Phantom Contamination Case 03-08-558112

Wisconsin Avenue ROW (Phantom)

On 9/22/17, the decision was made to remove this case as a separate case in BRRTS and to place the data for the case back into the Imperial Cleaners Case (02-08-546755) under the 550 code.

EVOTT

9/22/17

Wisconsin Avenue ROW (Phantom)
03-08-558112

Phantom Contamination Case
Created 01/05/2012

This case was created as a phantom contamination case due to the petroleum contamination that first appeared in the groundwater at MW-3 in July of 2008. This petroleum contamination could not be connected to the Imperial Cleaners (02-08-546755) case. The DNR PM (Alan Nass) and DNR Case Closure Committee (Roxanne Chronert and Keld Lauridsen) agreed that the petroleum contamination appeared to be from an unknown and off-site source. This phantom contamination case was thus created.

Alan Nass
1-5-2012

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
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January 4, 2012

Ms. Ann Meyer
Estate of James Welker
1303 Wisconsin Avenue
New Holstein, Wisconsin 53061

Subject: Conditional Closure Decision, With Requirements to Achieve Final Closure
Imperial Cleaners, 2210 Wisconsin Avenue, New Holstein, Wisconsin
WDNR BRRTS Activity # 02-08-546755

Dear Ms. Meyer:

On December 22, 2011, the Northeast Region Closure Committee reviewed your request for closure of the case described above. The Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. After careful review of the closure request, it was determined that the chlorinated solvent contamination on the site from the dry cleaning operation appears to have been investigated and remediated to the extent practicable under site conditions. Your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code and will be closed if the following conditions are satisfied:

MONITORING WELL ABANDONMENT

The monitoring wells at the site must be properly abandoned in accordance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment must be submitted to Alan Nass on Form 3300-005, found at http://dnr.wi.gov/org/water/dwg/gw/ or provided by the Department of Natural Resources.

REVISED CAP MAINTENANCE PLAN

A revision to the cap maintenance plan is needed to include a description and maintenance of the operating sub-slab depressurization systems and a figure of where they are located. Also include a description and figure of the piping system / potential sub-slab depressurization system in the former excavation, unless such system is to be abandoned prior to final closure. The figure showing the location of the required cap on the Imperial Cleaners Property should include the areas of B-1, B-2, B-6, B-9, B-10, B-11 and E-1.

When this case closes, it will do so with a soil GIS registry, NR 140 groundwater exemption, letters of notification to the city and adjacent property owners of contamination in the right-of-way and both adjacent properties, a cap maintenance plan, and maintenance of the on & off-site sub-slab depressurization systems.

When the above conditions have been satisfied, please submit the appropriate documentation (well abandonment forms and revised cap maintenance plan) to verify that applicable conditions have been met, and your case will be closed. Your site will be listed on the DNR's Remediation and Redevelopment GIS Registry. Information that was submitted with your closure request application will be included on the GIS Registry. To review the site on the GIS Registry web page, visit the RR Sites Map page at: http://dnr.wi.gov/org/aw/rr/gis/index.htm.

CONTINUING OBLIGATIONS AND RESPONSIBILITIES

As part of the approval of the closure of this case, you will be responsible for maintaining the following continuing obligations. You will be require to maintain the cap (building, concrete slab behind the building, and grass/gravel cover) over that area shown in the cap maintenance plan. The purpose of this cap is to prevent both contact with contaminated soil and infiltration of groundwater. You will be required to maintain the sub-slab depressurization systems (i.e. venting systems) both on and off of the Imperial Cleaners Property. In the final closure approval, you will also be required to conduct annual inspections of the cap. Documentation of the inspection will be required to be kept on site.

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

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact me at 920-662-5161.

Yours truly,

Alan Thomas Nass, P.G., P.S.S.
Hydrogeologist
Remediation & Redevelopment Program

cc: Kevin Bugel, Giles Engineering Associates, Inc., (electronic copy sent)
Michelle Williams, Reinhart Boerner Van Deuren s.c., (electronic copy sent)

Incomplete Copy – see 02-08-546255 for complete original

NER Closure Checklist and Cover Sheet

Date: December 21, 2011
Project Manager/Preparer: Nass
Site Name: Imperial Cleaners – 2210 Wisconsin Avenue, New Holstein, WI
BRRTS #: 02-08-546755
Second Review by Closure Committee: First was on August 25, 2011

History

The site has been an operating dry cleaner since the early 1960's. See Figure 2. The property was purchased by James Welker in 1966, who then operated the business until his death. After the death of Mr. Welker, his estate conducted an initial site screening investigation in 2006. Chlorinated volatile organic compounds (CVOCs) and petroleum volatile organic compounds (PVOCs) were discovered in the soil below the dry cleaner building. Additional investigation was done in 2007 and 2008, low level groundwater impacts were noted. An interim action was conducted in 2009 to remove highly contaminated soil below the building. Additional investigation and monitoring were done in 2009 and 2010. Sub-slab depressurization systems were installed in the drycleaner building and in the adjacent hardware store building. This property is zoned as commercial.

Closure was denied on 8/25/11 - DNR required: (1) A minimum of one additional round of GW sampling for MW-3 for confirmation and trend. (2) Groundwater elevations from all wells to get a fall flow direction. (3) Another round of sub-slab soil gas sampling from VP-1, A-1, A-2, and A-3 to show effectiveness of SSDS. (4) Notification to city about ROW contamination. (5) Updated groundwater conc. map with concentrations listed. (6) Buried utility map. (7) Information on potential sources for petroleum contamination. (8) Soil contamination map. (9) Groundwater contamination map. (10) Revised Cap Maintenance Plan. (11) Duplicate copies of above material for GIS packet.

Other Sites

There are two closed contamination cases shown on BRRTS, one about 600 feet to the east and one about 750 feet to the northwest. See Figure 2A.

Contamination

CVOCs and PVOCs were found in the soil and groundwater. PCE concentrations under the dry cleaner building were as high as 45,000,000 ug/kg (45,000 mg/kg). At the time of the investigation, this was the highest concentration noted in the state (and still may be). This concentration is indicative of free product, however no free product was noted. Other soil contaminants were present but at much lower concentrations. See Tables1 and 2 and Figure 3. Note the over-all lack of petroleum volatile organics in the soil across the site – especially note the lack at MW3. The most heavily impacted soil was confined to an approximate 10 X 15 X 9 foot area beneath the dry cleaner machine. Soil contamination appears to have migrated off-site onto the

cemetery to the west and the hardware store to the east. Off-site letters were sent to the two private property owners (cemetery and hardware store) and the city for the ROW contamination. Those letters are attached.

Groundwater contamination at the site was surprising very minor considering the high degree of contamination under the dry cleaner building. No groundwater was noted in the unconsolidated material above the bedrock. It is likely that a combination of the dry cleaner building and adjacent building and paved areas acting as a cap to prevent groundwater infiltration and a shallow depth to bedrock help to keep a higher water table from forming. See Table 3 and Figure 6 for groundwater results. The dolomite bedrock at this site is at 8 to 9 feet. The water table is at 40 to 60 feet in the bedrock. For most of the sampling history, there have only been PAL exceedances for several chlorinated compounds. Of interest is the petroleum contamination (benzene, ethylbenzene, TMBs, xylenes, and naphthalene) that show up in MW-3. It appears that this petroleum contamination in MW3 is from an off-site source. Based on the groundwater flow, the ES exceedances in MW-3 seem to occur when there is an east or northeast flow direction.

Plume(s) Definition

With one exception, the degree and extent of both the soil and groundwater contamination plumes are defined. The one exception is the petroleum contamination noted in the groundwater at MW3. Because the source for this contamination appears to be from off-site, the plume is not defined. No off-site source has been identified.

Sub-slab vapor samples were collected from the below the drycleaner building and the hardware store. See Tables 5 and 6, and Figure 8.

Remedy

Due to the very high level of PCE contamination under the dry cleaner building, an interim action was taken to excavate out as much of the contaminated soil as possible. This removal was done through the floor of the building (i.e. the building remained standing). Due to the presence of footings, not all soil contamination could be removed. Approximately 45 tons of contaminated soil was hauled to Illinois for incineration as hazardous material. See Figures 3, 4, 4A and 4B. Approximately 125 cubic yards of contaminated soil remains on-site and on the two adjacent properties. Direct contact soil contamination on the neighboring properties is not expected to be an issue. Soil vapor extraction piping was installed and stubbed through the floor as a contingency measure should further mitigation be needed. Sub-slab depressurization systems were installed in the dry cleaners and the hardware store. See Figure 2. The system for the dry cleaner consisted of two evenly spaced vapor extraction points along the east interior wall. A piping system was installed in the contaminated soil excavation but not hooked up. The system for the hardware store was placed in the existing sump basin.

Soil Type
Clayey silt and silty clay over dolomite bedrock at 8 to 9 feet.

Depth to Groundwater
Within the bedrock at 40 to 60 feet.

Direction of Groundwater Flow
Groundwater flow varies from west to northeast to east (see Table 4 and Figures 7A – 7D). Flow appears to be toward the west in December & January, to the northeast in January to March and to the east in April to October. No data is available for late fall / early winter.

Depth to Bedrock
Dolomite bedrock is at 8 to 9 feet below the ground surface.

SSRCL Developed & is DNR PM in agreement with SSRCL
Yes – see attached.

Surface Cover
The dry cleaner building remains as a cap. There is a grass cap west and north of the dry cleaner building. The hardware store building and paved street are east and south of the dry cleaner building respectively. See Figure 5.

Utility, Vapor or Free Product Issues
The water and sanitary laterals entering the south side of the building were assessed for vapor migration. A soil vapor sample (OA-1) was collected below the concrete sidewalk along the south side of the dry cleaner building over the utility trench. PCE level was detected at low level (see OA-1 in Tables 5 and 6). The location of OA-1 is at MW-3 and is shown in Figures 2 and 8.

The sub-slab depressurization systems were installed in the dry cleaner and hardware buildings on April 21, 2010. Tables 5 and 6 show the results of activating the two systems - soil vapor PCE levels have dropped.

While PCE soil concentrations under the building were indicative of free product, no free product was observed.

Potable or Municipal Wells
There are no potable or municipal well issues associated with the site. According to the consultant, there are no potable or municipal wells within 1200 feet of the site.

Surface Water
There are no surface water issues associated with the site.

Closure Recommendation

Grant conditional closure with:

Listing the site on the soil GIS registry for: 17,000 ug/kg PCE at B-2, 1,200 ug/kg at B-6, 5,300 ug/kg PCE at B-10, 2,000 ug/kg PCE at B-11, and 1,500 ug/kg PCE at E-1.

Give PAL Exemptions for PCE in MW-1, PCE and TCE in MW-2, and TCE in MW-3.

Require cap maintenance plan to maintain dry cleaner building and concrete slab immediately behind said building for direct contact and groundwater protection issues. Also maintain on-site sod cap on-site for same reasons.

Require the both sub-slab depressurization systems continue to operate. Require that when determined to be no longer needed, that the sub-slab depressurization systems under both buildings and the piping in the former excavation be properly abandon.

List petroleum contamination in MW-3 as phantom contamination.

Abandon all monitoring wells.

For final closure, consultant needs to provide updated cap maintenance plan with language about SSDS piping in excavation.

State of Wisconsin
Department of Natural Resources
http://dnr.wi.gov

Case Closure Request
Form 4400-202 (R 8/09)

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
Remediation and Redevelopment Program

This form is intended to provide instructions and a list of information that must be submitted for evaluation for case closure, each time a request is made. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

NOTICE: ***Completion of this form is mandatory*** *for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].*

In order to expedite the closure process, provide a complete and accurate closure package according to the following instructions, each time a closure decision is requested:

- Submit the Case Closure Request form and the required attachments as a stand-alone, **unbound** package. Include all information requested per section, as appropriate to the site, in the order shown. Include all attachments per section, as appropriate. Do not attach previously submitted reports. Correctly reference any reports in the case summary, as applicable.
- Include fees with this request at the time it is submitted to the department in order for the application to be considered complete.
- Specify your selected closure option.
- **Use forms 4400-245 and 4400-246 for Section H.** Include all **GIS Registry information** (in Section H) as a stand-alone document (*do not refer to materials in other attachments*). Include copies of all off-source property and ROW notifications.
- Place a √ (attached) or NA (not applicable) in the blank next to each attachment, in each section.
- Include a maintenance plan, if it is required for the implemented remedial action.
- **Maps for the GIS Registry may not be larger than 8.5 x 14 inches,** unless maps are submitted in electronic form in portable document format (pdf) readable by the Adobe Acrobat Reader. For electronic document submittal requirements, see http://dnr.wi.gov/org/aw/rr/archives/pubs/RR690.pdf.
- Prepare maps according to the applicable portions of ss. NR 716.15(2)(h)1 and 726.05(3)(a)4.d. Prepare visual aids, including maps, plans, drawings, cross sections, fence diagrams, tables and photographs according to s. NR 716.15(2)(h)1. – 4.
- **Use a bold font** on information of importance on tables, maps and figures. A **bold font (for ES exceedances**) and *italics (for PALs*) are preferred when differentiation is necessary. **Please do not use shading or highlights** on any of the analytical tables (per s. NR 726.05(3) and maps as the shading obscures the information that is scanned for inclusion in the GIS Registry.
- Put multiple tables submitted for contaminated media data (eg. pre- and post-remedial data) in chronological order. Include the level of detection for results which are below the detection level (i.e. do not just list as no detect (ND)). Summaries of all data should 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(2)(g)3 in the format required in s. NR 716.15(2)(h)3.
- Document free product recovery estimates as required in s. NR 708.15, if applicable.

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

Section A: Case History and Closure Pathway Selected

ATTACHMENTS:

x A brief site summary including results of all investigative activities, interim and remedial actions taken, a description of any residual soil and/or groundwater contamination and their locations, a description of any other media affected, and a description of how actual and potential impacts to receptors have been addressed.

x Site location map on USGS topographic base map.

x Site map including buildings, utilities, property lines of source property and impacted non-source properties, ground cover and supply wells, including any municipal wells. *These maps may be combined.*

x Verification of the zoning for affected properties.

