017 - 6:37PM PLOTTED BY: ToddW



**TOMAHAWK, WIS.**  
 NW/4 TOMAHAWK 15' QUADRANGLE  
 N4522.5-W8937.5/7.5  
 1982

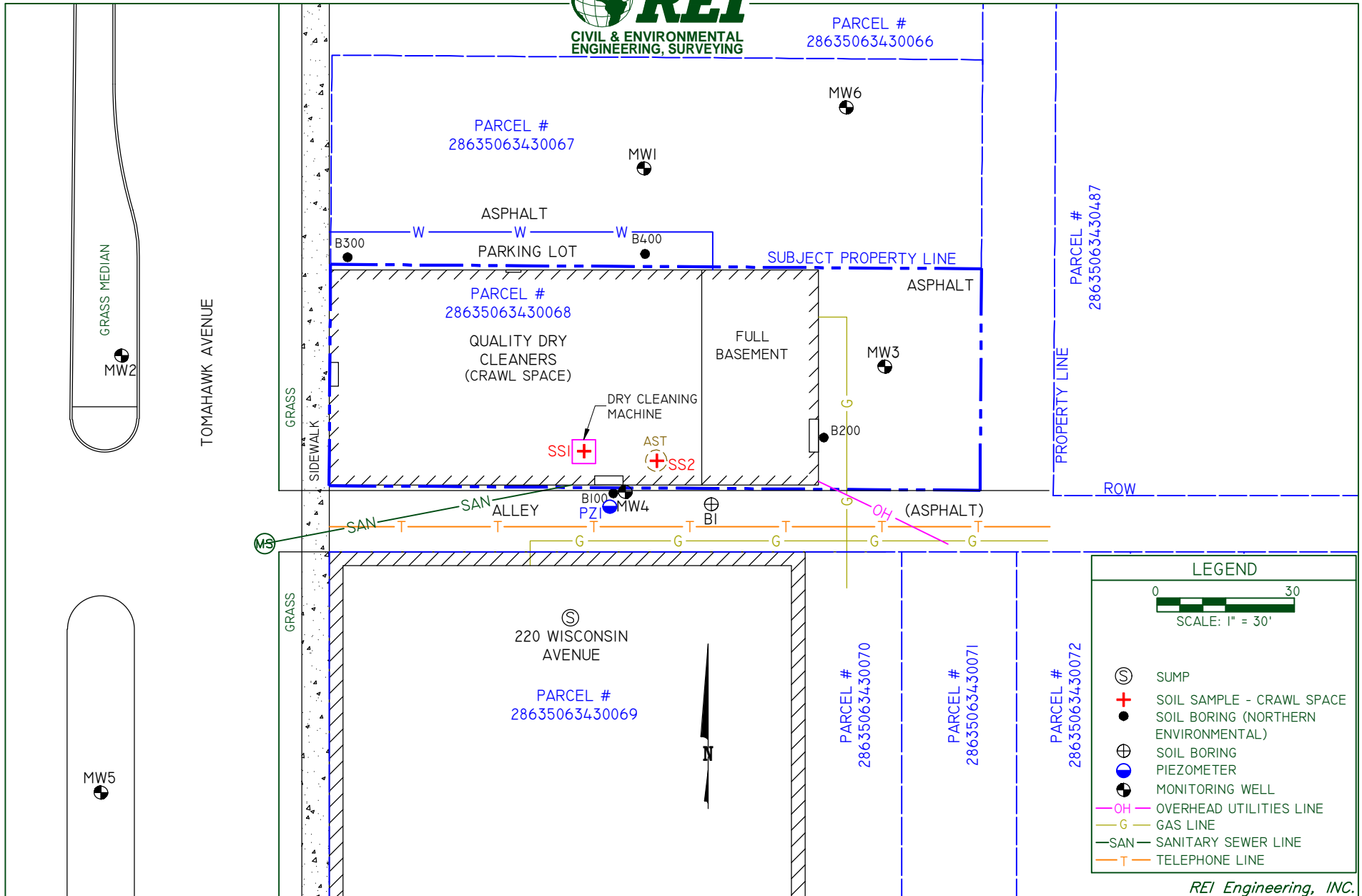
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QUALITY DRY CLEANERS  
 18 N. TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN

FIGURE B.1.a: LOCATION MAP

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QUALITY DRY CLEANERS  
 18 NORTH TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN 54487

FIGURE B.1.b : DETAILED SITE MAP

PROJECT NO.

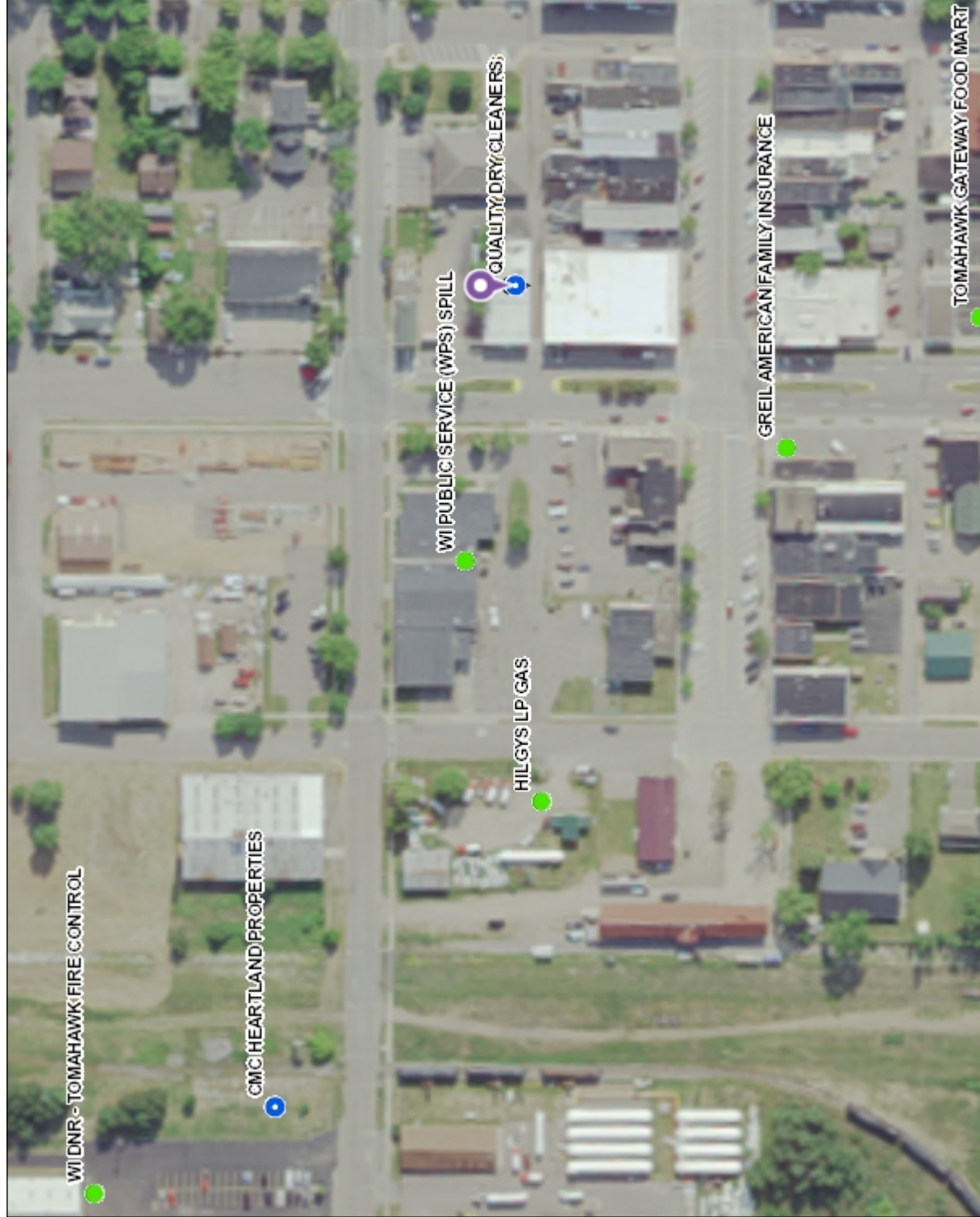
6345

DRAWN BY:  
TAW

DATE:  
10/10/2017



# Figure B.1.c RR Sites Map



### Legend

- Open Site (ongoing cleanup)
- Closed Site (completed cleanup)
- Dryclean Environmental Response Fund (DERF)
- Green Space Grant (2004-2009)
- Ready for Reuse
- Site Assessment Grant (2001-2009)
- State Funded Response
- Sustainable Urban Development Zone (SUDZ)

### Notes

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/legal/>

**Note: Not all sites are mapped.**

0.1 Miles

0.03

0

1: 1,980

NAD\_1983\_HARN\_Wisconsin\_TM

© Latitude Geographics Group Ltd.

PARCEL #  
28635063430066

PARCEL #  
28635063430067

MW1

MW6

ASPHALT  
B300 W B400  
PARKING LOT

SUBJECT PROPERTY LINE

PARCEL #  
28635063430068

QUALITY DRY  
CLEANERS  
(CRAWL SPACE)

FULL  
BASEMENT

MW3

DRY CLEANING  
MACHINE

SSI

AST

SS2

B200

PARCEL #  
28635063430487  
PROPERTY LINE

ROW

TOMAHAWK AVENUE

GRASS MEDIAN

MW2

GRASS  
SIDEWALK

GRASS

SAN ALLEY

B100

PZI

MW4

B1

OH (ASPHALT)

220 WISCONSIN  
AVENUE

PARCEL #  
28635063430069

PARCEL #  
28635063430070

PARCEL #  
28635063430071

MW5

**LEGEND**

- STRUCTURAL IMPEDIMENT
- ESTIMATED EXTENT OF PCE SOIL CONTAMINATION EXCEEDING GW PATHWAY RCL AT 0-2FT
- SOIL SAMPLE - CRAWL SPACE
- SOIL BORING (NORTHERN ENVIRONMENTAL)
- SOIL BORING
- PIEZOMETER
- MONITORING WELL
- OVERHEAD UTILITIES LINE
- GAS LINE
- SANITARY SEWER LINE
- TELEPHONE LINE

REI Engineering, INC.

QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WISCONSIN 54487

FIGURE B.2.a :SOIL CONTAMINATION – PCE

PROJECT NO.	6345	DRAWN BY: TAW	DATE: 10/10/2017
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PARCEL #  
 28635063430066

PARCEL #  
 28635063430067

PARCEL #  
 28635063430487

PARCEL #  
 28635063430068

MW6

MWI

ASPHALT  
 B300 W B400  
 PARKING LOT

SUBJECT PROPERTY LINE

ASPHALT

TOMAHAWK AVENUE

GRASS MEDIAN

MW2

GRASS

SIDEWALK

QUALITY DRY  
 CLEANERS  
 (CRAWL SPACE)

FULL  
 BASEMENT

MW3

DRY CLEANING  
 MACHINE

B200

SSI

AST

SS2

B100

PZI

MW4

BI

OH (ASPHALT)

ROW

MS

SAN

SAN

ALLEY

T

T

T

G

G

G

G

G

G

G

G

GRASS

220 WISCONSIN  
 AVENUE

PARCEL #  
 28635063430069

MW5

PARCEL #  
 28635063430070

PARCEL #  
 28635063430071

LEGEND



- STRUCTURAL IMPEDIMENT
- ESTIMATED EXTENT OF PCE SOIL CONTAMINATION EXCEEDING GW PATHWAY RCL AT 0-2FT
- SOIL SAMPLE - CRAWL SPACE
- SOIL BORING (NORTHERN ENVIRONMENTAL)
- SOIL BORING
- PIEZOMETER
- MONITORING WELL
- OH OVERHEAD UTILITIES LINE
- G GAS LINE
- SAN SANITARY SEWER LINE
- T TELEPHONE LINE

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QUALITY DRY CLEANERS  
 18 NORTH TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN 54487

FIGURE B.2.b :RESIDUAL SOIL CONTAMINATION – PCE

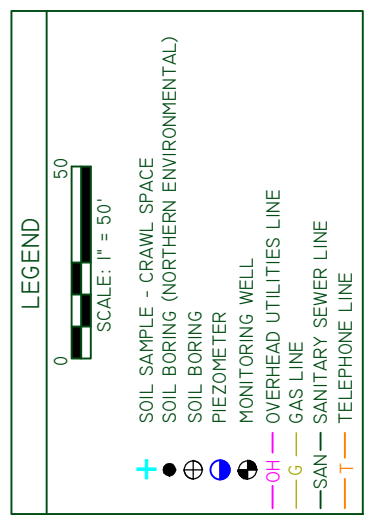
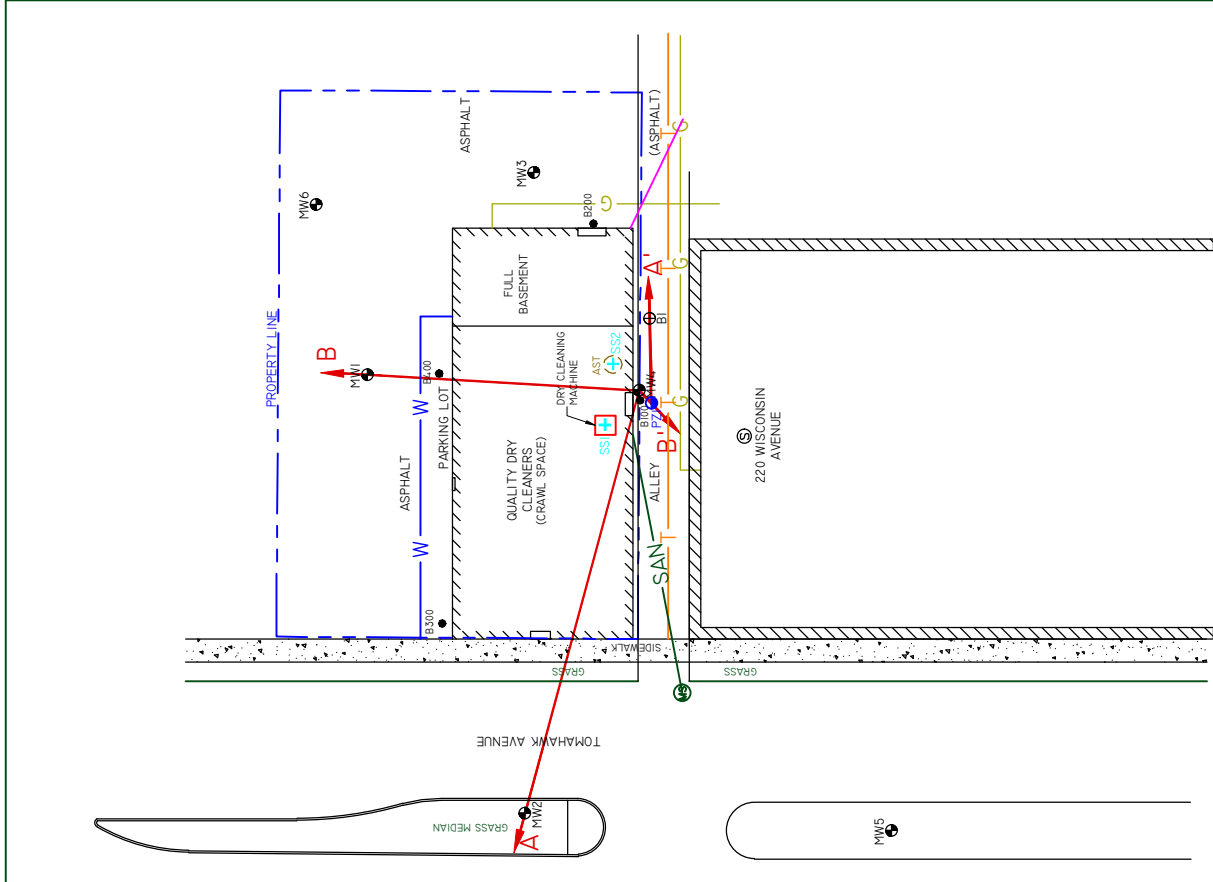
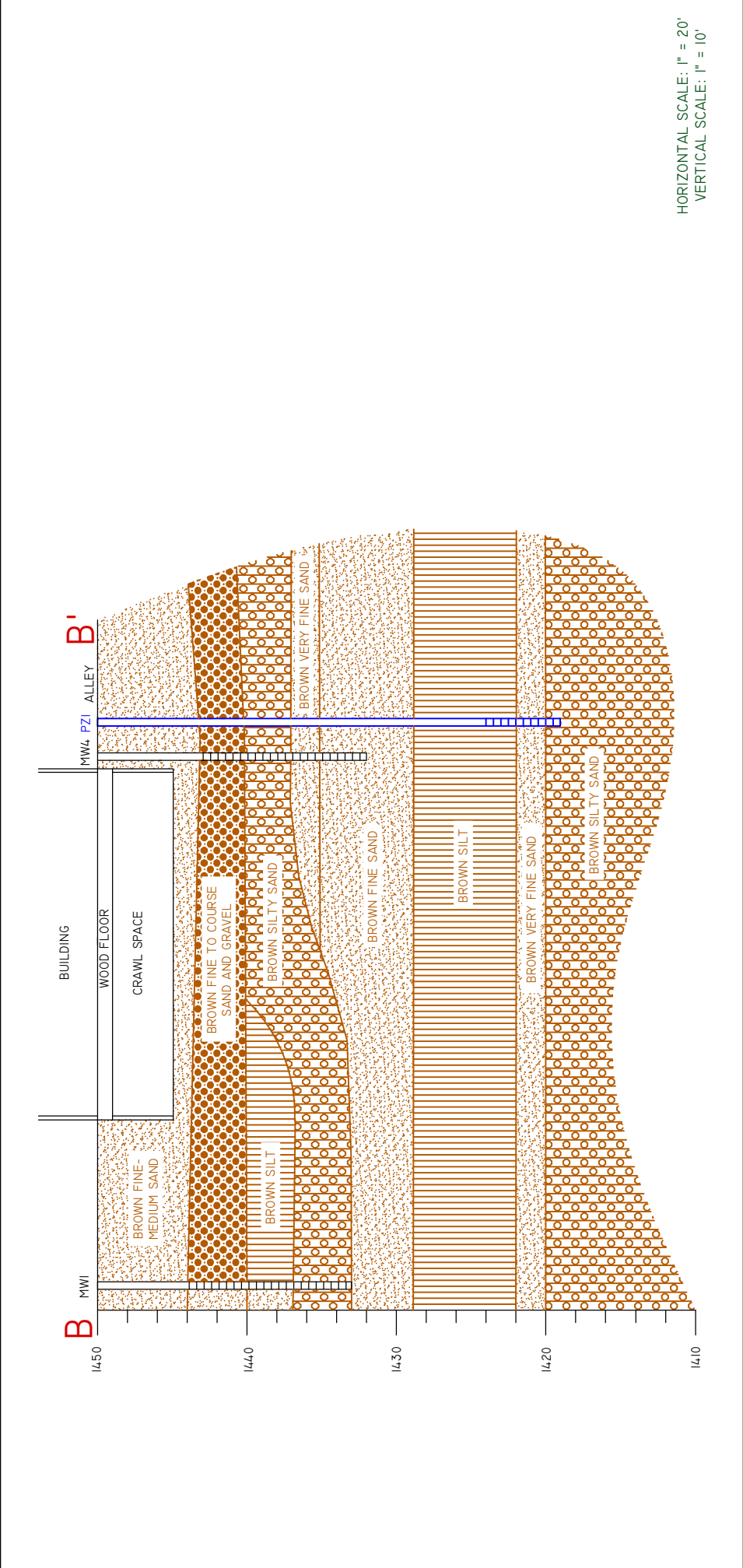
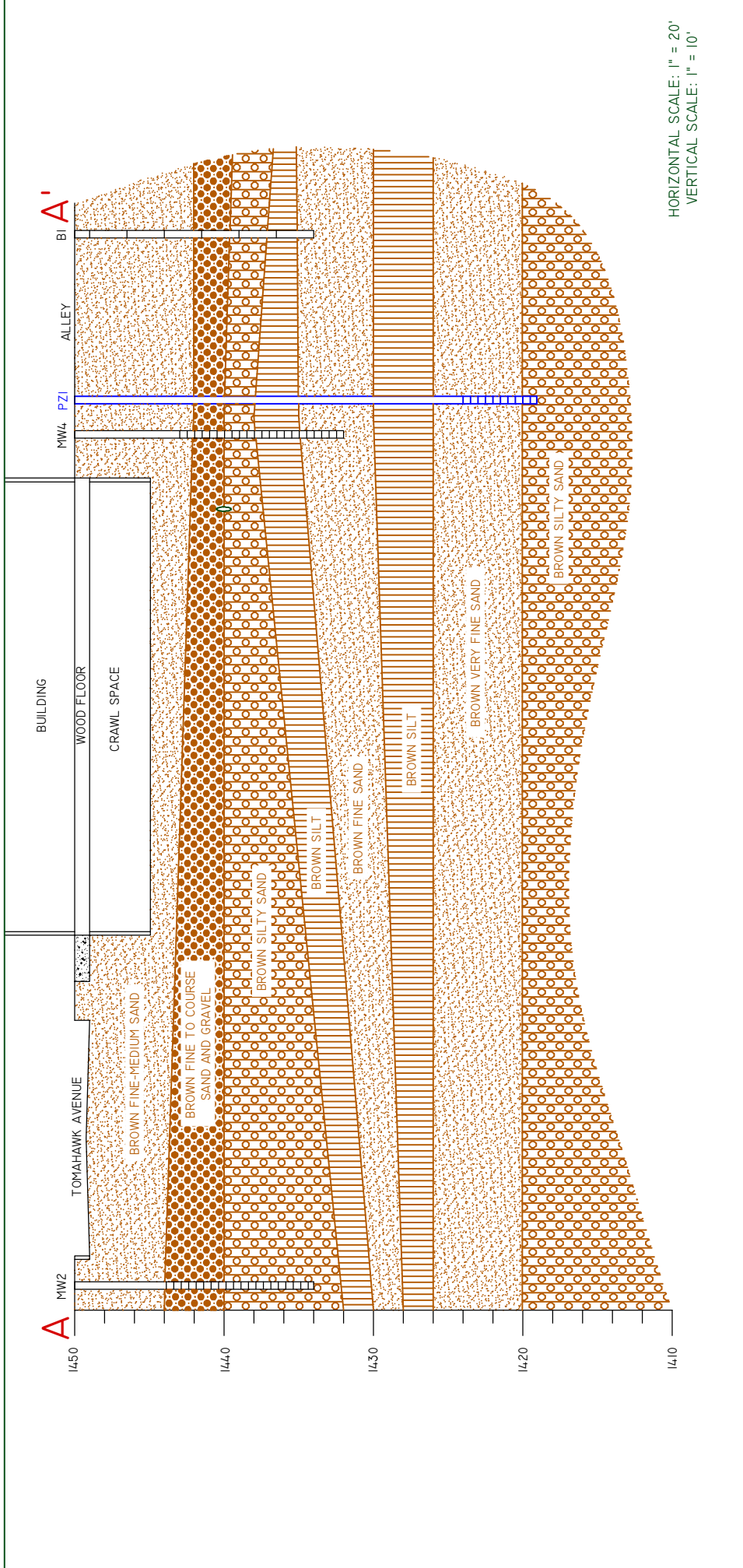
PROJECT NO.