INFORMATION NEEDED:

1. Site Name Imperial Cleaners
   Street Address: 2210 Wisconsin Avenue
   City/Zip Code: New Holstein, WI 53061
2. BRRTS #: 02-08-546755
3. DNR FID #: 408040820 PECFA Claim#: none
4. Responsible Party Name Estate of James Welker, c/o Ann Meyer
   Mailing Address: 1303 Wisconsin Avenue City/Zip Code: New Holstein, WI 53061
   Phone number: E Mail Address:
   Contact Person: Ann Meyer
5. Date of Incident/Discovery: 4/19/2006 Contaminant Type(s): tetrachloroethene (PCE)
6. Quantity Released: unknown
7. Land Use:
   Current : ____ Residential x Commercial ____ Industrial ____ Other
   If other, specify:
   Planned Post Remediation : ____ Residential x Commercial ____ Industrial ____ Other
   If other, specify:
8. Is a zoning change required? ____Y x N
   If so, has it been completed for post remedial land use? ____Y ____N
9. 0.19 Acres ready for use (The total area in acres of all adjacent tax parcels owned by the same entity on the site where the contamination originated, rounding fractions to nearest .5 acre and noting >100 acres for acreages above 100 acres. For multiple discharges that are cleaned up concurrently, count the acres once.)
10. Geographic Coordinates (meters/ WTM83/91) E 672739 N 388091
11. Method Used to Obtain Geographic Coordinates:
    ____ On-site using GPS equipment, converted or projected into WTM83/91 coordinates
    ____ Used county web map site to get coordinates
    x Used RR Sites Map web site to get WTM83/91 coordinates
    ____ Other (specify):
12. *Groundwater Contamination Remaining (>ES):
    On Source Property ~~x~~ Y X N
    Off Source Property ___Y x N
13. *Residual Soil Contamination > Generic or Site-Specific RCL:
    On Source Property x Y ___ N
    Off Source Property x Y ___ N
14. Contamination in Right of Way: ___Y x N
15. Closure Pathway Selected: check all that apply

CLOSURE via NR 726	
Soil	Groundwater
___ < s. NR 720.09/720.11 Generic RCLs	___ < s. NR 140.10 Table 1 & Table 2 Values
___ s. NR 720.19(2) Soil Performance Standards	X s. NR 140.28(2) PAL Exemption
~~x~~ s. NR 720.19(4) Groundwater Pathway	~~x~~ s. NR 726.05(2)(b), ≥ ES Natural Attenuation

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

OU 8-24-11

X s. NR 720.19(5) Direct Contact	
___s. NR 720.19(6) Other Pathways	

CLOSURE via NR 746 and NR 726	
Petroleum Storage Tank **Soil** Options for Closure:	
___s. NR 746.07 Requirements Met-Post Investigation	
___s. NR 746.08 Requirements Met-Post Remed.	
Petroleum Storage Tank **GW** Options for Closure:	Petroleum Storage Tank **GW** Options for Closure:
Within Permeable Material:	Within Low Permeability Material:
___s. NR 746.07(3) ≥PAL <ES, Post Investigation	___s. NR 746.07(2), Post Investigation
___s. NR746.07(4) >ES, Post Investigation	___s. NR 746.08(2), Post Remediation
___s. NR 746.08(3)≥ PAL, <ES, Post Remediation	
___s. NR 746.08(4) >ES, Post Remediation	

Section B: Receptor Summary

ATTACHMENTS:

N/A Notification(s) regarding contamination in ROW

x Notification(s) to off-source property owners regarding sampling results

INFORMATION NEEDED:

1. Identify **all** pre-remedial actual receptors, the assessed risk and their locations (e.g., both on- and off-site utility corridors, basements or sumps of nearby buildings, direct contact threat from soil, water supplies, surface waters, sediments, vapors, etc.) *For definitions, refer to s. NR 700.03 (47), Wis. Adm. Code.*
   Adjacent hardware store basement; Imperial Cleaners, sub-slab depressurization systems installed to provide institutional controls to remove vapor intrusion threat.

2. Have the remedial actions addressed the potential or actual impacts to these receptors?
   x Y (Details in the case history summary (Section A)).
   ____N If no, please identify the nature of the remaining risk and the receptor at risk, if any:

Section C: Soil Investigation Information

ATTACHMENTS:

x Complete soil data summary table of field screening and laboratory analytical results, including all detects, regardless of ch. NR 720 standards, with dates, sample locations, depths and detection limits. Identify exceedances.

x Map(s) of all pre-remedial soil sampling locations: depicting all soil sample locations relative to site facilities. Note in bold font those sample locations that exceed ch. NR 720 RCLs (including free product location) and delineate the extent of contamination.

x Pre-remedial geologic cross-sections; including geology, source location(s), extent of soil and groundwater contamination, free product location/depth, soil sample locations, water table elevation, and bedrock elevation, if encountered.

INFORMATION NEEDED:

1. Extent Defined? x Y ____N If not, explain why. _____

2. Soil Type(s): Brown clayey silt & silty clay underlain by bedrock at <10 feet.

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

3. Depth of Contamination: Top: 0' Bottom: 8 - 9'
4. Type of Bedrock: dolomite Depth to Bedrock: 8 - 9'
5. Is Any Contaminated Soil (Unsaturated or Saturated) in Contact With the Bedrock? x Y ___N
6. Measurable Free Product? ___Y x N Depth/Location: _____

Section D: Soil Remediation Information

ATTACHMENTS:

x Map showing remediated area (for example, excavation limits or area influenced by SVE) and locations of post-remediation soil samples (if any). This map should show the locations and extent of residual soil contamination exceeding ch. NR 720 RCLs. These samples should be noted in bold font. *A copy of the map(s) from Section H(form 4400-245) may be used.*

x Soil disposal documentation

x NR 720.19 analysis, assumptions and calculations for site specific RCLs (SSRCLs) , with justification

x Calculations and results of EPA Soil Screening Level Model.

___ Post-remedial cross-section(s) with post remedial soil sampling results, if soil removal or treatment has occurred. Identify sample results and depths. *A copy of the cross-section(s) from Section H(form 4400-245) may be used or you may refer to the cross-section(s) in Section E, as appropriate.*
___see Section E

INFORMATION NEEDED:

1. Remedial Action Completed? x Y ___N
2. Were immediate or interim actions conducted? x Y ___N If yes, what action was taken? rec'd 8-23-11
   Interim action to excavate highly-impacted soil in contact with bedrock
3. Brief description of remedial action taken:
   Highly contaminated soil was excavated & removed from site.
4. Were soils excavated? x Y ___N
   Quantity: 44.88 tons Disposal Method: Thermal treatment by incineration. @ Veolia ES Technical Solution, LLC - Sauget facility rec'd 8-23-11
5. Final Confirmation Sample Collection Methods:
   Excavation walls and floor
6. Final Soil/Drill Cuttings Disposal Location:
   Hickory Meadows Landfill
7. Estimated volume and depth of in situ soils exceeding ch. NR 720 Table RCLs or Site Specific RCLs:
   Est. @ 125 cubic yards OK rec'd 12-21-11
8. Estimated volume and depth of in situ soils exceeding ch. NR 746 Table 1 or Table 2 or Site Specific RCLs (*underground petroleum tank systems, as defined in ch. NR 746 only*):
   N/A
9. s. NR 720.19 Analysis? ___Y x N
   ___ Performance Standard -NR 720.19(2)
   ___ SSRCL - NR 720.19(3) and (4),(5) or (6)
10. If the remedy includes a Soil Performance Standard, what type? ___ not applicable
    x Cap ___ Soil x Building ___ Natural Attenuation of Groundwater ___Other
    Specify other: _____
11. Will the maintenance of the SPS be consistent with the planned post remediation land use?
    x Y ___N If No, please explain: _____
12. Is the EPA Soil Screening Level Model used as justification for closure of sites with residual contaminated soils?
    x Y ___N Are the input numbers used: ___ Site Specific , or x WI Defaults?
    See attached PUB RR 682 page 13

Section E: Groundwater Information

ATTACHMENTS:

x Table identifying all contaminants, summarizing all pre- and post-remediation groundwater analytical results, with sample collection dates *(prepared in accordance with guidance document RR-628)*

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

x	Groundwater sample location map showing the site facilities and all monitoring wells, sumps, extraction wells, and potable and non-potable wells.
	Isoconcentration map(s) when included as part of the site investigation or map(s) of the horizontal extent of contamination based on most recent data. *A copy of the map(s) from Section H (from 4400-245) may be used.*
x	A map showing groundwater flow direction(s) and summarizing the maximum variation in flow direction. *Multiple maps may be used. A copy of the map(s) from Section H (form 4400-245) may be used.*
x	A table summarizing all groundwater elevations, with dates, and top and bottom elevations of well screens. (*Wells are to be referenced to national geodetic survey datum, as per NR 141.065(2)).*
	Graphs and statistical analyses which demonstrate the dynamics of the groundwater plume, for sites requesting closure using natural attenuation that meet the criteria s. NR 726.05(2)(b) or of s. NR 746 (permeable soils). *Refer to WDNR publication RR-614 for guidance.*
	Geologic cross-sections showing extent of residual soil and/or groundwater contamination, as applicable. *A copy of the cross-section(s) from Section H, (form 4400-245) may be used.*

INFORMATION NEEDED:

1. Extent of Contamination Defined? x Y ____ N ____ N/A
2. Remedial Action Completed? x Y ____ N ____ N/A
   Brief Description of Remedial Action Taken: Removal of impacted soil; monitoring of groundwater; installation of sub-slab vapor mitigation systems in Imperial Cleaners and adjacent hardware store
3. Depth(s) to Groundwater 40' - 60' Flow Direction(s): ~~east to west~~ east to north to west au 8-23-11
4. Field Analyses? ____ Y x N
   Lab Analyses? x Y ____ N
5. 7 # of Sample Rounds
   3 # of Sampling Points
   3 # NR 141 Monitoring Wells Sampled
   0 # Temporary GW Sampling Points Sampled
   0 # Recovery Sumps Sampled
   0 # Municipal Wells Sampled
   0 # Private Wells Sampled
6. Was DNR notified of substances in groundwater without standards? x Y ____ N ____ N/A
   If yes, how many? ____ What substances? petroleum VOCs
7. Preventive Action Limit currently exceeded? x Y ____ N If yes, identify location(s)
   MW-1, MW-2, MW-3 au 8-24-11
8. Enforcement Standard currently exceeded? X Y ____ N If yes, identify location(s)
   MW-3, for petroleum-related off-site constituents
9. Measurable free product detected? ____ Y x N Pre-remediation
   ____ Y x N Post-remediation
10. Was free product remediated? ____ Y x N
    Method: ____
    Purge water or free product-groundwater mixture disposal method?
    Hickory Meadows Landfill
11. Potable wells within 1200 feet of site? ____ Y x N
    Have they been sampled? ____ Y x N
    Type (i.e. municipal, private, etc.)? N/A
    [NOTE: Include wells on *groundwater well location map*]
12. Has DNR been provided with **all** results of private well sampling? N/A Y ____ N
13. Have well owners/occupants been notified of results? (*Sec. B Attachments*) N/A Y ____ N
    (*Results also need to be sent to the DNR Water Supply Specialist)*
14. Are there any monitoring wells that have not been located for abandonment? N/A Y ____ N
15. Identify the property address(es) where the missing well is located: ____

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

Section F. Other Contaminated Media Information:

ATTACHMENTS:

x Table of analytical results for all contaminants for media other than soil or groundwater

INFORMATION NEEDED:

1. Have other media been impacted (either on-site or off-site e.g. sediment, utilities, air)? x Y ____N
   Briefly describe type and extent of **all** contamination found in media other than soil or groundwater:
   Sub-slab vapor shows to be elevated beneath Imperial Cleaners building
2. Remedial action completed? x Y ____N ____N/A
   Brief description of remedial action taken: Interim action source soil excavation; active sub-slab vapor mitigation system
3. # of Post Remedial Sample Rounds: 2
   # of Sampling Points: ~~4~~ 5 all B-23-1
   Field Analyses? ____Y x N
   Lab Analyses? x Y ____N

Section G. Associated Site Closure Information:

ATTACHMENTS:

N/A Construction documentation or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), in accordance with s. NR 724.15.

N/A Maps and photos documenting the cap area, and/or integrity of the cap, with date.

N/A Description of any soil performance standard cover system used, including a description of how it meets the requirement to be protective until residual contaminant concentrations no longer pose a threat to public health, safety, welfare or the environment, per s. NR 720.19(2), s. NR 722.09(2) and (3).

x Maintenance plan associated with 292.12 land use control or for performance standard remedy. (per ss. NR 720.19(2) and 724.13(2))

INFORMATION NEEDED:

1. Enforcement actions closed out? ____Y ____N x N/A
2. Permits closed out? ____Y ____N x N/A
3. Describe how the following pathways are protected:
   a) Direct Contact Pathway: Buildings and pavement cover soil with direct contact risk
   b) Groundwater: Soil source removal and Capped to prevent infiltration.
   c) Other: ____

Section H. Required GIS Registry Information: Use form 4400-245, GIS Registry Checklist, and form 4400-246, Impacted Off-Source Property Information. Submit these forms and their attachments with this closure request form.

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

I certify that, to the best of my knowledge, the information presented on and attached to this form is true and accurate. This recommendation for case closure is based upon all available data as of 4/1/2011 (date). I have read the Case Closure Request Form instructions and all required information has been included.

Form Completed By: _____ 7/21/2011
(Signature) (Date)

x **$750.00 Closure Review Fee Attached**
x **$250.00 GIS Registry Maintenance Fee Attached (GW and/or monitoring well to be abandoned)**
x **$200.00 GIS Registry Maintenance Fee Attached (Soil)**

Printed Name: Kevin T. Bugel, P.G., C.P.G.