6345

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 TAW

DATE:  
 8/21/2017







**REI**  
CIVIL & ENVIRONMENTAL  
ENGINEERING, SURVEYING

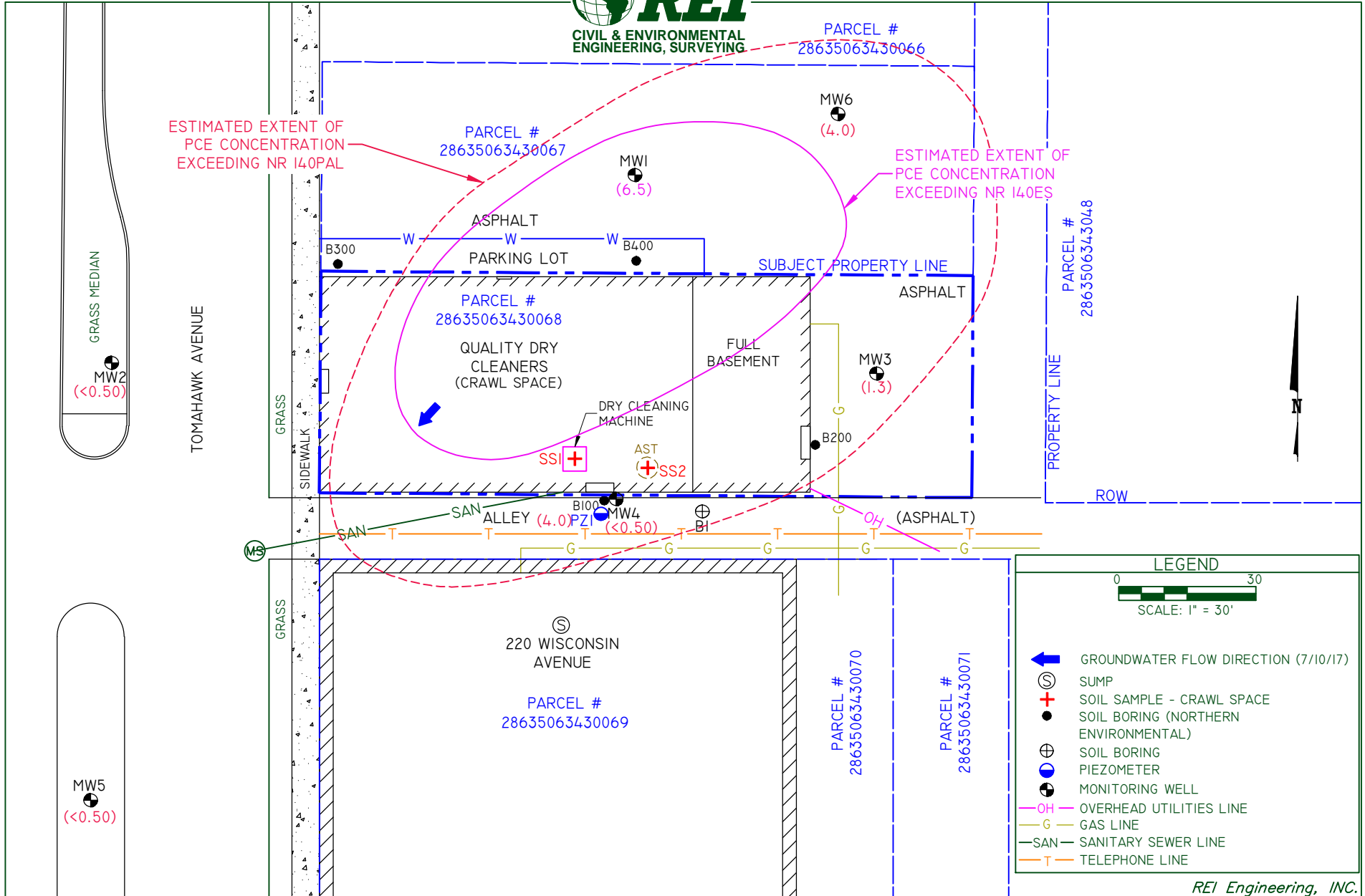
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WISCONSIN 54487

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FIGURE B.3.a: GEOLOGIC CROSS SECTION A-A' & B-B'












PROJECT No. 6345	DRAWN BY: TAW	DATE: 8/21/2017
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**LEGEND**

0  30  
SCALE: 1" = 30'

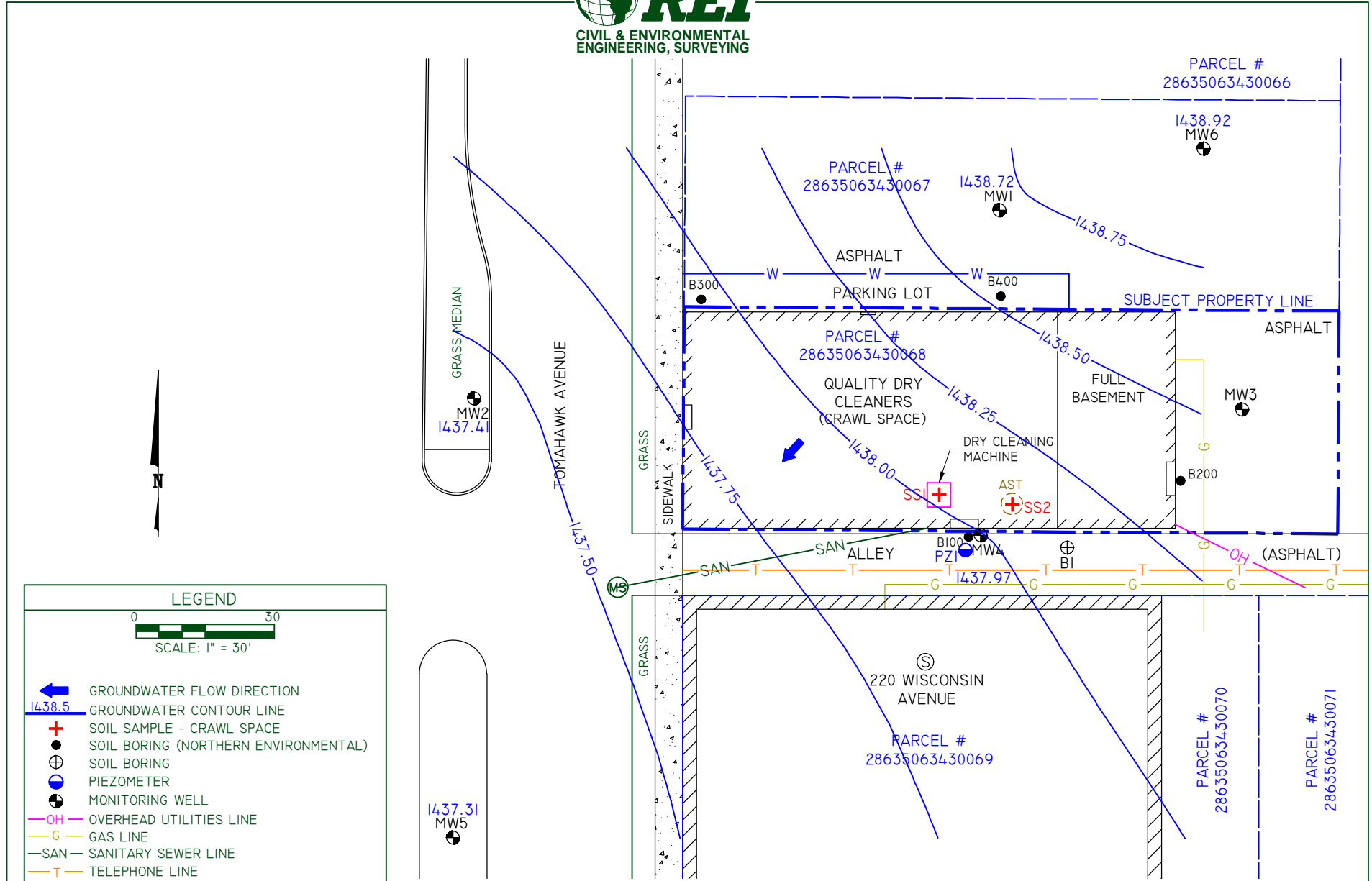
-  GROUNDWATER FLOW DIRECTION (7/10/17)
-  SUMP
-  SOIL SAMPLE - CRAWL SPACE
-  SOIL BORING (NORTHERN ENVIRONMENTAL)
-  SOIL BORING
-  PIEZOMETER
-  MONITORING WELL
-  OVERHEAD UTILITIES LINE
-  GAS LINE
-  SANITARY SEWER LINE
-  TELEPHONE LINE

REI Engineering, INC.

QUALITY DRY CLEANERS  
 18 NORTH TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN 54487

FIGURE B.3.b : GROUNDWATER ISOCONCENTRATION (07/10/17)

PROJECT NO.	6345	DRAWN BY:	TAW	DATE:	10/10/2017
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**LEGEND**

0 30  
 SCALE: 1" = 30'

- GROUNDWATER FLOW DIRECTION
- GROUNDWATER CONTOUR LINE
- SOIL SAMPLE - CRAWL SPACE
- SOIL BORING (NORTHERN ENVIRONMENTAL)
- SOIL BORING
- PIEZOMETER
- MONITORING WELL
- OVERHEAD UTILITIES LINE
- GAS LINE
- SANITARY SEWER LINE
- TELEPHONE LINE

REI Engineering, INC.

QUALITY DRY CLEANERS 18 NORTH TOMAHAWK AVENUE TOMAHAWK, WISCONSIN 54487		FIGURE B.3.c : GROUNDWATER FLOW DIRECTION (07/10/17)	
		PROJECT NO. 6345	DRAWN BY: TAW

PARCEL #  
28635063430066

PARCEL #  
28635063430067

MW1

MW6

ASPHALT  
PARKING LOT

SUBJECT PROPERTY LINE

PARCEL #  
28635063430068

QUALITY DRY  
CLEANERS  
(CRAWL SPACE)

FULL  
BASEMENT

ASPHALT

MW3

DRY CLEANING  
MACHINE

AST

MW4

BI

OH (ASPHALT)

TOMAHAWK AVENUE

GRASS MEDIAN

MW2

GRASS  
SIDEWALK

PARCEL #  
28635063430487

PROPERTY LINE

ROW

220 WISCONSIN  
AVENUE

PARCEL #  
28635063430069

PARCEL #  
28635063430070

PARCEL #  
28635063430071







PARCEL #  
28635063430072

MW5

GRASS

**LEGEND**

0 30  
SCALE: 1" = 30'

-  SUMP
-  MONITORING WELL (IN USE)
-  OVERHEAD UTILITIES LINE
-  GAS LINE
-  SANITARY SEWER LINE
-  TELEPHONE LINE

REI Engineering, INC.

QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WISCONSIN 54487

FIGURE B.3.d : MONITORING WELLS (IN USE)

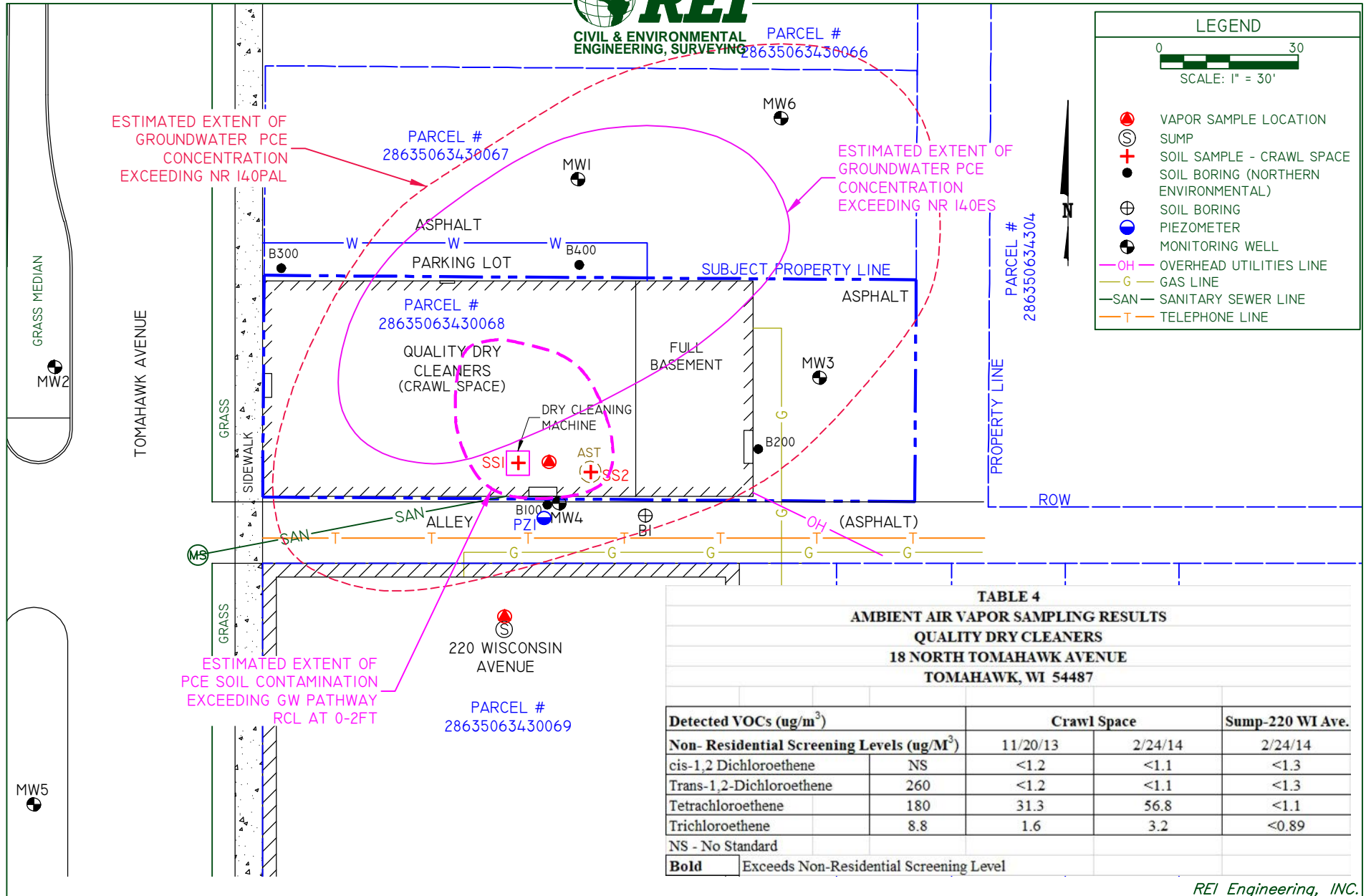
PROJECT NO.

6345

DRAWN BY:  
TAW

DATE:  
10/10/2017





**TABLE 4**  
**AMBIENT AIR VAPOR SAMPLING RESULTS**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

Detected VOCs (ug/m <sup>3</sup> )	Crawl Space			Sump-220 WI Ave.
	11/20/13	2/24/14	2/24/14	
<b>Non- Residential Screening Levels (ug/M<sup>3</sup>)</b>	11/20/13	2/24/14	2/24/14	
cis-1,2 Dichloroethene	NS	<1.2	<1.1	<1.3
Trans-1,2-Dichloroethene	260	<1.2	<1.1	<1.3
Tetrachloroethene	180	31.3	56.8	<1.1
Trichloroethene	8.8	1.6	3.2	<0.89
NS - No Standard				
<b>Bold</b>	Exceeds Non-Residential Screening Level			

REI Engineering, INC.

QUALITY DRY CLEANERS  
 18 NORTH TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN 54487

FIGURE B.4.a : VAPOR INTRUSION MAP

PROJECT NO.	6345	DRAWN BY:	TAW	DATE:	10/10/2017
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**B.4.b**  
**OTHER MEDIA OF CONCERN**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, there was no other affected media**

**B.4.c**  
**OTHER**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, there was no other relevant data**

B.5 - Structural Impediment Photos



Dry cleaner building, facing east through alley



Dry cleaner building, facing west through alley

## **TABLE OF CONTENTS**

### **Attachment C: Documentation of Remedial Action**

C.1. Site Investigation Documentation Not Previously Submitted – Not applicable

C.2. Investigative Waste Documentation – Not applicable

C.3. Methodology for Determining Residual Contaminant Levels (RCLs) – Current standards and tables used to determine RCLs

C.4. Construction Documentation – Not applicable, no remediation systems utilized

C.5. Decommissioning of Remedial Systems – Not applicable, no remedial systems were installed

### **C.6. Other – Contaminant Graphs**

**C.6.a – PCE vs. Groundwater Elevation and Time at MW1**

**C.6.b – PCE vs. Groundwater Elevation and Time at MW3**

**C.6.c – PCE vs. Groundwater Elevation and Time at MW4**

**C.6.d – PCE vs. Groundwater Elevation and Time at PZ1**

**C.6.e – PCE vs. Groundwater Elevation and Time at MW6**



**C.1**  
**SITE INVESTIGATION DOCUMENTATION NOT PREVIOUSLY SUBMITTED**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, all investigative data included in previous reports**

C.2  
INVESTIGATIVE WASTE DOCUMENTATION  
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WI 54487

**Not Applicable, all investigative waste disposal documentation previously submitted**

**C.3**  
**METHODOLOGY FOR DETERMINING RESIDUAL CONTAMINANT LEVELS (RCLs)**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, default RCLs were used**

**C.4**  
**CONSTRUCTION DOCUMENTATION**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, no remedial systems or source removal was utilized**

**C.5**  
**DECOMMISSIONING OF REMEDIAL SYSTEMS**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, no remedial systems were installed**