Company Name: Giles Engineering Associates, Inc.

Email address: kbugel@gilesengr.com

If not site owner, relationship to site owner: Environmental Consultant

Address: N8 W22350 Johnson Drive, Suite A1 City/Zip Code Waukesha, WI 53186

Telephone Number: (262) 544-0118 FAX Number: (262) 549-5868

Source Property Owner's Name (if different from person conducting the cleanup):

Estate of James Welker

Address: 1303 Wisconsin Avenue City/Zip Code New Holstein, WI 53061

Telephone Number: (920) 762-0007 Email Address: ra3meyer@charter.net

Environmental Consultant (if different than above):

Address: City/Zip Code

Email Address:

Telephone Number: ( ) FAX Number: ( )

State of Wisconsin
Department of Natural Resources
http://dnr.wi.gov

Case Closure Request
Form 4400-202 (R 8/09)

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

FOR DEPARTMENT USE ONLY

PROJECT MANAGER: [signature] Date Reviewed: 8-24-11

(X) **Approved** ( ) **Denied** ( ) **Sent to Committee** (Date: 8-24-11)

CLOSURE COMMITTEE DECISION ON CLOSURE:

~~SECOND~~ First **COMMITTEE REVIEW DATE:** 8/25/11 ( ) **Approved** ( ) **Denied**

[signature] (Signature) [signature] (Signature) (Signature) (Signature)

COMMITTEE RECOMMENDATION:

_____ **Closure Approved With:**

- _____ No Restrictions
- _____ Listing on GIS Registry due to Groundwater impacts
- _____ Listing on GIS Registry due to Soil impacts
- _____ Zoning Verification
- _____ Deed Restriction
- _____ Deed Notice
- _____ Site Specific Close Out Letter
- _____ Well Abandonment Documentation
- _____ Soil Disposal Documentation
- _____ NR 140 Exemption For:
- _____ VPLE Insurance needed
- _____ Other Conditions/Comments:

- (10) Cap maintenance plan
- (9) Estimate of soil left in place
- (8) Gw PAL Plume map – as map needs Gw Pce/DCE
- (7) Soil plume map for Gw Pce/DCE
- (6) Location of vapor extraction in excavation – abandonment of system needed
- ✓ (5) Location of OA-1 (on map)
- ✓ (4) Location of vapor mitigation system
- ✓ (*) Confirm soil App. A letter to [illegible] / Millenium Store
- (*) Additional info NEED – ✓ (1) Updated X-sections Excav. & Remaining [illegible]
- (2) map with most recent Gw Results (include [illegible] MW-3 [illegible])
- (3) Utility lateral locations drawn on map
- (*) ROW Notice for Soil impacts based on MW-3 & Gw not [illegible] [illegible] wells
- (*) MW-3. Collect gw [illegible] (VOC)

X **Closure Denied, Needs More:**

- _____ Investigation
- _____ Groundwater Monitoring
- _____ Soil Remediation
- _____ Groundwater Remediation
- _____ Documentation of Soil Landspreading or Biopile Destiny
- X Specific Comments: – Collect sub-slab soil vapor samples @ all sample points (VP-1, A-1, A-2, A-3)

(*) Consultant / P.M. Review [illegible] [illegible] steps for VOC Gw sample results [illegible] [illegible] Provide @ time of [illegible] (2nd Review)

(*) Explanation for Pct VOC in MW-3 & 2 [illegible] into soil pct. near Same

(*) Closure Committee [illegible] Sump. of Site X

State of Wisconsin
Department of Natural Resources
http://dnr.wi.gov

Case Closure Request
Form 4400-202 (R 8/09)

WDNR BRRTS CASE # 02 - 08 - 546755 WDNR SITE NAME : Imperial Cleaners

FOR DEPARTMENT USE ONLY

PROJECT MANAGER: [signature] Date Reviewed: 8-24-11

(X) **Approved** ( ) **Denied** ( ) **Sent to Committee** (Date: 8-24-11)

CLOSURE COMMITTEE DECISION ON CLOSURE:

2nd
~~FIRST~~ **COMMITTEE REVIEW DATE:** 12-22-11 (X) **Approved** ( ) **Denied**

[signature] [signature] [signature] [signature]
(Signature) (Signature) (Signature) (Signature)

COMMITTEE RECOMMENDATION:

(X) **Closure Approved With:**

- ____ No Restrictions
- ____ Listing on GIS Registry due to Groundwater impacts
- (X) Listing on GIS Registry due to Soil impacts B-2, ~~B-3~~, B-4, B-5, B-6, B-10, B-11 (cw) ~~MW-1~~, ~~MW-3~~ ~~N-1~~, ~~W-1~~, ~~B-1~~, E-1 — only undefined locations have GW Pathway – Soil exceedances & NEED to be on GIS Soil Reg Req 1, 4, 12
- ____ Zoning Verification
- X Well Abandonment Documentation
- ____ Soil Disposal Documentation
- X NR 140 Exemption For: MW-1, MW-2, MW-3 (TCE & PCE)
- ____ VPLE Insurance needed
- X ROW notification needed WI Ave for soil impacts
- X Cap required, maintenance plan needed for cap (add langs, Regarding Venting Pipes & Vapor Mitigation System)
- ____ Structural Impediment – notification and investigation needed if change in land use
- ____ Maintain Zoning - Industrial Land Use soil standards applied
  - notification needed if change in land use
- ____ Site Specific Closure Letter
- ____ Deed Restriction
- ____ Deed Notice
- X Other maintain existing on-site & off-site vapor mitigation systems

Conditions/Comments:

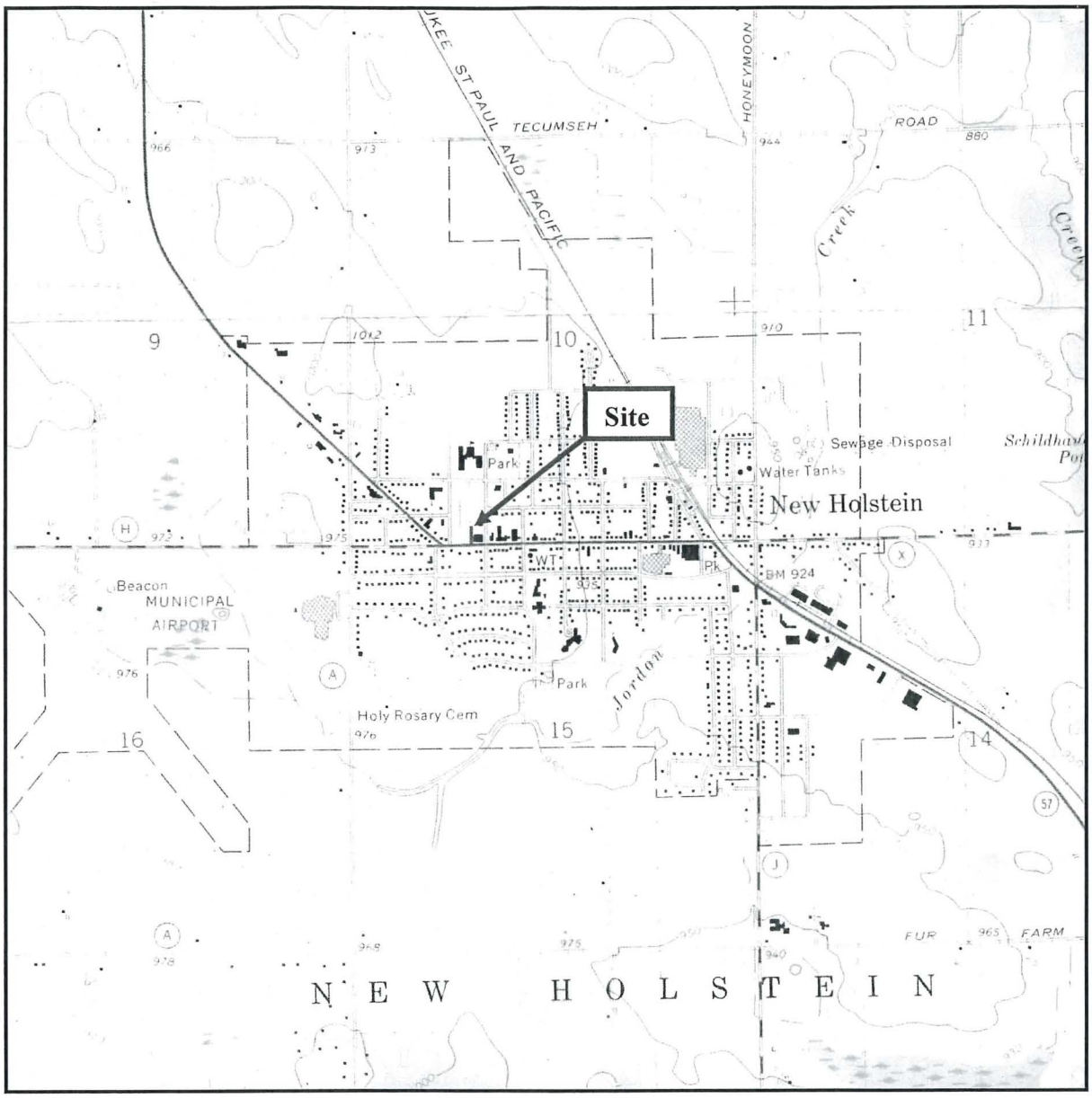
@ Sol-off site letter — Cemetery & Hardware Store

X P.M. to open phantom cont'n case in area for petro in MW-3. Also check DSPS Database — tanks.

____ **Closure Denied, Needs More:**

- ____ Investigation
- ____ Groundwater Monitoring
- ____ Soil Remediation
- ____ Groundwater Remediation
- ____ Documentation of Soil Landspreading or Biopile Destiny

Specific Comments:



Source: USGS *Kiel, Wisconsin* 7.5-minute series (topographic) quadrangle map

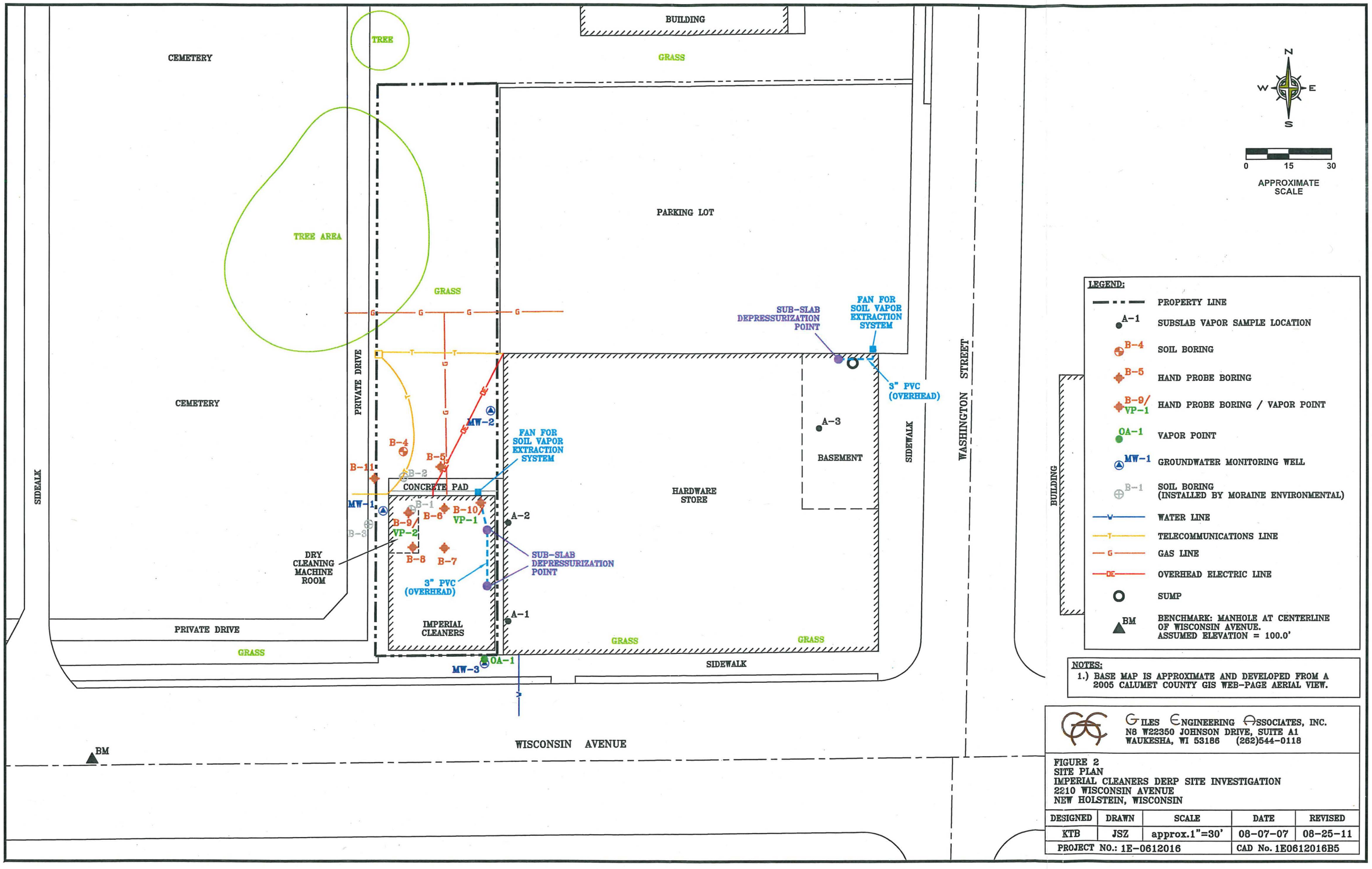
Scale: 1:24,000

N
W E
S

FIGURE 1
SITE LOCATION MAP

Imperial Cleaners
2210 Wisconsin Avenue
New Holstein, Wisconsin
Project No. 1E-0612016

GILES
ENGINEERING ASSOCIATES, INC.



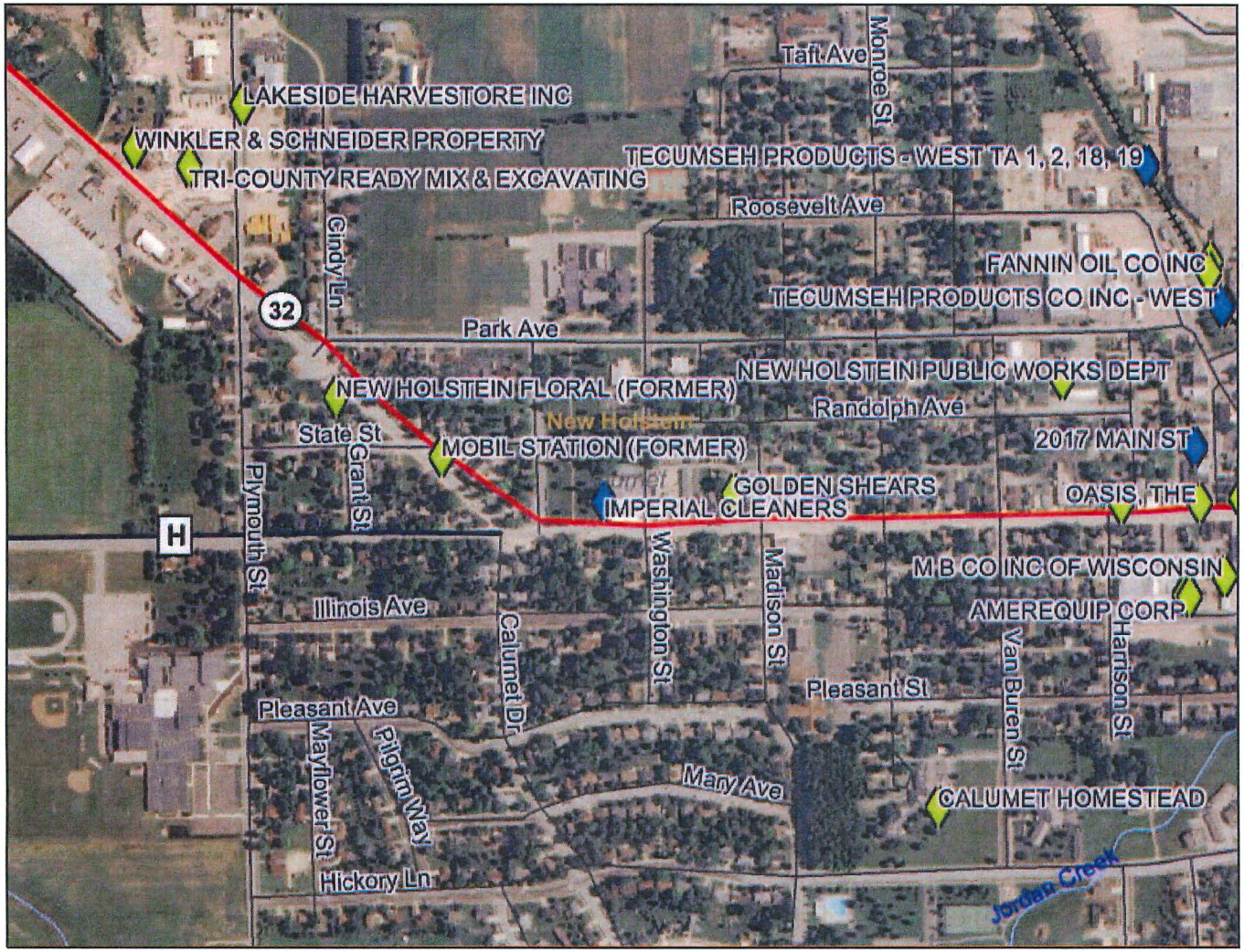
NOTES:
1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 2
SITE PLAN
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	08-07-07	08-25-11
PROJECT NO.: 1E-0612016			CAD No. 1E0612016B5	

Imperial Cleaners



Legend

- Open Sites (ongoing cleanups)
- Open Sites (ongoing cleanups) - site boundaries shown
- Closed Sites (completed cleanups)
- Closed Sites (completed cleanups) - site boundaries shown
- County Boundary
- Railroads
- County Roads (WDOT)
- County Trunk Highway
- State and U.S. Highways (WDOT)
- State Trunk Highway
- US Highway
- Interstate Highways (WDOT)
- Interstate Highway
- Local Roads (WDOT)
- Civil Towns
- Civil Town
- 24K Open Water
- 24K Rivers and Shorelines
- Municipalities

0 850 1700 2550 ft.

Scale: 1:8,846

Map created on Aug 23, 2011

Note: Not all RR Sites have been geo-located yet.

Figure 2A

Figure 2A

GILES
ENGINEERING ASSOCIATES, INC.
GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

• Atlanta, GA
• Baltimore/Wash. DC
• Dallas, TX
• Los Angeles, CA
• Milwaukee, WI
• Orlando, FL

November 15, 2011

City of New Holstein
City of New Holstein
2110 Washington Street
New Holstein, Wisconsin 53061
Attn: Mayor Dianne Reese

Subject: Notification of Contamination
Right-of-way of Wisconsin Avenue
New Holstein, Wisconsin
Project No. 1E-0612016
WDNR BRRTS No. 02-08-546755

To Mayor Reese:

This correspondence is to inform you that Giles Engineering Associates, Inc. (Giles) is conducting closure activities at the 2210 Wisconsin Avenue property (Site) on behalf of the Estate of James Welker. Contamination that appears to have originated on the property located at the Site and may have migrated into the Right-of-way of Wisconsin Avenue. The level of tetrachloroethene (PCE) contamination associated with a release from the dry cleaner at the Site does not exceed the Site-specific direct contact residual contaminant level of 1,230 micrograms per kilogram (ug/kg) in the soil samples collected from soil boring MW-3). The soil contamination would be found at a depth of approximately 2 to 8 feet below the ground surface; groundwater was observed at depths of greater than 40 feet in MW-3. The approximate horizontal extent of possible soil and groundwater contamination is shown on the attached Figures 4 and 6. Giles has investigated and remediated the majority of the on-Site contamination and has informed the Estate of James Welker that the residual soil contamination remaining will naturally degrade over time. Giles believes that allowing natural attenuation to complete the cleanup at this site will meet the requirements for case closure that are found in chapter NR 726 and chapter Comm 46 Wisconsin Administrative Code, and Giles will be requesting that the Department of Natural Resources (the Department) accept natural attenuation as the final remedy for this site and grant case closure. Closure means that the Department will not be requiring any further investigation or cleanup action to be taken, other than the reliance on natural attenuation.

Since the source of possible soil contamination is not on your property, neither you nor any subsequent owner of your property will be held responsible for investigation or cleanup of this soil and groundwater contamination, as long as you and any subsequent owners comply with the requirements of section 292.13, Wisconsin Statutes, including allowing access to your property for environmental investigation or cleanup if access is required. To obtain a copy of the Department of Natural Resources' publication #RR–589, Fact Sheet 10: Guidance for Dealing with Properties Affected by Off–Site Contamination, you may visit http://www.dnr.wi.gov/org/aw/rr/archives/pubs/RR589.pdf.

The Department will not review the closure request for at least 30 days after the date of this letter. As an affected property owner, you have a right to contact the Department 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 Department that is relevant to this closure request, you should mail that information to: Mr. Alan T. Nass, Hydrogeologist, Bureau for Remediation and Redevelopment, 2984 Shawano Avenue, Green Bay, Wisconsin 54313.

GILES
ENGINEERING ASSOCIATES, INC.

If this case is closed, all properties within the site boundaries where possible soil contamination exceeds chapter NR 720 standards will be listed on the Department of Natural Resources' geographic information system (GIS) Registry of Closed Remediation Sites. The information on the GIS Registry includes maps showing the location of properties in Wisconsin where possible soil and groundwater contamination above chapter NR 720 and NR 140 standards were found at the time that the case was closed. This GIS Registry will be available to the general public on the Department of Natural Resources' internet web site. Please review the enclosed deed, survey, and legal description of your property, and notify Giles within the next 30 days if the legal description is incorrect.

Once the Department makes a decision on this closure request, it will be documented in a letter. If the Department grants closure, you may obtain a copy of this letter by contacting Timothy Taugher at Giles, or by accessing the DNR GIS Registry of Closed Remediation Sites on the internet at http://www.dnr.wi.gov/org/aw/rr/gis/index.htm. A copy of the closure letter is included as part of the site file on the GIS Registry of Closed Remediation Sites.

Should you or any subsequent property owner wish to construct or reconstruct a well on your property, special well construction standards may be necessary to protect the well from the residual soil contamination. Any well driller who proposes to construct a well on your property in the future will first need to 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://www.dnr.wi.gov/org/water/dwg/3300254.pdf, or may be accessed through the GIS Registry web address in the preceding paragraph.

Please call me (Timothy Taugher) at Giles Engineering (262) 544-0118 if you have any questions. Alternatively you may contact Alan T. Nass, the DNR Project Manager directly at (920)662-5161.

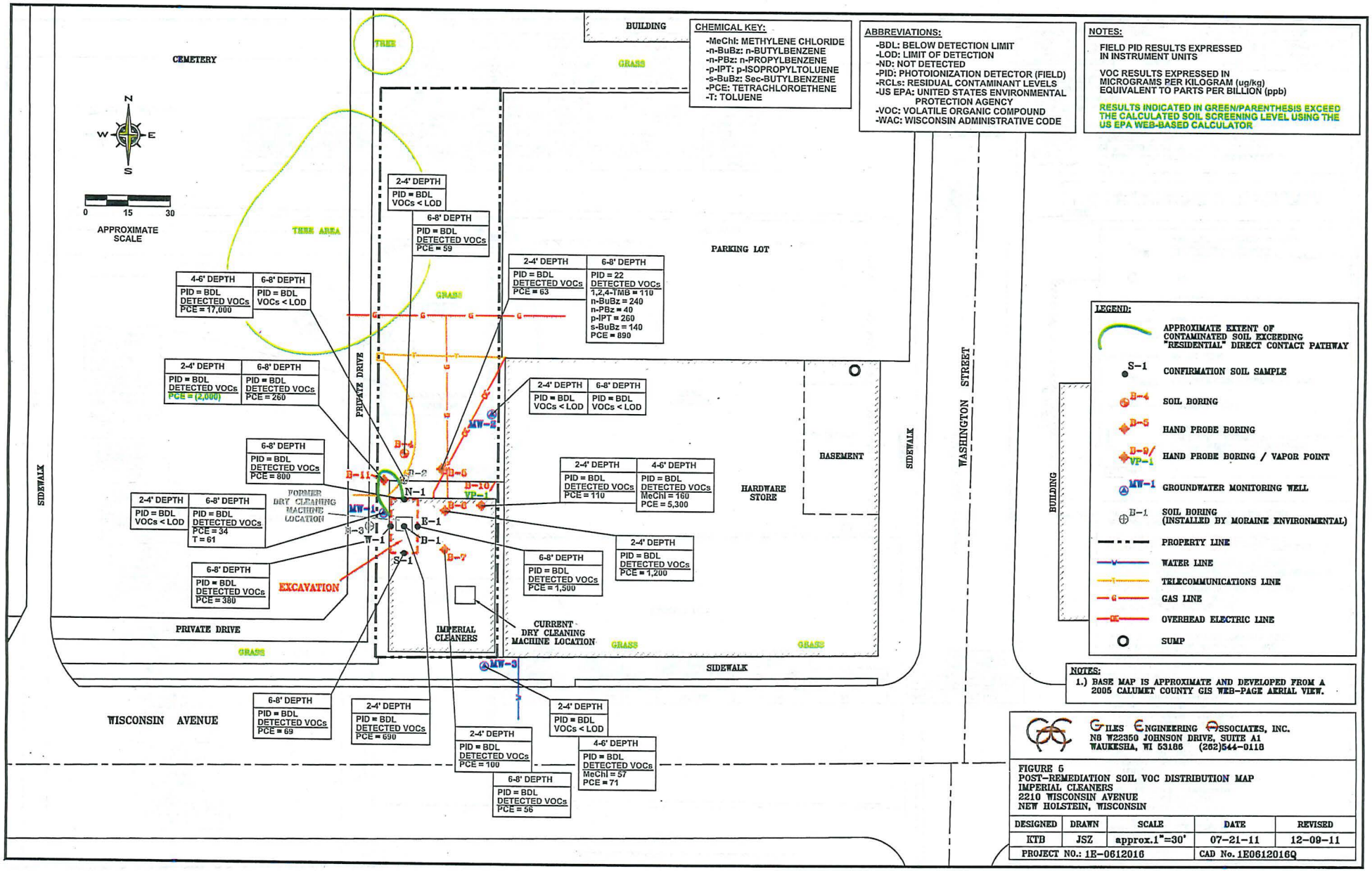
Very truly yours,

GILES ENGINEERING ASSOCIATES, INC.