Figure C.6.a - PCE vs. Groundwater Elevation and Time at MW1



Figure C.6.b - PCE vs. Groundwater Elevation and Time at MW3

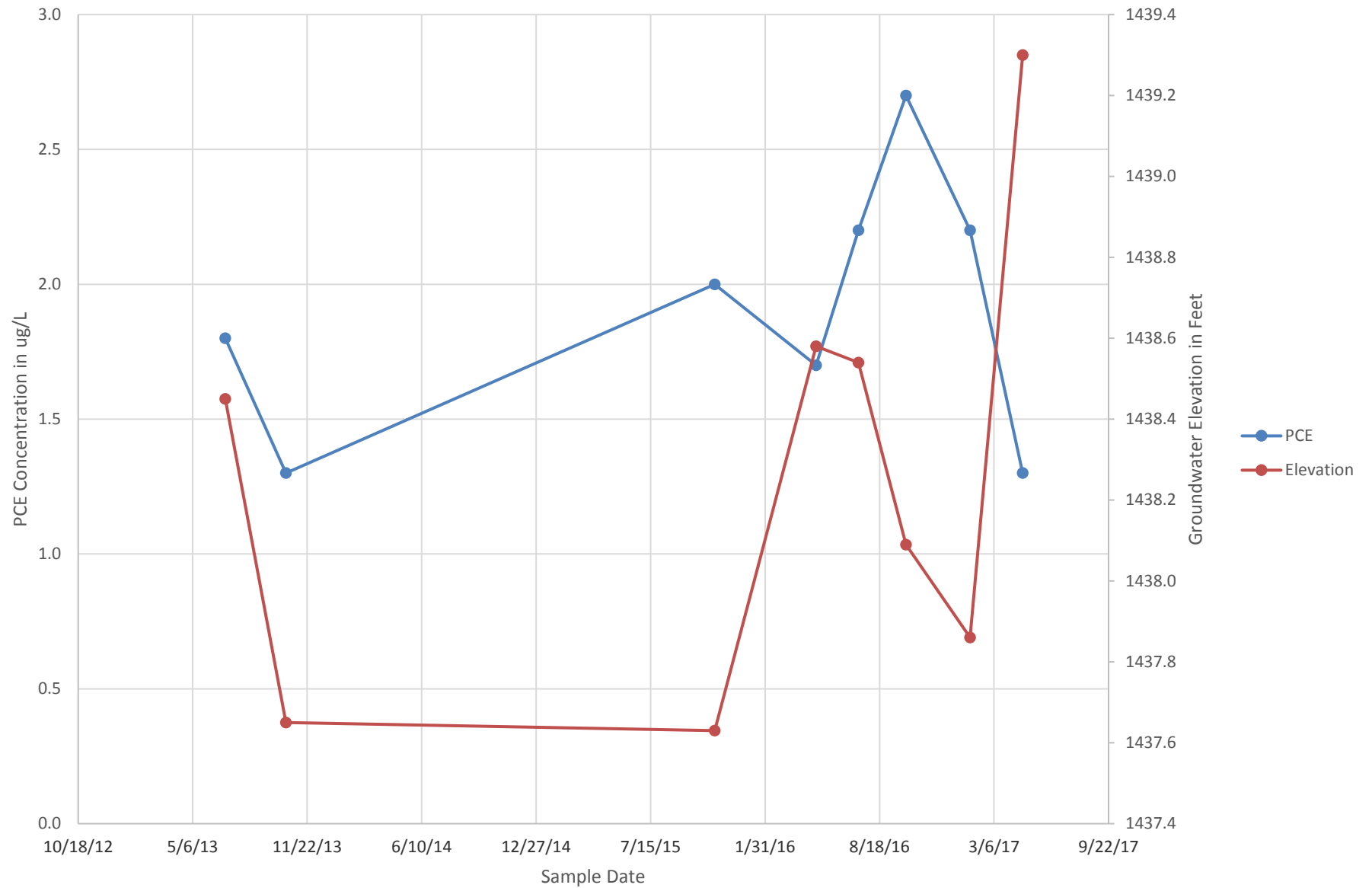


Figure C.6.c - PCE vs. Groundwater Elevation and Time at MW4

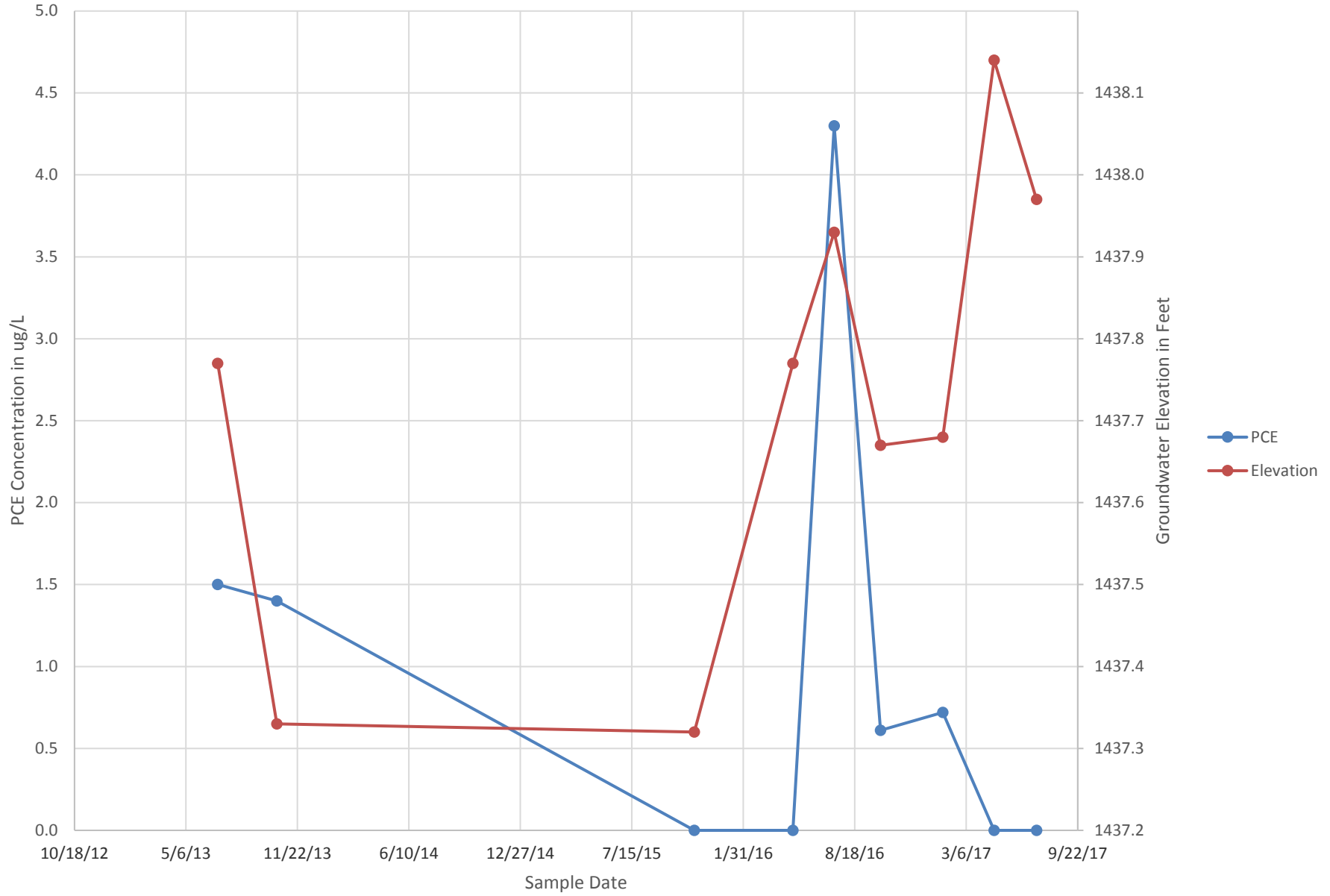


Figure C.6.d - PCE vs. Groundwater Elevation and Time at PZ1

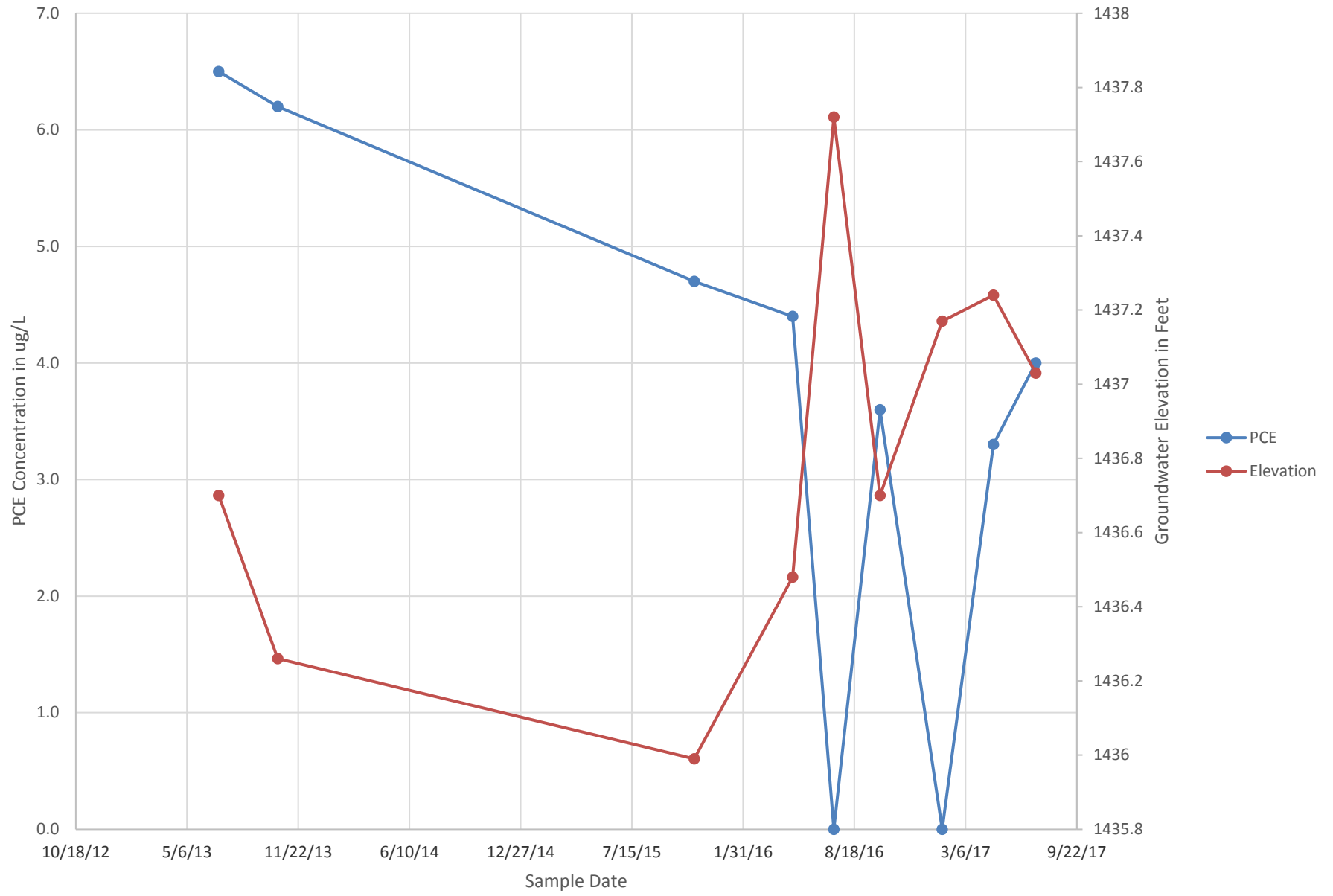


Figure C.6.e - PCE vs. Groundwater Elevation and Time at MW6





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### **Attachment D: Maintenance Plan(s) and Photographs**

D.1. Descriptions of maintenance action(s) required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required – Not applicable, no maintenance plan required

D.2. Location Map – Not applicable, no maintenance plan required

D.3. Photographs – Not applicable, no maintenance plan required

D.4. Inspection Log – Not applicable, no maintenance plan required

**D.1**  
**DESCRIPTIONS OF MAINTENANCE ACTIONS REQUIRED**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, no maintenance plan is required. Soil exceeding direct contact standards is not present**

**D.2  
LOCATION MAP  
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WI 54487**

**Not Applicable, no maintenance plan is required.**

**D.3  
PHOTOGRAPHS  
QUALITY DRY CLEANERS  
18 NORTH TOMAHAWK AVENUE  
TOMAHAWK, WI 54487**

**Not Applicable, no maintenance plan is required. Photos of structural  
impediment included as B.5**

**D.4**  
**INSPECTION LOG**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, no maintenance plan is required.**



## **TABLE OF CONTENTS**

### **Attachment E: Monitoring Well Information**

Not applicable – All monitoring wells have been located and will be abandoned upon closure

**E**  
**MONITORING WELLS**  
**QUALITY DRY CLEANERS**  
**18 NORTH TOMAHAWK AVENUE**  
**TOMAHAWK, WI 54487**

**Not Applicable, all monitoring wells have been located and will be abandoned  
upon closure**

## **TABLE OF CONTENTS**

### **Attachment F: Source Legal Documents**

**F.1. Deed**

**F.2. Lincoln County Parcel map in lieu of CSM**

**F.3. Verification of Zoning – Current tax assessment included**

**F.4. Signed Statement**

F.1 Source Property Deed



\* 4 8 8 3 0 5 2 \*

APPLICATION FOR THE TERMINATION OF DECEDENT'S INTEREST AND CONFIRMATION OF APPLICANT'S INTEREST IN PROPERTY

488305

SARAH L. KOSS LINCOLN COUNTY, WI REGISTER OF DEEDS

04/29/2011 01:58:59PM

REC FEE: 30.00 PAGES: 2

Recording area

Use black ink

Table with DECEDENT'S NAME (Terry Michael Collins, Sr), DATE OF DEATH (01-01-2010), ADDRESS OF DECEDENT AT DATE OF DEATH (W6504 Hwy 8), CITY (Tomahawk), ST (WI), ZIP (54487)

PRESENTATION OF DEATH CERTIFICATE

I certify that I have viewed a certified copy of the decedent's death certificate.

Signature: Beth M. Humphrey, Deputy; DATE: 4/29/11; REGISTER OF DEEDS SIGNATURE

Name and return address:

Charlotte D. Collins 18 N. Tomahawk Av. Tomahawk, WI 54487

THE INTEREST OF THE DECEDENT IN THE PROPERTY NOTED HEREIN IS HEREBY TERMINATED/CONFIRMED UNDER THE FOLLOWING STATUTE (please check appropriate statute)

s. 867.045 which pertains to real property in which the decedent was a joint tenant, had a vendor's or mortgagee's interest, or had a life estate.

s. 867.046 which pertains to property of a decedent specified in a marital property agreement; survivorship marital property; or a third party confirmation; or a nonprobate transfer on death as described in s.705.10(1).

\$30.00 pd cK #512

Parcel Identification Number SEND TAX STATEMENT TO:

Presentation of recorded document establishing interest in real estate.

DOCUMENT # VOLUME/REEL PAGE/IMAGE RECORDS/DEEDS

#286490 V-415 P-603

Description of the real estate.

See Attached

Description of personal property (if any) being transferred.

You may list savings accounts, checking accounts and securities on attached pages. Indicate person(s) receiving property. DECLARATION: I(We) declare that this document is, to the best of my(our) knowledge and belief, true, correct and complete and is in conformity with the provisions and limitations of the Wisconsin Statutes.

Table with 4 columns: Name and Address, Applicant's Interest in Property, Applicant Signature (Notarized), Date. Row 1: Charlotte D. Collins, Spouse, Charlotte D. Collins, 4/29/2011

This document was drafted by: (print or type name below)

STATE OF WISCONSIN, County of Lincoln Subscribed and sworn to before me on:

4/29/2011

CHARLOTTE COLLINS

by the above named person(s):

NOTE: SEE DIRECTIONS. Wisconsin Register of Deeds Association Form HT-110 Website Version 05/27/2010

Signature of Notary or other person authorized to administer an oath (as per s 706.06, 706.07) Print or type name:

Title: Notary

Notary Public Seal: Sarah A. Powell, Notary Public, State of Wisconsin, Commission Expires: 9/25/2011

THIS IS A STANDARD FORM. ANY MODIFICATIONS TO THIS FORM SHOULD BE CLEARLY IDENTIFIED.

F.1 Source Property Deed

DOCUMENT NO. 286490

STATE BAR OF WISCONSIN FORM 1 - 1982 WARRANTY DEED

THIS SPACE RESERVED FOR RECORDING DATA

LINCOLN COUNTY, WIS.