Timothy J. Taugher, P.G
Senior Hydrogeologist

Kevin T. Bugel, P.G., C.P.G.
Environmental Department Manager

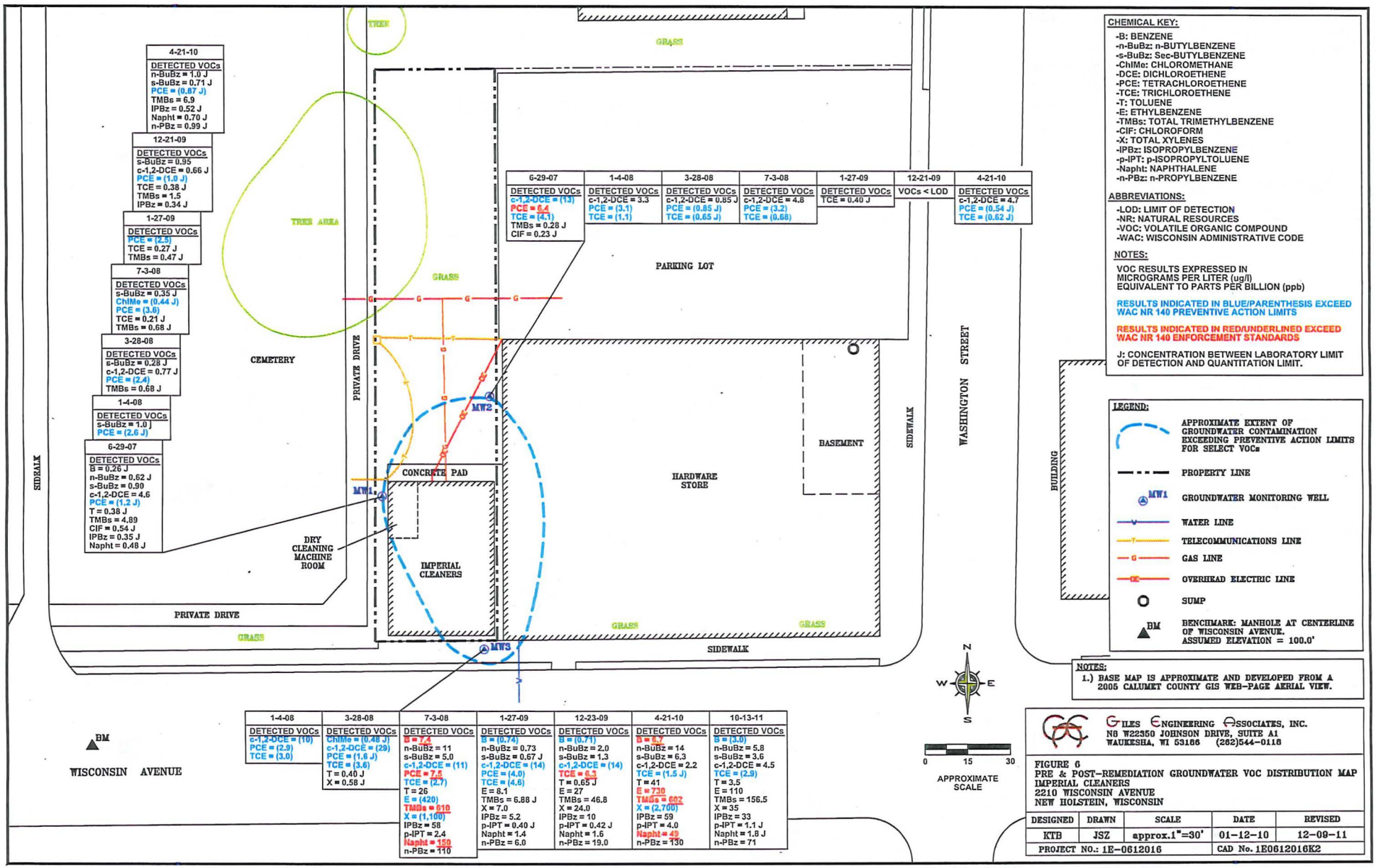
Attachments: Figure 4; Soil VOC Distribution Map
Figure 6; Groundwater Analytical Results



GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 6
POST-REMEDIATION SOIL VOC DISTRIBUTION MAP
IMPERIAL CLEANERS
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	07-21-11	12-09-11
PROJECT NO.: 1E-0612016			CAD No. 1E0612016Q	



4-21-10
DETECTED VOCs
n-BuBz = 1.0 J
s-BuBz = 0.71 J
PCE = (0.87 J)
TMBs = 6.9
IPBz = 0.52 J
Napht = 0.70 J
n-PBz = 0.99 J

12-21-09
DETECTED VOCs
s-BuBz = 0.95
c-1,2-DCE = 0.66 J
PCE = (1.0 J)
TCE = 0.38 J
TMBs = 1.5
IPBz = 0.34 J

1-27-09
DETECTED VOCs
PCE = (2.5)
TCE = 0.27 J
TMBs = 0.47 J

7-3-08
DETECTED VOCs
s-BuBz = 0.35 J
ChlMe = (0.44 J)
PCE = (3.6)
TCE = 0.21 J
TMBs = 0.68 J

3-28-08
DETECTED VOCs
s-BuBz = 0.28 J
c-1,2-DCE = 0.77 J
PCE = (2.4)
TMBs = 0.68 J

1-4-08
DETECTED VOCs
s-BuBz = 1.0 J
PCE = (2.6 J)

6-29-07
DETECTED VOCs
B = 0.26 J
n-BuBz = 0.62 J
s-BuBz = 0.90
c-1,2-DCE = 4.6
PCE = (1.2 J)
T = 0.38 J
TMBs = 4.89
CIF = 0.54 J
IPBz = 0.35 J
Napht = 0.48 J

6-29-07	1-4-08	3-28-08	7-3-08	1-27-09	12-21-09	4-21-10
DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	VOCs < LOD	DETECTED VOCs
c-1,2-DCE = (13)	c-1,2-DCE = 3.3	c-1,2-DCE = 0.85 J	c-1,2-DCE = 4.8	TCE = 0.40 J		c-1,2-DCE = 4.7
PCE = 6.4	PCE = (3.1)	PCE = (0.85 J)	PCE = (3.2)			PCE = (0.54 J)
TCE = (4.1)	TCE = (1.1)	TCE = (0.65 J)	TCE = (0.68)			TCE = (0.62 J)
TMBs = 0.28 J						
CIF = 0.23 J						

1-4-08	3-28-08	7-3-08	1-27-09	12-23-09	4-21-10	10-13-11
DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs
c-1,2-DCE = (10)	ChlMe = (0.48 J)	B = 7.4	B = (0.74)	B = (0.71)	B = 6.7	B = (3.0)
PCE = (2.9)	c-1,2-DCE = (29)	n-BuBz = 11	n-BuBz = 0.73	n-BuBz = 2.0	n-BuBz = 14	n-BuBz = 5.8
TCE = (3.0)	PCE = (1.6 J)	s-BuBz = 5.0	s-BuBz = 0.67 J	s-BuBz = 1.3	s-BuBz = 6.3	s-BuBz = 3.6
	TCE = (3.6)	c-1,2-DCE = (11)	c-1,2-DCE = (14)	c-1,2-DCE = (14)	c-1,2-DCE = 2.2	c-1,2-DCE = 4.5
	T = 0.40 J	PCE = 7.5	PCE = (4.0)	TCE = 6.3	TCE = (1.5 J)	TCE = (2.9)
	X = 0.58 J	TCE = (2.7)	TCE = (4.6)	T = 0.65 J	T = 41	T = 3.5
		T = 26	E = 8.1	E = 27	E = 730	E = 110
		E = (420)	TMBs = 6.88 J	TMBs = 46.8	TMBs = 602	TMBs = 156.5
		TMBs = 610	X = 7.0	X = 24.0	X = (2,700)	X = 35
		X = (1,100)	IPBz = 5.2	IPBz = 10	IPBz = 59	IPBz = 33
		IPBz = 58	p-IPT = 0.40 J	p-IPT = 0.42 J	p-IPT = 4.0	p-IPT = 1.1 J
		p-IPT = 2.4	Napht = 1.4	Napht = 1.6	Napht = 49	Napht = 1.8 J
		Napht = 150	n-PBz = 6.0	n-PBz = 19.0	n-PBz = 130	n-PBz = 71
		n-PBz = 110				

CHEMICAL KEY:

-B: BENZENE
-n-BuBz: n-BUTYLBENZENE
-s-BuBz: Sec-BUTYLBENZENE
-ChlMe: CHLOROMETHANE
-DCE: DICHLOROETHENE
-PCE: TETRACHLOROETHENE
-TCE: TRICHLOROETHENE
-T: TOLUENE
-E: ETHYLBENZENE
-TMBs: TOTAL TRIMETHYLBENZENE
-CIF: CHLOROFORM
-X: TOTAL XYLENES
-IPBz: ISOPROPYLBENZENE
-p-IPT: p-ISOPROPYLTOLUENE
-Napht: NAPHTHALENE
-n-PBz: n-PROPYLBENZENE

ABBREVIATIONS:

-LOD: LIMIT OF DETECTION
-NR: NATURAL RESOURCES
-VOC: VOLATILE ORGANIC COMPOUND
-WAC: WISCONSIN ADMINISTRATIVE CODE

NOTES:

VOC RESULTS EXPRESSED IN MICROGRAMS PER LITER (ug/l) EQUIVALENT TO PARTS PER BILLION (ppb)

RESULTS INDICATED IN BLUE/PARENTHESIS EXCEED WAC NR 140 PREVENTIVE ACTION LIMITS

RESULTS INDICATED IN RED/UNDERLINED EXCEED WAC NR 140 ENFORCEMENT STANDARDS

J: CONCENTRATION BETWEEN LABORATORY LIMIT OF DETECTION AND QUANTITATION LIMIT.

LEGEND:

- APPROXIMATE EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING PREVENTIVE ACTION LIMITS FOR SELECT VOCs
- PROPERTY LINE
- MW1 GROUNDWATER MONITORING WELL
- W WATER LINE
- T TELECOMMUNICATIONS LINE
- G GAS LINE
- OE OVERHEAD ELECTRIC LINE
- SUMP
- BM BENCHMARK: MANHOLE AT CENTERLINE OF WISCONSIN AVENUE. ASSUMED ELEVATION = 100.0'

NOTES:

1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 6
PRE & POST-REMEDIATION GROUNDWATER VOC DISTRIBUTION MAP
IMPERIAL CLEANERS
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	01-12-10	12-09-11
PROJECT NO.: 1E-0612016			CAD No. 1E0612016K2	

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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:

City of New Holstein
2110 Washington Street
New Holstein, WI
53061
Attn: Mayor Dianne Reese

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Angie Halbach ☐ Age ☐ Add

B. Received by (Printed Name) Angie Halbach | C. Date of D 12-9-

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Mercha
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7005 1820 0003 6469 7295

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-I

RECEIVED
DEC 15 2011
WI DNR - GREEN BAY

7005 1820 0003 6469 7295

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com®

Postage	$
Certified Fee	2.85
Return Receipt Fee (Endorsement Required)	2.30
Restricted Delivery Fee (Endorsement Required)	1.08
Total Postage & Fees	$ 6.23

Postmark Here

ATTN: Mayor Dianne Reese

Sent To: City of New Holstein
Street, Apt. No. or PO Box No.: 2110 Washington St
City, State, ZIP+4: New Holstein WI 53061

PS Form 3800, June 2002 See Reverse for Instructio

TABLE 1 (CONTINUED)
PRE-REMEDIATION SOIL ANALYTICAL RESULTS SUMMARY
DETECTED VOCS

Imperial Cleaners
2210 West Wisconsin
New Holstein, Wisconsin
Project No. 1E-0612016

Analyte	B-9		B-10		B-11		MW-1		MW-2		MW-3		NR 720.09 RCLs	Calculated EPA SSL	WDNR Landfill Disposal Limit Contained-Out Non-Hazardous
Sample Depth (feet)	2-4	4-6	2-4	4-6	2-4	6-8	2-4	6-8	2-4	6-8	2-4	4-6			
Sample Date	7/3/2008	7/3/2008	7/3/2008	7/3/2008	7/3/2008	7/3/2008	6/6/2007	6/6/2007	6/7/2007	6/7/2007	12/13/2007	12/13/2007			
PID (HNU)	360	850	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Detected VOCs (ug/kg)															
1,2,4 Trimethylbenzene	**11,000 E**	**11,000**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
1,3,5 Trimethylbenzene	**4,100**	**4,100**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
1,2-Dichlorobenzene	**1,800**	**1,500**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
1,4-Dichlorobenzene	**180**	**170**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
cis-1,2-Dichloroethene	**33**	<29	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	156,000	NS
Chloroform	**260**	**110**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
Ethylbenzene	**87**	**57**	<30	,27	<28	<28	<32	<27	<30	<28	<28	<28	2,900	NC	NS
Isopropylbenzene	**1,000**	**940**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
Methylene Chloride	<56	<58	<60	**160**	<57	<57	<63	<54	<59	<56	<56	**57**	NS	NC	NS
Naphthalene	**170**	**200**	<60	<54	<57	<57	<63	<54	<59	<56	<56	<56	NS	NC	NS
N-Butylbenzene	**1,100**	**1,500**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
n-Propylbenzene	**1,600**	**1,500**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
p-Isopropyltoluene	**510**	**730**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
sec-Butylbenzene	**520**	**660**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
Tetrachloroethene	**{45,000,000 E}**	**{41,000,000}**	**110**	**5,300**	**(2,000)**	**260**	<32	**34**	<30	<28	<28	**71**	NS	1,230	33,000
Toluene	**71**	**45**	<30	<27	<28	<28	<32	**61**	<30	<28	<28	<28	1,500	NC	NS
1,1,1-Trichloroethane	**78**	**36**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	NC	NS
Trichloroethene	**(4,100)**	**2,700**	<30	<27	<28	<28	<32	<27	<30	<28	<28	<28	NS	850	14,000
Xylenes, total	**1,500**	**1,000**	<100	<93	<96	<96	<110	<91	<100	<95	<95	<95	4,100	NC	NS

Notes:

PID: Photoionization Detector
VOCs: Volatile Organic Compounds
ug/kg: Micrograms per kilogram; equivalent to parts per billion (ppb)
NR: Natural Resources Chapter of the Wisconsin Administrative Code (WAC)
EPA: Environmental Protection Agency
BDL: Below Detection Limit
RCLs: Residual Contaminant Levels
NS: No Established Standard
SSL: Soil Screening Level
NC: Not Calculated
E: Concentration exceeds the calibration range and result is semi-quantitative
*: Calculated using State of Wisconsin Defaults presented in PUB-RR-682, dated January 11, 2002

Results indicated in red/underlined exceed the WAC NR 720.09 Generic RCLs based on groundwater protection

Results indicated in green/parenthesis exceed the Calculated Soil Screening Level Using the US EPA Web-based Claculator & Green Highlight

Results indicated in purple/brackets exceed the Allowable level for Landfill acceptance as contained-out non-hazardous waste.