Received for Record the 9

Day of MAY A.D. 1986

11:55 o'clock A.M. and Recorded in

Vol. 415 of RECORDS on page 603

Handwritten signature and REGISTER OF DEEDS

This Deed, made between Howard Wurl and Betty J. Wurl, his wife as Survivorship marital property

Witnesseth, That the said Grantor, for a valuable consideration of one dollar and other good and valuable consideration conveys to Grantee the following described real estate in Lincoln County, State of Wisconsin:

Lots Three (3), Four (4), Five (5) and Six (6) in Block Eight (8) of the Original Plat of the City of Tomahawk, Lincoln County, Wisconsin.

Tax Parcel No:

RETURN TO NORTHERN ABSTRACT & TITLE CO. 4-00-PD

TRANSFER \$54.00 JBB

This is not homestead property.

Together with all and singular the hereditaments and appurtenances thereunto belonging; And warrants that the title is good, indefeasible in fee simple and free and clear of encumbrances except none.

and will warrant and defend the same.

Dated this 29th day of April, 1986

Signatures of Howard Wurl and Betty J. Wurl with seals.

AUTHENTICATION

Signature(s)

authenticated this day of 19

TITLE: MEMBER STATE BAR OF WISCONSIN

(If not authorized by § 706.06, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY MARK D. ALBERG Attorney at Law

(Signatures may be authenticated or acknowledged. Both are not necessary.)

\*Names of persons signing in any capacity should be typed or printed below their signatures.

ACKNOWLEDGMENT

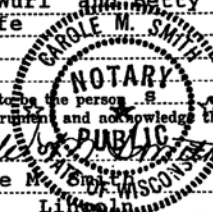
STATE OF WISCONSIN

LINCOLN County, as.

Personally came before me this 29th day of April, 1986 the above named Howard Wurl and Betty J. Wurl, his wife

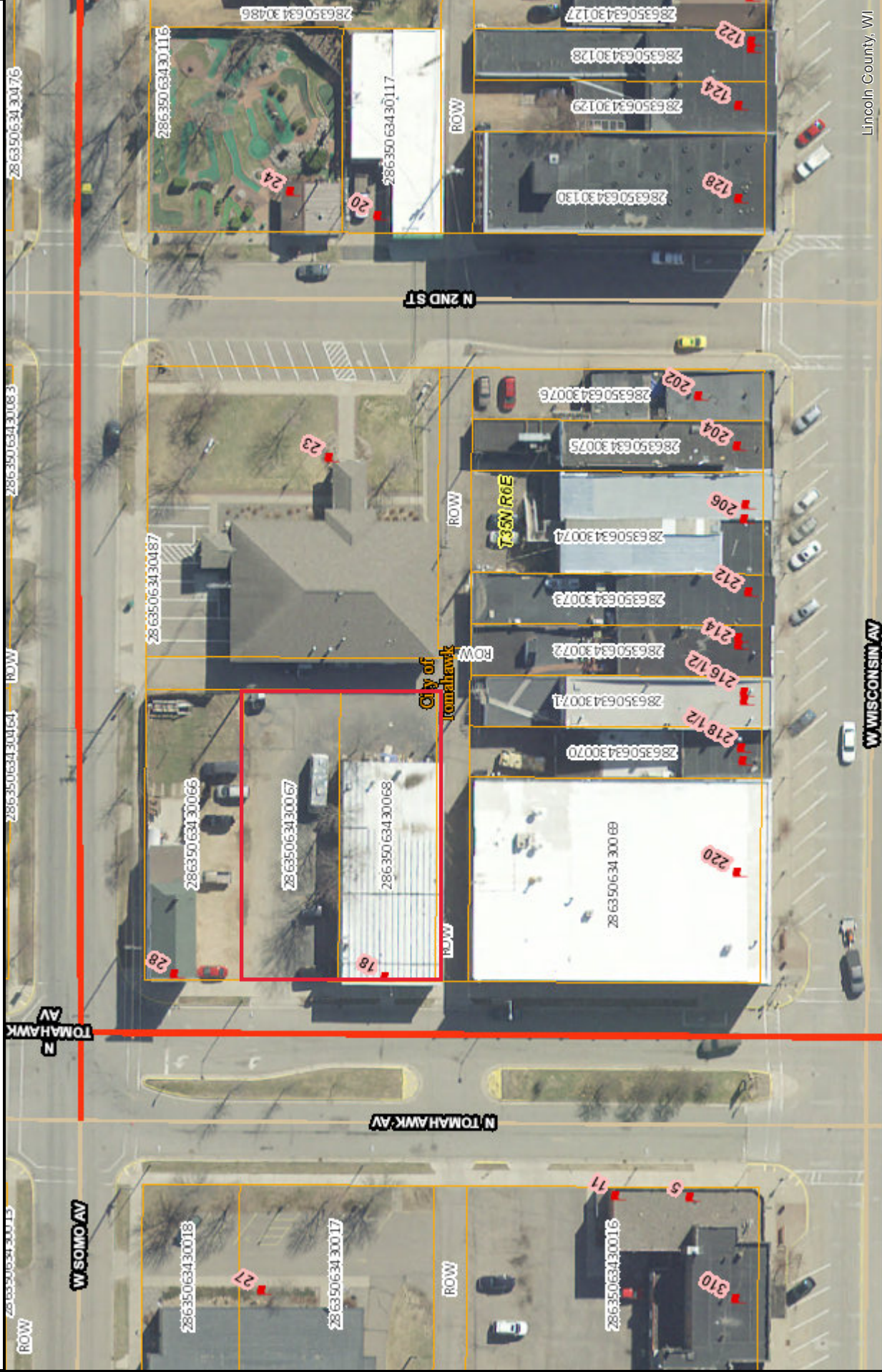
to me known to be the person who executed the foregoing instrument and acknowledged the same.

Notary Public Carole M. Smith, Lincoln County, Wis. My Commission is permanent. (If not, state expiration date: May 10, 1987...)





# F.2 Lincoln County Map



Author: Public  
Date Printed: 8/22/2017



The information depicted on this map is a compilation of public record information including aerial photography and other base maps. No warranty is made, express or implied, as to the accuracy of the information used. The data layers are a representation of current data to the best of our knowledge and may contain errors. It is not a legally recorded map and cannot be substituted for field-verified information. Map may be reproduced with permission of the Lincoln County Land Services Department. Errors should be reported to Land Services Department, 801 North Sales St. Merrill, WI, 54452. Copyright © 2015 Phone (715) 539-1049.

Lincoln County, WI

F.3 Verification of Zoning

Lincoln County Land Record

Report Generated:  
8/1/2017 at 12:15:37 PM



**Request:** 28635063430068  
**PIN:** 286-3506-343-0068  
**Parcel:** 36-0002-000-157-00-00  
**Municipality:** City of TOMAHAWK

For reference purposes only.

No warranties are expressed or implied for the data provided.

**View Type:** Public

**Account:** None

**Record Navigation Bar:**
◀ PIN ▶
◀ Address ▶

**(1) General Parcel Information:**

**PIN** 286-3506-343-0068  
**Parcel Number** 36-0002-000-157-00-00  
**Parcel Status** Active  
**Sale Type** ADDITIONAL PARCELS  
**Sale Date** 04/29/2011  
**Sale Amount** \$0.00  
**Transfer Tax** \$0.00  
**Deed Type** Termination of Jnt P  
**Deed Reference** D0488305  
**Mailing Address** 18 N TOMAHAWK AV  
TOMAHAWK , WI  
54487

**(3) Parcel Addresses:**

Address # 1 18 N TOMAHAWK AV TOMAHAWK, WI 54487

**(4) Parcel Descriptions:**

Year	Acre	Description
1994	N/A	ORIGINAL PLAT OF TOMAHAWK LOTS 5 & 6 BLK 8 *157

**(5) Parcel Assessment:**

Year	Use	Acre	Land Value	Improvement Value	Total Value
2013	COMMERCIAL	0.00	\$6,500.00	\$36,500.00	
	Totals for 2013	0.00	\$6,500.00	\$36,500.00	\$43,000.00
2010	COMMERCIAL	0.00	\$6,500.00	\$54,300.00	
	Totals for 2010	0.00	\$6,500.00	\$54,300.00	\$60,800.00
2003	COMMERCIAL	0.00	\$6,700.00	\$54,000.00	
	Totals for 2003	0.00	\$6,700.00	\$54,000.00	\$60,700.00
2001	COMMERCIAL	0.00	\$5,400.00	\$40,200.00	

October 9, 2017

**Ms. Charlotte Collins**  
18 N Tomahawk Ave  
Tomahawk, WI 54487

**Subject:**

Quality Dry Cleaners  
WDNR BRRTS #: 02-35-551789  
18 N Tomahawk Ave  
Tomahawk, WI 54487

**(1) Lots Three (3), Four (4), Five (5) and Six (6) in Block Eight (8) of the  
Original Plat of the City of Tomahawk, Lincoln County, Wisconsin.**

I have reviewed the above mentioned legal description, and herby certify that they are correct for the Quality Dry Cleaners site in Tomahawk, WI



10-12-17

**Ms. Charlotte Collins, Owner, Quality Dry Cleaners**

**Date**

RECEIVED  
OCT 10 2017

## **TABLE OF CONTENTS**

### **Attachment G: Signed Statement for Other Affected Properties**

#### **G.a Notification to the City of Tomahawk for soil contamination in ROW**



**The affected property is:**

- the source property (the source of the hazardous substance discharge), but the property is not owned by the person who conducted the cleanup (a deeded property)
- a deeded property affected by contamination from the source property
- a right-of-way (ROW)
- a Department of Transportation (DOT) ROW

**Include this completed page as an attachment with all notifications provided under sections A and B.**

**Contact Information**

**Responsible Party:** The person responsible for sending this form, and for conducting the environmental investigation and cleanup is:

Responsible Party Name Ms. Dawn Collins

Contact Person Last Name	First	MI	Phone Number (include area code)	
Collins	Dawn			
Address		City	State	ZIP Code
18 N Tomahawk Ave		Tomahawk	WI	54487
E-mail				

**Name of Party Receiving Notification:**

Business Name, if applicable: City of Tomahawk

Title	Last Name	First	MI	Phone Number (include area code)	
Mr.	Cole	John		(715) 453-3654	
Address		City	State	ZIP Code	
415 W Spirit Ave (PO Box 469)		Tomahawk	WI	54487	

**Site Name and Source Property Information:**

Site (Activity) Name Quality Dry Cleaners

Address		City	State	ZIP Code
18 N Tomahawk Ave		Wausau	WI	54487
DNR ID # (BRRTS#)	(DATCP) ID #			
02-35-551789				

**Contacts for Questions:**

If you have any questions regarding the cleanup or about this notification, please contact the Responsible Party identified above, or contact:

**Environmental Consultant:** REI Engineering, Inc.

Contact Person Last Name	First	MI	Phone Number (include area code)	
Delforge	Andrew		(715) 675-9784	
Address		City	State	ZIP Code
4080 N. 20th Ave		Wausau	WI	54401
E-mail sblado@reiengineering.com				

**Department Contact:**

To review the Department's case file, or for questions on cleanups or closure requirements, contact:

Department of: Natural Resources (DNR)

Address		City	State	ZIP Code
107 Sutliff Ave		Rhinelanders	WI	54501
Contact Person Last Name	First	MI	Phone Number (include area code)	
Stoltz	Carrie		(715) 365-8942	
E-mail (Firstname.Lastname@wisconsin.gov) Carrie.Stoltz@wisconsin.gov				



**Notification of Continuing Obligations  
and Residual Contamination**  
Form 4400-286 (9/15)

**Section B: ROW Notification: Residual Contamination and/or Continuing Obligations - Non-DOT ROWs**

**KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS**

415 W Spirit Ave (PO Box 469)  
Tomahawk, WI, 54487

Dear Mr. Cole:

I am providing this notification to inform you of the location and extent of contamination remaining in a right-of-way for which you are responsible, and of certain long-term responsibilities (continuing obligations) for which city of Tomahawk may become responsible. I investigated a release of:

tetrachlorethene (PCE)

on 18 N Tomahawk Ave, Wausau, WI, 54487 that has shown that contamination

has migrated into the right-of-way for which city of Tomahawk is responsible.