CHEMICAL KEY:
-MeChl: METHYLENE CHLORIDE
-n-BuBz: n-BUTYLBENZENE
-n-PBz: n-PROPYLBENZENE
-p-IPT: p-ISOPROPYLTOLUENE
-s-BuBz: Sec-BUTYLBENZENE
-PCE: TETRACHLOROETHENE
-T: TOLUENE

ABBREVIATIONS:
-BDL: BELOW DETECTION LIMIT
-LOD: LIMIT OF DETECTION
-ND: NOT DETECTED
-PID: PHOTOIONIZATION DETECTOR (FIELD)
-RCLs: RESIDUAL CONTAMINANT LEVELS
-US EPA: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
-VOC: VOLATILE ORGANIC COMPOUND
-WAC: WISCONSIN ADMINISTRATIVE CODE

NOTES:
FIELD PID RESULTS EXPRESSED IN INSTRUMENT UNITS

VOC RESULTS EXPRESSED IN MICROGRAMS PER KILOGRAM (ug/kg) EQUIVALENT TO PARTS PER BILLION (ppb)

RESULTS INDICATED IN GREEN/PARENTHESIS EXCEED THE CALCULATED SOIL SCREENING LEVEL USING THE US EPA WEB-BASED CALCULATOR

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N
W E
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APPROXIMATE SCALE

CEMETERY
TREE
GRASS
BUILDING
TREE AREA
PARKING LOT
PRIVATE DRIVE
SIDEWALK
WASHINGTON STREET
BUILDING
BASEMENT
HARDWARE STORE
FORMER DRY CLEANING MACHINE LOCATION
EXCAVATION
IMPERIAL CLEANERS
CURRENT DRY CLEANING MACHINE LOCATION
PRIVATE DRIVE
GRASS
SIDEWALK
WISCONSIN AVENUE

4-6' DEPTH	6-8' DEPTH
PID = BDL DETECTED VOCs PCE = 17,000	PID = BDL VOCs < LOD

2-4' DEPTH	6-8' DEPTH
PID = BDL VOCs < LOD	PID = BDL DETECTED VOCs PCE = 59

2-4' DEPTH	6-8' DEPTH
PID = BDL DETECTED VOCs PCE = 63	PID = 22 DETECTED VOCs 1,2,4-TMB = 110 n-BuBz = 240 n-PBz = 40 p-IPT = 260 s-BuBz = 140 PCE = 890

2-4' DEPTH	6-8' DEPTH
PID = BDL DETECTED VOCs PCE = (2,000)	PID = BDL DETECTED VOCs PCE = 260

2-4' DEPTH	6-8' DEPTH
PID = BDL VOCs < LOD	PID = BDL VOCs < LOD

6-8' DEPTH
PID = BDL DETECTED VOCs PCE = 800

2-4' DEPTH	6-8' DEPTH
PID = BDL VOCs < LOD	PID = BDL DETECTED VOCs PCE = 34 T = 61

2-4' DEPTH	4-6' DEPTH
PID = BDL DETECTED VOCs PCE = 110	PID = BDL DETECTED VOCs MeChl = 160 PCE = 5,300

2-4' DEPTH
PID = BDL DETECTED VOCs PCE = 1,200

6-8' DEPTH
PID = BDL DETECTED VOCs PCE = 1,500

6-8' DEPTH
PID = BDL DETECTED VOCs PCE = 380

6-8' DEPTH
PID = BDL DETECTED VOCs PCE = 69

2-4' DEPTH
PID = BDL DETECTED VOCs PCE = 690

2-4' DEPTH
PID = BDL DETECTED VOCs PCE = 100

6-8' DEPTH
PID = BDL DETECTED VOCs PCE = 56

2-4' DEPTH
PID = BDL VOCs < LOD

4-6' DEPTH
PID = BDL DETECTED VOCs MeChl = 57 PCE = 71

MW-1 MW-2 MW-3
B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10/VP-1 B-11
N-1 E-1 W-1 S-1

LEGEND:
- APPROXIMATE EXTENT OF CONTAMINATED SOIL EXCEEDING "RESIDENTIAL" DIRECT CONTACT PATHWAY (0-4' depth) au
- S-1 CONFIRMATION SOIL SAMPLE
- B-4 SOIL BORING
- B-5 HAND PROBE BORING
- B-9/VP-1 HAND PROBE BORING / VAPOR POINT
- MW-1 GROUNDWATER MONITORING WELL
- B-1 SOIL BORING (INSTALLED BY MORAINE ENVIRONMENTAL)
- PROPERTY LINE
- W WATER LINE
- T TELECOMMUNICATIONS LINE
- G GAS LINE
- OE OVERHEAD ELECTRIC LINE
- SUMP

NOTES:
1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

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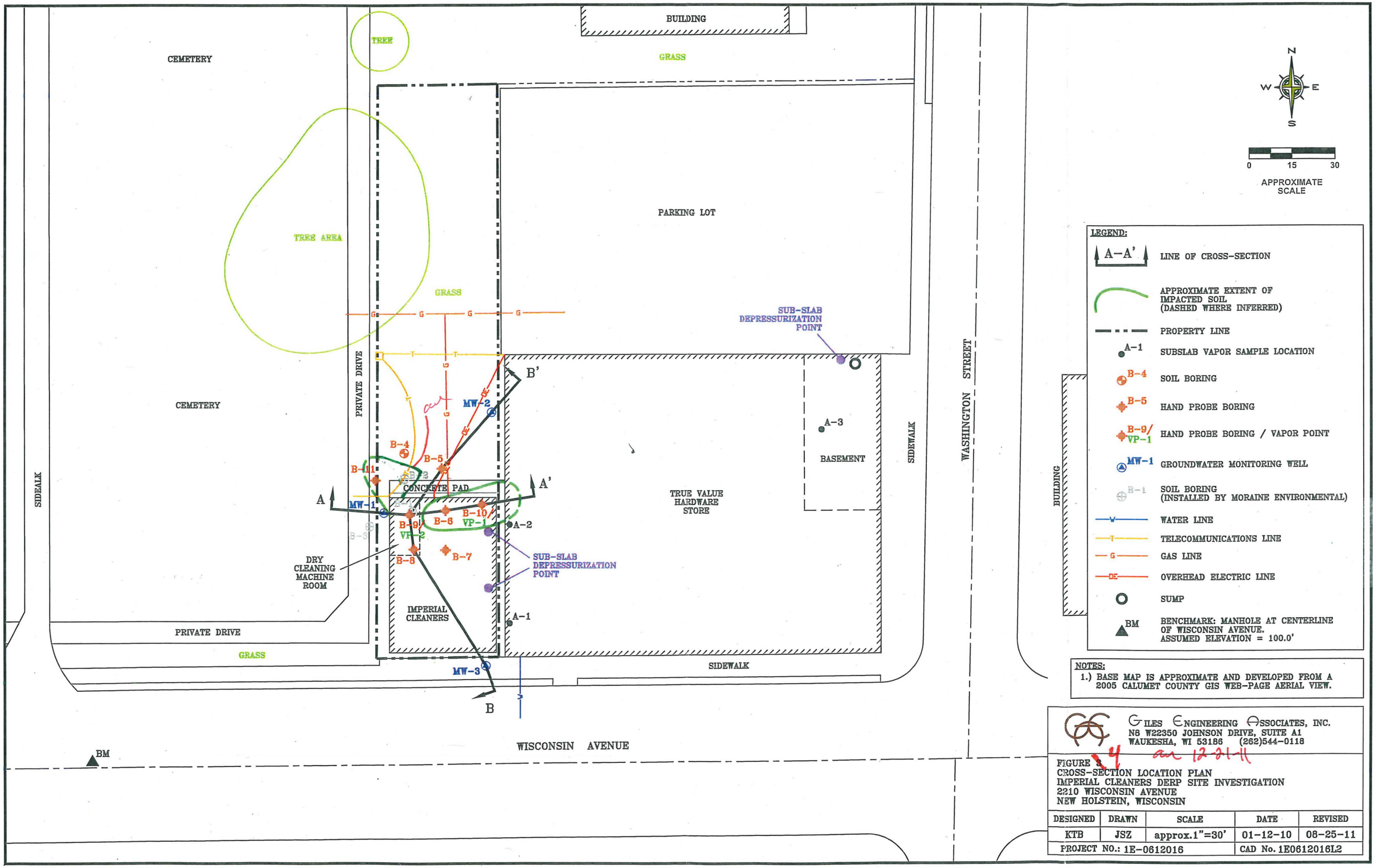
WAUKESHA, WI 53186 (262)544-0118

FIGURE 5
POST-REMEDIATION SOIL VOC DISTRIBUTION MAP
IMPERIAL CLEANERS
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	07-21-11	12-09-11
PROJECT NO.: 1E-0612016			CAD No. 1E0612016Q	



NOTES:
1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

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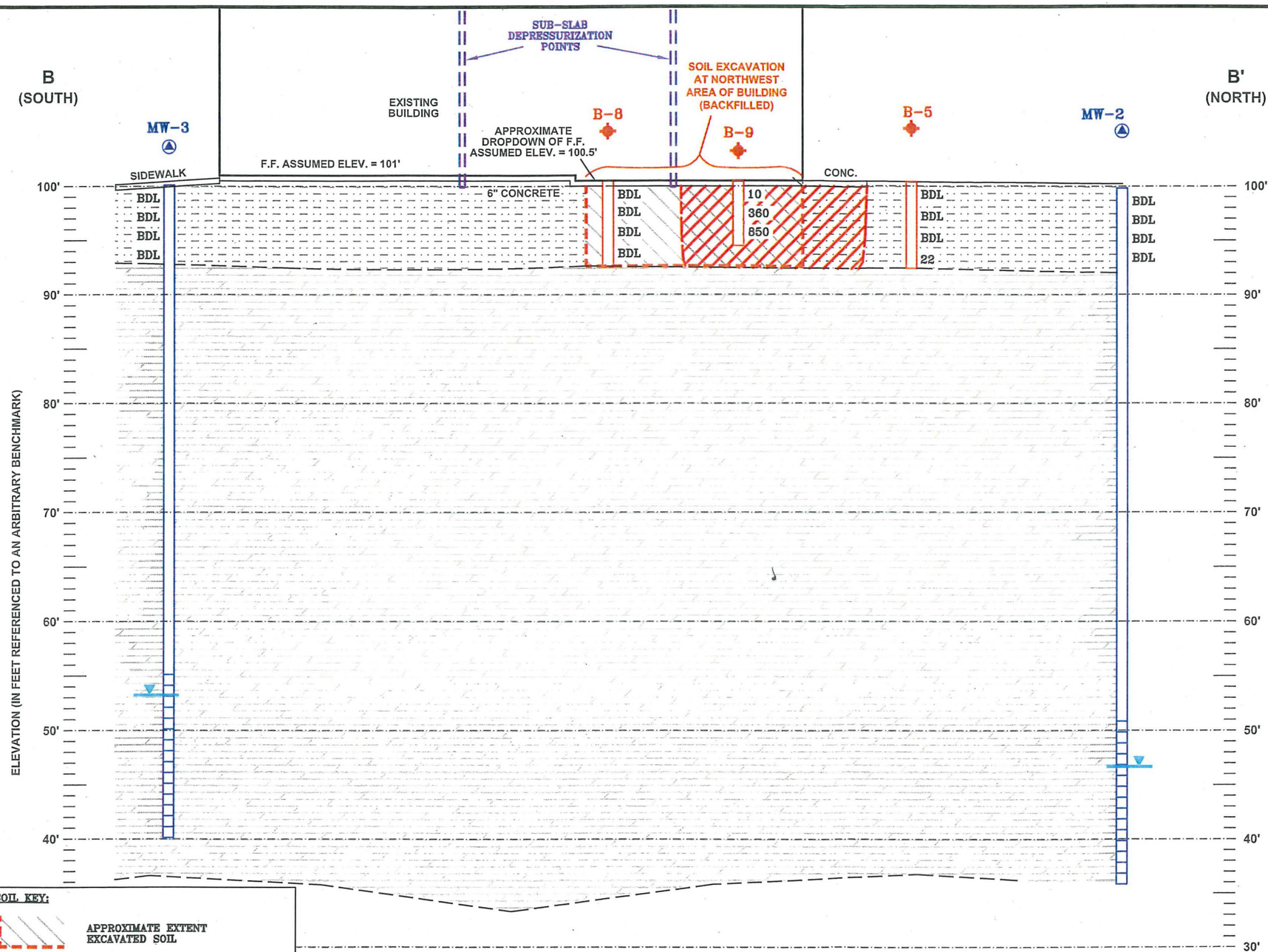
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 4 as 12-21-11
CROSS-SECTION LOCATION PLAN
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	01-12-10	08-25-11
PROJECT NO.: 1E-0612016			CAD No. 1E0612016L2	



SOIL KEY:

- APPROXIMATE EXTENT EXCAVATED SOIL
- CLAYEY SILT
- SILURIAN DOLOMITE BEDROCK
- SOIL TO BEDROCK CONTACT LINES DASHED WHERE INFERRED

LEGEND:

- ESTIMATED EXTENT OF IMPACTED SOIL REMAINING
- B-9 — SOIL BORING
- MW-1 — GROUNDWATER MONITORING WELL
- WELL SCREEN
- STATIC WATER LEVEL (1/27/09)
- 58.9 — PHOTOIONIZATION DETECTOR (PID) READING
- BDL — BELOW PID DETECTION LIMIT

CROSS SECTION B-B'

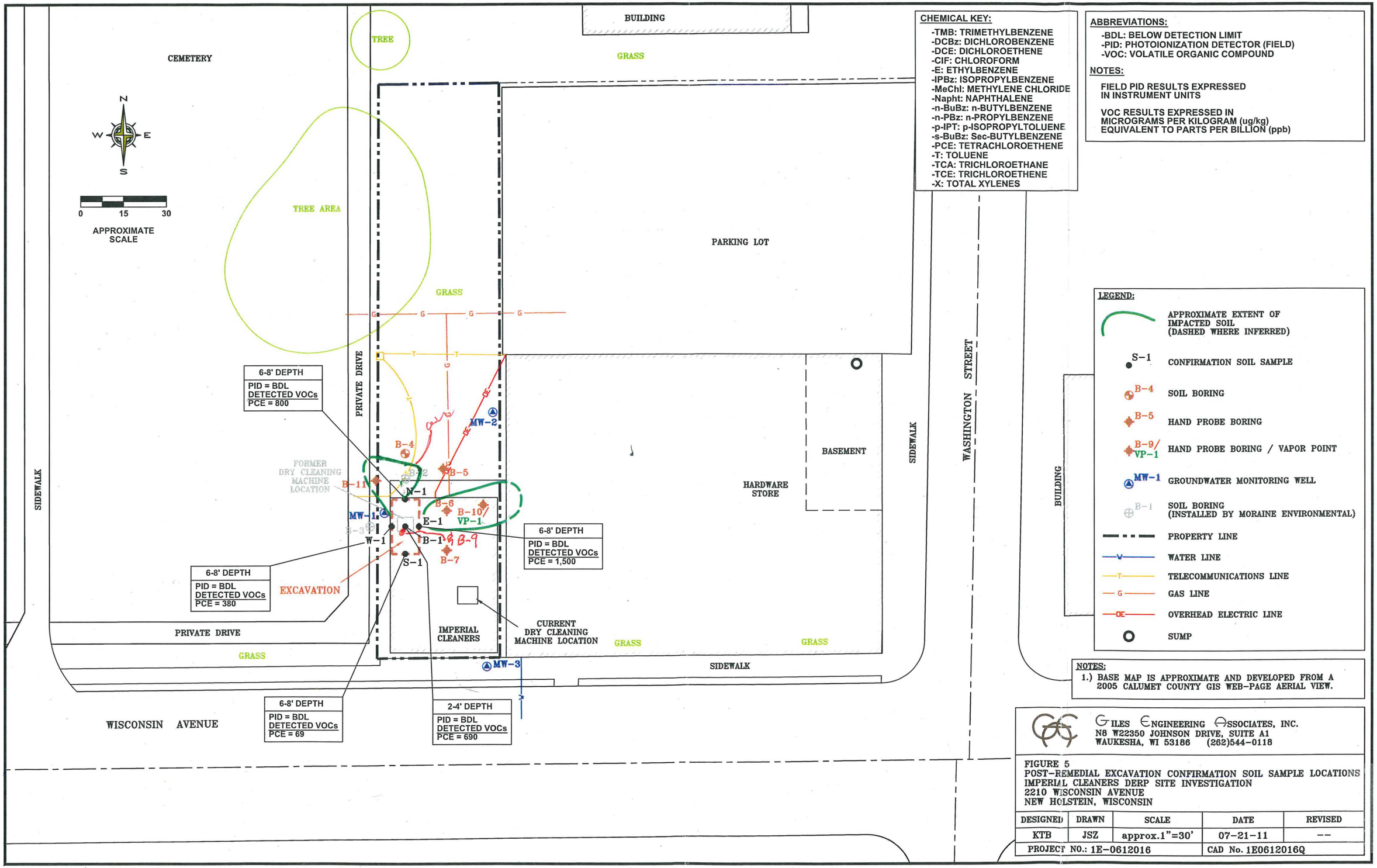
SCALE: VERTICAL 1" = 10'
HORIZONTAL 1" = 10'

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

4B cwc 12-21-11

FIGURE 3B
CROSS-SECTION B-B'
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	SEE TITLE	01-08-10	08-25-11
PROJECT NO.: 1E-0612016			CAD No. 1E0612016N2	



CHEMICAL KEY:

- -TMB: TRIMETHYLBENZENE
- -DCBz: DICHLOROBENZENE
- -DCE: DICHLOROETHENE
- -CIF: CHLOROFORM
- -E: ETHYLBENZENE
- -IPBz: ISOPROPYLBENZENE
- -MeChl: METHYLENE CHLORIDE
- -Napht: NAPHTHALENE
- -n-BuBz: n-BUTYLBENZENE
- -n-PBz: n-PROPYLBENZENE
- -p-IPT: p-ISOPROPYLTOLUENE
- -s-BuBz: Sec-BUTYLBENZENE
- -PCE: TETRACHLOROETHENE
- -T: TOLUENE
- -TCA: TRICHLOROETHANE
- -TCE: TRICHLOROETHENE
- -X: TOTAL XYLENES

ABBREVIATIONS:

- -BDL: BELOW DETECTION LIMIT
- -PID: PHOTOIONIZATION DETECTOR (FIELD)
- -VOC: VOLATILE ORGANIC COMPOUND

NOTES:

FIELD PID RESULTS EXPRESSED IN INSTRUMENT UNITS

VOC RESULTS EXPRESSED IN MICROGRAMS PER KILOGRAM (ug/kg) EQUIVALENT TO PARTS PER BILLION (ppb)

LEGEND:

- APPROXIMATE EXTENT OF IMPACTED SOIL (DASHED WHERE INFERRED)
- S-1 — CONFIRMATION SOIL SAMPLE
- B-4 — SOIL BORING
- B-5 — HAND PROBE BORING
- B-9/VP-1 — HAND PROBE BORING / VAPOR POINT
- MW-1 — GROUNDWATER MONITORING WELL
- B-1 — SOIL BORING (INSTALLED BY MORAINE ENVIRONMENTAL)
- PROPERTY LINE
- W — WATER LINE
- T — TELECOMMUNICATIONS LINE
- G — GAS LINE
- OE — OVERHEAD ELECTRIC LINE
- SUMP

NOTES:

1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 5
POST-REMEDIAL EXCAVATION CONFIRMATION SOIL SAMPLE LOCATIONS
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	07-21-11	--
PROJECT NO.: 1E-0612016			CAD No. 1E0612016Q	

TABLE 2 3 ave 12-21-11
PRE- & POST-REMEDIATION GROUNDWATER ANALYTICAL RESULTS SUMMARY
DETECTED VOCS

Imperial Cleaners
2210 West Wisconsin
New Holstein, Wisconsin
Project No. 1E-0612016

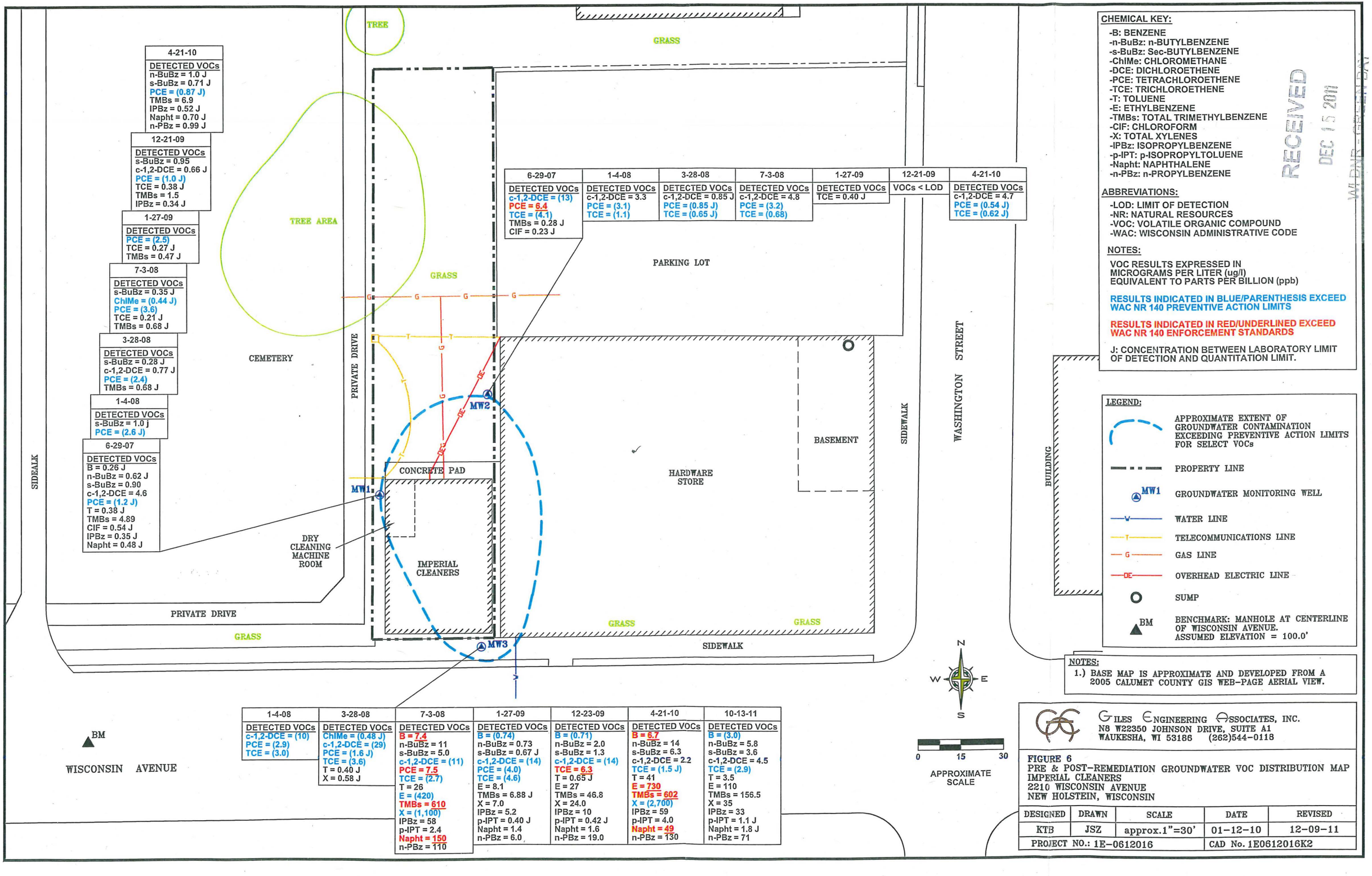
Detected Volatile Organic Compounds (VOCs) (ug/L)																	
Sample Location	Sample Date	Benzene	n-Butylbenzene	sec-BuBz	ChlMe	cis-1,2-DCE	PCE	TCE	Toluene	EthylBenzene	TMBs	Chloroform	Xylenes	Isopropylbenzene	p-Isopropyltoluene	Napthalene	n-Propylbenzene
MW-1	06/29/07	0.26j	0.62j	0.90	<0.20	4.6	(1.2j)	<0.20	0.38j	<0.50	4.89	0.54j	<0.50	0.35j	<0.20	0.48j	<0.50
	01/04/08	<0.80	<0.80	1.0j	<0.80	<2.0	(2.6j)	<0.80	<0.80	<2.0	<0.80	<0.80	<2.0	<0.80	<0.80	<1.0	<2.0
	03/28/08	<0.20	<0.20	0.28j	<0.20	0.77j	(2.4)	<0.20	<0.20	<0.50	0.68j	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	07/03/08	<0.20	<0.20	0.35j	(0.44j)	<0.50	(3.6)	0.21j	<0.50	<0.50	0.68j	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	01/27/09	<0.20	<0.20	<0.25	<0.30	<0.50	(2.5)	0.27j	<0.50	<0.50	0.47j	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	12/21/09	<0.20	<0.20	0.95	<0.30	0.66j	(1.0j)	0.38j	<0.50	<0.50	1.5	<0.20	<0.50	0.34j	<0.20	<0.25	<0.50
	04/21/10	<0.20	1.0j	0.71j	<0.30	<0.50	(0.87j)	<0.20	<0.50	<0.50	6.9	<0.20	<0.50	0.52j	<0.20	0.70j	0.99j
	10/13/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	06/29/07	<0.20	<0.20	<0.25	<0.20	(13)	6.4	(4.1)	<0.20	<0.50	0.28j	0.23j	<0.50	<0.20	<0.20	<0.25	<0.50
	01/04/08	<0.20	<0.20	<0.25	<0.20	3.3	(3.1)	(1.1)	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	03/28/08	<0.20	<0.20	<0.25	<0.20	0.85j	(0.85j)	(0.65j)	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	07/03/08	<0.20	<0.20	<0.25	<0.30	4.8	(3.2)	(0.68)	<0.50	<0.50	<0.20	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	01/27/09	<0.20	<0.20	<0.25	<0.30	<0.50	<0.50	0.40j	<0.50	<0.50	<0.20	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	12/21/09	<0.20	<0.20	<0.25	<0.30	<0.50	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	04/21/10	<0.20	<0.20	<0.25	<0.30	4.7	(0.54j)	(0.62j)	<0.50	<0.50	<0.20	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	10/13/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	06/29/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	01/04/08	<0.20	<0.20	<0.25	<0.20	(10)	(2.9)	(3.0)	<0.20	<0.50	<0.20	<0.20	<0.50	<0.20	<0.20	<0.25	<0.50
	03/28/08	<0.20	<0.20	<0.25	(0.48j)	(29)	(1.6j)	(3.6)	0.40j	<0.50	<0.20	<0.20	0.58j	<0.20	<0.20	<0.25	<0.50
	07/03/08	7.4	11	5.0	<0.30	(11)	7.5	(2.7)	26	(420)	610	<0.20	(1,100)	58	2.4	150	110
	01/27/09	(0.74)	0.73	0.67j	<0.30	(14)	(4.0)	(4.6)	<0.50	8.1	6.88j	<0.20	7.0	5.2	0.40j	1.4	6.0
	12/21/09	(0.71)	2.0	1.3	<0.30	(14)	<0.50	6.3	0.65j	27	46.8	<0.20	24	10	0.42j	1.6	19
	04/21/10	6.7	14	6.3	<0.30	2.2	<0.50	(1.5j)	41	730	602	<0.20	(2,700)	59	4.0	49	130
	10/13/11	(3.0)	5.8	3.6	<0.30	4.5	<0.50	(2.9)	3.5	110	(156.5)	<0.20	35	33	1.1j	1.8j	71
NR140 ES		5.0	NS	NS	3	70	5	5	1,000	700	480	6	10000	NS	NS	40	NS
NR140 PAL		0.5	NS	NS	0.3	7	0.5	0.5	200	140	96	0.6	1000	NS	NS	8	NS