I have responded to the release, and will be requesting that the Department of Natural Resources (DNR) grant case closure. Closure means that the DNR will not be requiring any further investigation or cleanup action to be taken. However, continuing obligations may be imposed as a condition of closure approval.

**You have 30 days to comment on the proposed closure request:**

The DNR will not review my closure request for at least 30 days after the date of this letter. As an affected right-of-way holder, you have a right to contact the DNR to provide any technical information that you may have that indicates that closure should not be granted for this site. If you would like to submit any information to the DNR that is relevant to this closure request, you should mail that information to the DNR contact: 107 Sutliff Ave, Rhinelander, WI, 54501, or at Carrie.Stoltz@wisconsin.gov.

**Residual Contamination:**

**Soil Contamination:**

Soil contamination remains at:  
in the alleyway, just south of the Quality Dry Cleaners site at 18 N Tomahawk Ave.

The remaining contaminants include:  
tetrachloroethene (PCE)

at levels which exceed the soil standards found in ch. NR 720, Wis. Adm. Code. The following steps have been taken to address any exposure to the remaining soil contamination.

Asphalt in the alleyway overlays the contaminated area, and levels of PCE are below WDNR direct contact standards.

If residual soil or groundwater contamination is likely to affect water collected in a pit/trench that requires dewatering, a general permit for Discharge of Contaminated Groundwater from Remedial Action Operations may be needed. If you or any other person plan to conduct utility or building construction for which dewatering will be necessary, you or that person must contact the DNR's Water Quality Program, and if necessary, apply for the necessary discharge permit. Additional information regarding discharge permits is available at <http://dnr.wi.gov/topic/wastewater/GeneralPermits.html>.

**Continuing Obligations on the Right-of-Way (ROW):** As part of the response actions, I am proposing that the following continuing obligations be used at the affected ROW. If my closure request is approved, you will be responsible for the following continuing obligations:

**Residual Soil Contamination:**

If soil is excavated from the areas with residual contamination, the right-of-way holder at the time of excavation will be responsible for the following:

- determine if contamination is present,
- determine whether the material would be considered solid or hazardous waste,
- ensure that any storage, treatment or disposal is in compliance with applicable statutes and rules. Contaminated soil may be managed in-place, in accordance with s. NR 718, Wis. Adm. Code, with prior Department approval.

The right-of-way holder needs 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 from ingestion, inhalation or dermal contact.

Depending on site-specific conditions, construction over contaminated soils or groundwater 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.

**GIS Registry and Well Construction Requirements:**

If this site is closed, all properties within the site boundaries where contamination remains, or where a continuing obligation is applied, will be listed on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web, at <http://dnr.wi.gov/topic/Brownfields/clean.html>. Inclusion on this database provides public notice of remaining contamination and of any continuing obligations. Documents can be viewed on this database, and include final closure letters, site maps and any applicable maintenance plans. The location of the site may also be viewed on the Remediation and Redevelopment Sites Map (RR Sites Map), on the "GIS Registry" layer, at the same internet address listed above.

DNR approval prior to well construction or reconstruction is required for all sites included in the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. Special well construction standards may be necessary to protect the well from the remaining contamination. Well drillers need to first obtain approval from a regional water supply specialist in DNR's Drinking Water and Groundwater Program. The well construction application, form 3300-254, is on the internet at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

If you have any questions regarding this notification, I can be reached at: (715) 675-9784  
adelforge@reiengineering.com

*Signature of responsible party/environmental consultant for the responsible party*

Date Signed

8/2/10

**Attachments**

Contact Information

Legal Description for each Parcel:







# City of Tomahawk - ROW



1

QUALITY CLEANERS

X: 540855.61633  
Y: 555370.69660

0.0

0

0.01

0.0 Miles



NAD\_1983\_HARN\_Wisconsin\_TM

1: 495



© Latitude Geographics Group Ltd.

## Notes

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/org/legal/>

**Note: Not all sites are mapped.**

## Legend

- Open Site (ongoing cleanup)
- Closed Site (completed cleanup)





SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

John Cole  
 415 W Spirit Ave  
 PO Box 469  
 Tomahawk, WI 54487



9590 9402 2406 6249 7442 88

2. Article Number (Transfer from service label)

7016 0910 0001 5653 2361

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Brenda Cross

- Agent
- Addressee

B. Received by (Printed Name)

Brenda Cross

C. Date of Delivery

08 24 17

D. Is delivery address different from Item 1? If YES, enter delivery address below:

- Yes
- No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation™
- Signature Confirmation Restricted Delivery

PARCEL #  
28635063430066

PARCEL #  
28635063430067

MW1

MW6

ASPHALT  
 B300 W B400  
 PARKING LOT

SUBJECT PROPERTY LINE

PARCEL #  
28635063430068

QUALITY DRY  
 CLEANERS  
 (CRAWL SPACE)

FULL  
 BASEMENT

ASPHALT

MW3

DRY CLEANING  
 MACHINE

SSI

AST

SS2

B200

PARCEL #  
28635063430487

PROPERTY LINE

ROW

TOMAHAWK AVENUE

GRASS MEDIAN

MW2

GRASS  
 SIDEWALK

GRASS

220 WISCONSIN  
 AVENUE

PARCEL #  
28635063430069

PARCEL #  
28635063430070

PARCEL #  
28635063430071

MW5

SAN

SAN

ALLEY

B100

PZI

MW4

B1

OH

(ASPHALT)

G

G

G

G

G

G

G

G

LEGEND



SCALE: 1" = 30'

- STRUCTURAL IMPEDIMENT
- ESTIMATED EXTENT OF PCE SOIL  
CONTAMINATION EXCEEDING GW PATHWAY  
RCL AT 0-2FT
- SOIL SAMPLE - CRAWL SPACE
- SOIL BORING (NORTHERN ENVIRONMENTAL)
- SOIL BORING
- PIEZOMETER
- MONITORING WELL
- OVERHEAD UTILITIES LINE
- GAS LINE
- SANITARY SEWER LINE
- TELEPHONE LINE

REI Engineering, INC.

QUALITY DRY CLEANERS  
 18 NORTH TOMAHAWK AVENUE  
 TOMAHAWK, WISCONSIN 54487

FIGURE B.2.a :SOIL CONTAMINATION – PCE

PROJECT NO.

6345

DRAWN BY:  
TAW

DATE:

10/10/2017





January 31, 2018

CITY OF TOMAHAWK  
ATTN: JOHN COLE  
415 W SPIRIT AVE  
PO BOX 469  
TOMAHAWK WI 54487

SUBJECT: Notice of Closure Approval with Continuing Obligations for Rights-of-Way Holders for the Alleyway South of 18 North Tomahawk Avenue  
Final Case Closure for Quality Cleaners, 18 North Tomahawk Ave, Tomahawk  
DNR BRRTS Activity #02-35-551789

Dear Mr. Cole:

The Department of Natural Resources (DNR) recently approved the completion of environmental work done at the Quality Cleaners site. This letter describes how that approval applies to the right-of-way (ROW) at the alleyway to the south of 18 North Tomahawk Avenue. As the right-of-way holder, the City of Tomahawk is responsible for complying with these continuing obligations for any work you conduct in the ROW.

State law directs parties responsible for environmental contamination to take actions to restore the environment and minimize harmful effects. The law allows some contamination to remain in soil and groundwater if it does not pose a threat to public health, safety, welfare or to the environment.

On August 24, 2017, you received information from REI about the tetrachloroethylene (PCE) contamination in the ROW from Quality Cleaners, located at 18 North Tomahawk Avenue, and about the continuing obligations. Continuing obligations are meant to limit exposure to any remaining contamination.

#### Applicable Continuing Obligations

The continuing obligations that apply to this right-of-way are described below, and are consistent with Wis. Stat. § 292.12, and Wis. Admin. § NR 700 series.

Residual Soil Contamination (ch. NR 718, chs. 500 to 536, Wis. Adm. Code or ch. 289, Wis. Stats.)

Soil contamination remains under the existing site building around the former dry-cleaning machine and former solvent above-ground storage tank and extends into the alley right-of-way south of the site, as indicated on the attached Figure B.2.b, Residual Soil Contamination - PCE, prepared by REI and dated August 21, 2017. If soil in the specific locations described above is excavated in the future, the property owner or ROW holder at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner or ROW holder 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 standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval. This continuing obligation also applies to the City of Tomahawk as the ROW holders for the alleyway south of the site.

In addition, all current and future owners and occupants of the property and right-of-way holders 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 to prevent a direct contact health threat to humans.

Send all written notifications in accordance with these requirements to:

Department of Natural Resources  
Attn: Remediation and Redevelopment Program Environmental Program Assistant  
107 Sutliff Avenue  
Rhineland, WI 54501

Additional Information

Additional information about this case is available at the DNR's Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web at <http://dnr.wi.gov/botw/SetUpBasicSearchForm.do>. Enter 02-35-551789 in the **Activity Number** field in the initial screen, then click on **Search**. Scroll down and click on the **GIS Registry Packet** link for information about the completion of the environmental work. The site may also be seen on the map view, RR Sites Map. RR Sites Map can be found at <http://dnr.wi.gov/topic/Brownfields/wrrd.html>.

Please contact Carrie Stoltz, the DNR Project Manager, at (715) 365-8942 or [Carrie.Stoltz@Wisconsin.gov](mailto:Carrie.Stoltz@Wisconsin.gov) with any questions or concerns.

Sincerely,



Christopher A. Saari  
Northern Region Team Supervisor  
Remediation and Redevelopment Program

Attachments:

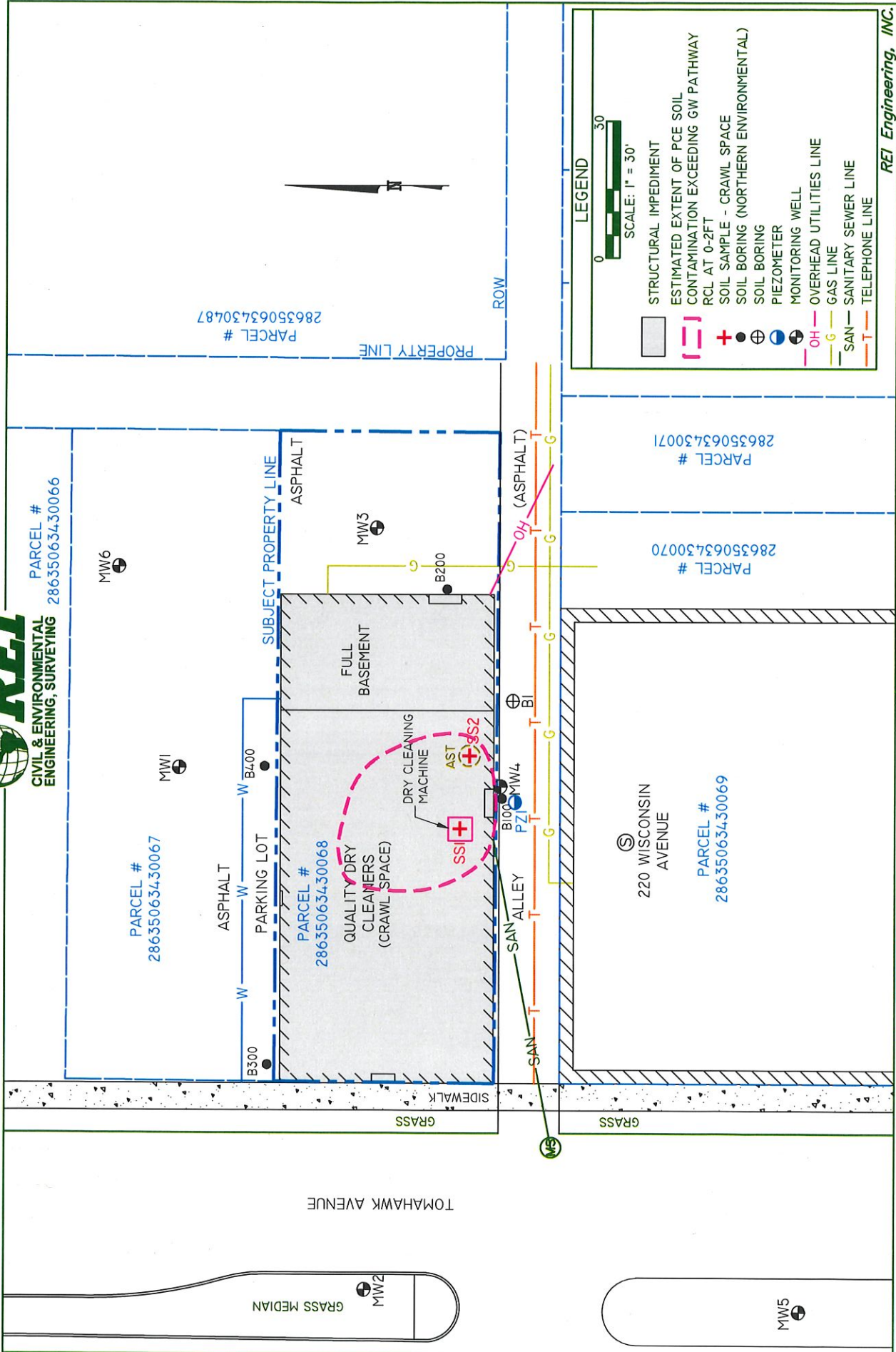
- Figure B.2.b, Residual Soil Contamination - PCE, REI, August 21, 2017
- Continuing Obligations for Environmental Protection, DNR Publication RR-819

cc: Charlotte Collins, 18 N. Tomahawk Ave., Tomahawk, WI 54487  
Andy Delforge – REI (via email)  
Carrie Stoltz – DNR Rhineland (via email)



CIVIL & ENVIRONMENTAL  
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PARCEL #  
286350634.30066



**LEGEND**

SCALE: 1" = 30'

0 30

- STRUCTURAL IMPEDIMENT
- ESTIMATED EXTENT OF PCE SOIL CONTAMINATION EXCEEDING GW PATHWAY RCL AT 0-2FT
- SOIL SAMPLE - CRAWL SPACE
- SOIL BORING (NORTHERN ENVIRONMENTAL)
- PIEZOMETER
- MONITORING WELL
- OVERHEAD UTILITIES LINE
- GAS LINE
- SANITARY SEWER LINE
- TELEPHONE LINE

<b>QUALITY DRY CLEANERS</b> <b>18 NORTH TOMAHAWK AVENUE</b> <b>TOMAHAWK, WISCONSIN 54487</b>		<b>FIGURE B.2.b : RESIDUAL SOIL CONTAMINATION - PCE</b>	
PROJECT NO.	6345	DRAWN BY:	TAW
DRAWING FILE: P:\6300-6399\6345-WDNR-QUALITYCLEANERS\DWG\6345-Soil Contam-PCE-Residual.dwg		DATE: 8/21/2017	
LAYOUT: SOIL CONTAM PLOTTED BY: NATHAN		REI Engineering, INC.	



## Continuing Obligations for Environmental Protection Responsibilities of Wisconsin Property Owners Wis. Stat. § 292.12

### Purpose

This fact sheet is intended to help property owners understand their legal requirements under s. 292.12, Wis. Stats., regarding continuing obligations that arise due to the environmental condition of their property.

### Introduction

The term “continuing obligations” refers to certain actions for which property owners are responsible following a completed environmental cleanup. They are sometimes called environmental land use controls or institutional controls. These legal obligations, such as a requirement to maintain pavement over contaminated soil, are most often found in a cleanup approval letter from the state.

Less commonly, a continuing obligation may apply where a cleanup is not yet completed but a cleanup plan has been approved, or at a property owned by a local government that is exempt from certain cleanup requirements.

### What Are Continuing Obligations?

Continuing obligations are legal requirements designed to protect public health and the environment in regard to contamination that remains on a property.

Continuing obligations still apply after a property is sold. Each new owner is responsible for complying with the continuing obligations.

### Background

Wisconsin, like most states, allows some contamination to remain after cleanup of soil or groundwater contamination (residual contamination). This minimizes the transportation of contamination and reduces cleanup costs while still ensuring that public health and the environment are protected.

The Department of Natural Resources (DNR), through its Remediation and Redevelopment (RR) Program, places sites or properties with residual contamination on a public database in order to provide notice to interested parties about the residual contamination and any associated continuing obligations. Please see the “Public Information” section on page 3 to learn more about the database. (Prior to June 3, 2006, the state used deed restrictions recorded at county courthouses to establish continuing obligations, and those deed restrictions have also been added into the database.)

### Types of Continuing Obligations

#### 1. Manage Contaminated Soil that is Excavated

If the property owner intends to dig up an area with contaminated soil, the owner must ensure that proper soil sampling, followed by appropriate treatment or disposal, takes place. Managing contaminated soil must be done in compliance with state law and is usually done under the guidance of a private environmental professional.

## 2. Manage Construction of Water Supply Wells

If there is soil or groundwater contamination and the property owner plans to construct or reconstruct a water supply well, the owner must obtain prior DNR approval to ensure that well construction is designed to protect the water supply from contamination.

### Other Types of Continuing Obligations

Some continuing obligations are designed specifically for conditions on individual properties. Examples include:

- keeping clean soil and vegetation over contaminated soil;
- keeping an asphalt “cover” over contaminated soil or groundwater;
- maintaining a vapor venting system; and
- notifying the state if a structural impediment (e.g. building) that restricted the cleanup is removed. The owner may then need to conduct additional state-approved environmental work.

It is common for properties with approved cleanups to have continuing obligations because the DNR generally does not require removal of all contamination.

Property owners with the types of continuing obligations described above will find these requirements described in the state’s cleanup approval letter or cleanup plan approval, and *must*:

- comply with these property-specific requirements; and
- obtain the state’s permission before changing portions of the property where these requirements apply.

The requirements apply whether or not the person owned the property at the time that the continuing obligations were placed on the property.

### Changing a Continuing Obligation

A property owner has the option to modify a continuing obligation if environmental conditions change. For example, petroleum contamination can degrade over time and property owners may collect new samples showing that residual contamination is gone. They may then request that the DNR modify or remove a continuing obligation. Fees are required for the DNR’s review of this request and for processing the change to the database (\$1050 review fee, \$300/\$350 database fee). Fees are subject to change; current fees are found in Wis. Admin. § NR 749 online at [http://docs.legis.wisconsin.gov/code/admin\\_code/nr/700/749](http://docs.legis.wisconsin.gov/code/admin_code/nr/700/749).

### Public Information

The DNR provides public information about continuing obligations on the Internet. This information helps property owners, purchasers, lessees and lenders understand legal requirements that apply to a property. The DNR has a comprehensive database of contaminated and cleaned up sites, *BRRTS on the Web*. This database shows all contamination activities known to the DNR. Site specific documents are found under the *Documents* section. The information includes maps, deeds, contaminant data and the state’s closure letter. The closure letter states that no additional environmental cleanup is needed for past contamination and includes information on property-specific continuing obligations. If a cleanup has not been completed, the state’s approval of the remedial action plan will contain the information about

continuing obligations.

Properties with continuing obligations can generally be located in the DNR's *RR Sites Map*. RR Sites Map provides a map view of contaminated and cleaned up sites, including sites with continuing obligations, and links to BRRTS on the Web. *BRRTS on the Web* and *RR Sites Map* are part of the Wisconsin Remediation and Redevelopment Database (WRRD) at <http://dnr.wi.gov/topic/Brownfields/wrrd.html>.

If a completed cleanup is shown in *BRRTS on the Web* but the site documents cannot be found in the documents section, the DNR's closure letter can still be obtained from a regional office. For assistance, please contact a DNR Environmental Program Associate (see the RR Program's Staff Contact web page at [dnr.wi.gov/topic/Brownfields/Contact.html](http://dnr.wi.gov/topic/Brownfields/Contact.html)).

### **Off-Site Contamination: When Continuing Obligations Cross the Property Line**

An off-site property owner is someone who owns property that has been affected by contamination that moved through soil, sediment or groundwater from another property. Wis. Stat. § 292.13 provides an exemption from environmental cleanup requirements for owners of "off-site" properties. The DNR will generally not ask off-site property owners to investigate or clean up contamination that came from a different property, as long as the property owner allows access to his or her property so that others who are responsible for the contamination may complete the cleanup.

However, off-site property owners are legally obligated to comply with continuing obligations on their property, even though they did not cause the contamination. For example, if the state approved a cleanup where the person responsible for the contamination placed clean soil over contamination on an off-site property, the owner of the off-site property must either keep that soil in place or obtain state approval before disturbing it.

Property owners and others should check the *Public Information* section above if they need to:

- determine whether and where continuing obligations exist on a property;
- review the inspection, maintenance and reporting requirements, and
- contact the DNR regarding changing that portion of the property. The person to contact is the person that approved the closure or remedial action plan.

### **Option for an Off-Site Liability Exemption Letter**

In general, owners of off-site properties have a legal exemption from environmental cleanup requirements. This exemption does not require a state approval letter. Nonetheless, they may request a property-specific liability exemption letter from the DNR if they have enough information to show that the source of the contamination is not on their property. This letter may be helpful in real estate transactions. The fee for this letter is \$700 under Chapter NR 749, Wis. Adm. Code. For more information about this option, please see the RR Program's Liability web page at [dnr.wi.gov/topic/Brownfields/Liability.html](http://dnr.wi.gov/topic/Brownfields/Liability.html).

#### **Legal Obligations of Off-Site Property Owners**

- Allow access so the person cleaning up the contamination may work on the off-site property (unless the off-site owner completes the cleanup independently).
- Comply with any required continuing obligations on the off-site property.



## **Required Notifications to Off-Site Property Owners**

1. The person responsible for cleaning up contamination must notify affected property owners of any proposed continuing obligations on their off-site property **before** asking the DNR to approve the cleanup. This is required by law and allows the off-site owners to provide the DNR with any technical information that may be relevant to the cleanup approval.

When circumstances are appropriate, an off-site neighbor and the person responsible for the cleanup may enter into a "legally enforceable agreement" (i.e. a contract). Under this type of private agreement, the person responsible for the contamination may also take responsibility for maintaining a continuing obligation on an off-site property. This agreement would not automatically transfer to future owners of the off-site property. The state is not a party to the agreement and cannot enforce it.

2. If a cleanup proposal that includes off-site continuing obligations is approved, the DNR will send a letter to the off-site owners detailing the continuing obligations that are required for their property. Property owners should inform anyone interested in buying their property about maintaining these continuing obligations. For residential property, this would be part of the real estate disclosure obligation.

## **More Information**

For more information, please visit the RR Program's Continuing Obligations website at [dnr.wi.gov/topic/Brownfields/Residual.html](http://dnr.wi.gov/topic/Brownfields/Residual.html).

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This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Chief, Public Civil Rights, Office of Civil Rights, U.S. Department of the Interior, 1849 C. Street, NW, Washington, D.C. 20240.

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