Notes:

ChlMe: Chloromethane
PCE: Tetrachloroethene
TCE: Trichloroethene
TMB: Trimethylbenzene
DCE: Dichloroethene
ug/L: Micrograms per liter; equivalent to parts per billion (ppb)
" - ": No data collected and/or well not installed.
j: Concentration was detected between the laboratory detection limit and the quantitation limit
NS: No Established Standard

Results indicated in red/underlined exceed the Wisconsin Administrative Code NR 140 Enforcement Standard (ES)

Results indicated in blue/parenthesis are above the Wisconsin Administrative Code NR 140 Preventive Action Limits (PAL)



4-21-10
DETECTED VOCs
n-BuBz = 1.0 J
s-BuBz = 0.71 J
PCE = (0.87 J)
TMBs = 6.9
IPBz = 0.52 J
Napht = 0.70 J
n-PBz = 0.99 J

12-21-09
DETECTED VOCs
s-BuBz = 0.95
c-1,2-DCE = 0.66 J
PCE = (1.0 J)
TCE = 0.38 J
TMBs = 1.5
IPBz = 0.34 J

1-27-09
DETECTED VOCs
PCE = (2.5)
TCE = 0.27 J
TMBs = 0.47 J

7-3-08
DETECTED VOCs
s-BuBz = 0.35 J
ChlMe = (0.44 J)
PCE = (3.6)
TCE = 0.21 J
TMBs = 0.68 J

3-28-08
DETECTED VOCs
s-BuBz = 0.28 J
c-1,2-DCE = 0.77 J
PCE = (2.4)
TMBs = 0.68 J

1-4-08
DETECTED VOCs
s-BuBz = 1.0 j
PCE = (2.6 J)

6-29-07
DETECTED VOCs
B = 0.26 J
n-BuBz = 0.62 J
s-BuBz = 0.90
c-1,2-DCE = 4.6
PCE = (1.2 J)
T = 0.38 J
TMBs = 4.89
CIF = 0.54 J
IPBz = 0.35 J
Napht = 0.48 J

6-29-07	1-4-08	3-28-08	7-3-08	1-27-09	12-21-09	4-21-10
DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	VOCs < LOD	DETECTED VOCs
c-1,2-DCE = (13)	c-1,2-DCE = 3.3	c-1,2-DCE = 0.85 J	c-1,2-DCE = 4.8	TCE = 0.40 J		c-1,2-DCE = 4.7
PCE = 6.4	PCE = (3.1)	PCE = (0.85 J)	PCE = (3.2)			PCE = (0.54 J)
TCE = (4.1)	TCE = (1.1)	TCE = (0.65 J)	TCE = (0.68)			TCE = (0.62 J)
TMBs = 0.28 J						
CIF = 0.23 J						

1-4-08	3-28-08	7-3-08	1-27-09	12-23-09	4-21-10	10-13-11
DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs	DETECTED VOCs
c-1,2-DCE = (10)	ChlMe = (0.48 J)	B = 7.4	B = (0.74)	B = (0.71)	B = 6.7	B = (3.0)
PCE = (2.9)	c-1,2-DCE = (29)	n-BuBz = 11	n-BuBz = 0.73	n-BuBz = 2.0	n-BuBz = 14	n-BuBz = 5.8
TCE = (3.0)	PCE = (1.6 J)	s-BuBz = 5.0	s-BuBz = 0.67 J	s-BuBz = 1.3	s-BuBz = 6.3	s-BuBz = 3.6
	TCE = (3.6)	c-1,2-DCE = (11)	c-1,2-DCE = (14)	c-1,2-DCE = (14)	c-1,2-DCE = 2.2	c-1,2-DCE = 4.5
	T = 0.40 J	PCE = 7.5	PCE = (4.0)	TCE = 6.3	TCE = (1.5 J)	TCE = (2.9)
	X = 0.58 J	TCE = (2.7)	TCE = (4.6)	T = 0.65 J	T = 41	T = 3.5
		T = 26	E = 8.1	E = 27	E = 730	E = 110
		E = (420)	TMBs = 6.88 J	TMBs = 46.8	TMBs = 602	TMBs = 156.5
		TMBs = 610	X = 7.0	X = 24.0	X = (2,700)	X = 35
		X = (1,100)	IPBz = 5.2	IPBz = 10	IPBz = 59	IPBz = 33
		IPBz = 58	p-IPT = 0.40 J	p-IPT = 0.42 J	p-IPT = 4.0	p-IPT = 1.1 J
		p-IPT = 2.4	Napht = 1.4	Napht = 1.6	Napht = 49	Napht = 1.8 J
		Napht = 150	n-PBz = 6.0	n-PBz = 19.0	n-PBz = 130	n-PBz = 71
		n-PBz = 110				

CHEMICAL KEY:

-B: BENZENE
-n-BuBz: n-BUTYLBENZENE
-s-BuBz: Sec-BUTYLBENZENE
-ChlMe: CHLOROMETHANE
-DCE: DICHLOROETHENE
-PCE: TETRACHLOROETHENE
-TCE: TRICHLOROETHENE
-T: TOLUENE
-E: ETHYLBENZENE
-TMBs: TOTAL TRIMETHYLBENZENE
-CIF: CHLOROFORM
-X: TOTAL XYLENES
-IPBz: ISOPROPYLBENZENE
-p-IPT: p-ISOPROPYLTOLUENE
-Napht: NAPHTHALENE
-n-PBz: n-PROPYLBENZENE

ABBREVIATIONS:

-LOD: LIMIT OF DETECTION
-NR: NATURAL RESOURCES
-VOC: VOLATILE ORGANIC COMPOUND
-WAC: WISCONSIN ADMINISTRATIVE CODE

NOTES:

VOC RESULTS EXPRESSED IN MICROGRAMS PER LITER (ug/l) EQUIVALENT TO PARTS PER BILLION (ppb)

RESULTS INDICATED IN BLUE/PARENTHESIS EXCEED WAC NR 140 PREVENTIVE ACTION LIMITS

RESULTS INDICATED IN RED/UNDERLINED EXCEED WAC NR 140 ENFORCEMENT STANDARDS

J: CONCENTRATION BETWEEN LABORATORY LIMIT OF DETECTION AND QUANTITATION LIMIT.

LEGEND:

- APPROXIMATE EXTENT OF GROUNDWATER CONTAMINATION EXCEEDING PREVENTIVE ACTION LIMITS FOR SELECT VOCs
- PROPERTY LINE
- MW1 GROUNDWATER MONITORING WELL
- W WATER LINE
- T TELECOMMUNICATIONS LINE
- G GAS LINE
- OE OVERHEAD ELECTRIC LINE
- SUMP
- BM BENCHMARK: MANHOLE AT CENTERLINE OF WISCONSIN AVENUE. ASSUMED ELEVATION = 100.0'

NOTES:

1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 6
PRE & POST-REMEDIATION GROUNDWATER VOC DISTRIBUTION MAP
IMPERIAL CLEANERS
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	01-12-10	12-09-11
PROJECT NO.: 1E-0612016			CAD No. 1E0612016K2	

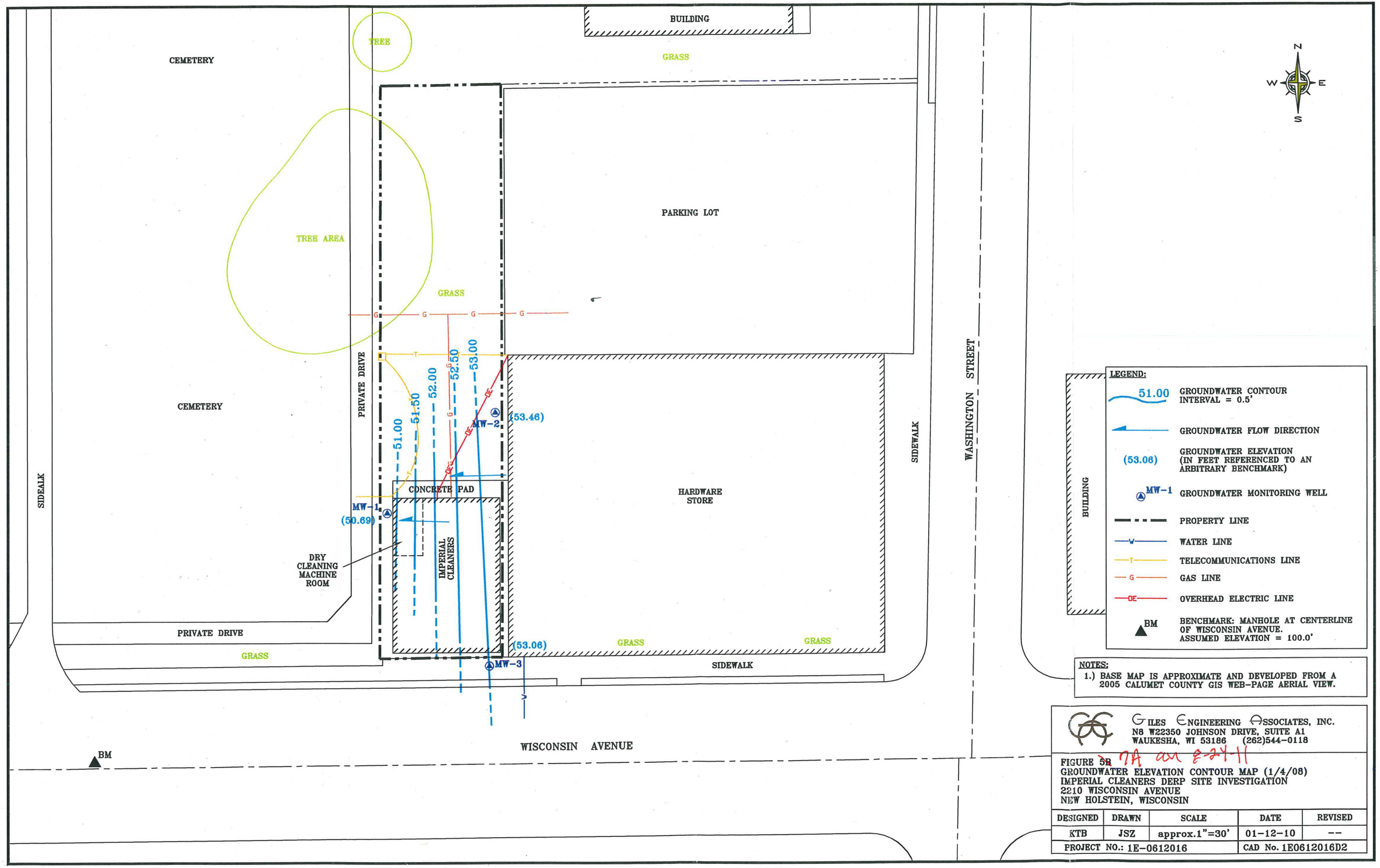
Table 1 4 on 12-21-11

Pre- and Post-Remediaiton Groundwater Table Elevation Summary

Imperial Cleaners
2210 Wisconsin Street
New Holstein, Wisconsin
Project No. 1E-0612016

Well ID	Elevation (TOC)*	Elevation Ground Surface	Well Depth	Screen Length	Groundwater Depth (TOC)	Calculated Groundwater Elevation	Change in Elevation	Feet Water in Well	Date
MW-1	100.00	100.41	55.00	10.00	50.95	49.05		4.05	06/29/2007
					50.29	49.71	0.66	4.71	12/13/2007
					49.31	50.69	0.98	5.69	01/04/2008
					42.75	57.25	6.56	12.25	03/28/2008
					39.52	60.48	3.23	15.48	07/03/2008
					46.01	53.99	-6.49	8.99	01/27/2009
					47.72	52.28	-1.71	7.28	12/21/2009
					42.72	57.28	5.00	12.28	04/21/2010
					48.85	51.15	-6.13	6.15	10/13/2011
MW-2	99.83	100.24	64.00	15.00	46.44	53.39		17.56	06/29/2007
					48.34	51.49	-1.90	15.66	12/13/2007
					46.37	53.46	1.97	17.63	01/04/2008
					48.29	51.54	-1.92	15.71	03/28/2008
					42.80	57.03	5.49	21.20	07/03/2008
					53.16	46.67	-10.36	10.84	01/27/2009
					48.22	51.61	4.94	15.78	12/21/2009
					42.65	57.18	5.57	21.35	04/21/2010
					49.33	50.50	-6.68	14.67	10/13/2011
MW-3	100.12	100.44	60.00	15.00	NM				06/29/2007
					48.69	51.43		11.31	12/13/2007
					47.06	53.06	1.63	12.94	01/04/2008
					40.02	60.10	7.04	19.98	03/28/2008
					43.18	56.94	-3.16	16.82	07/03/2008
					46.88	53.24	-3.70	13.12	01/27/2009
					60.25	39.87	-13.37	-0.25	12/21/2009
					42.95	57.17	17.30	17.05	04/21/2010
					49.67	50.45	-6.72	10.33	10/13/2011

Notes:
TOC: Top of Casing
"*": Temporary benchmark referenced to rim of a manhole located on the Centerline of Wisconsin Avenue, west of the Imperial Cleaners

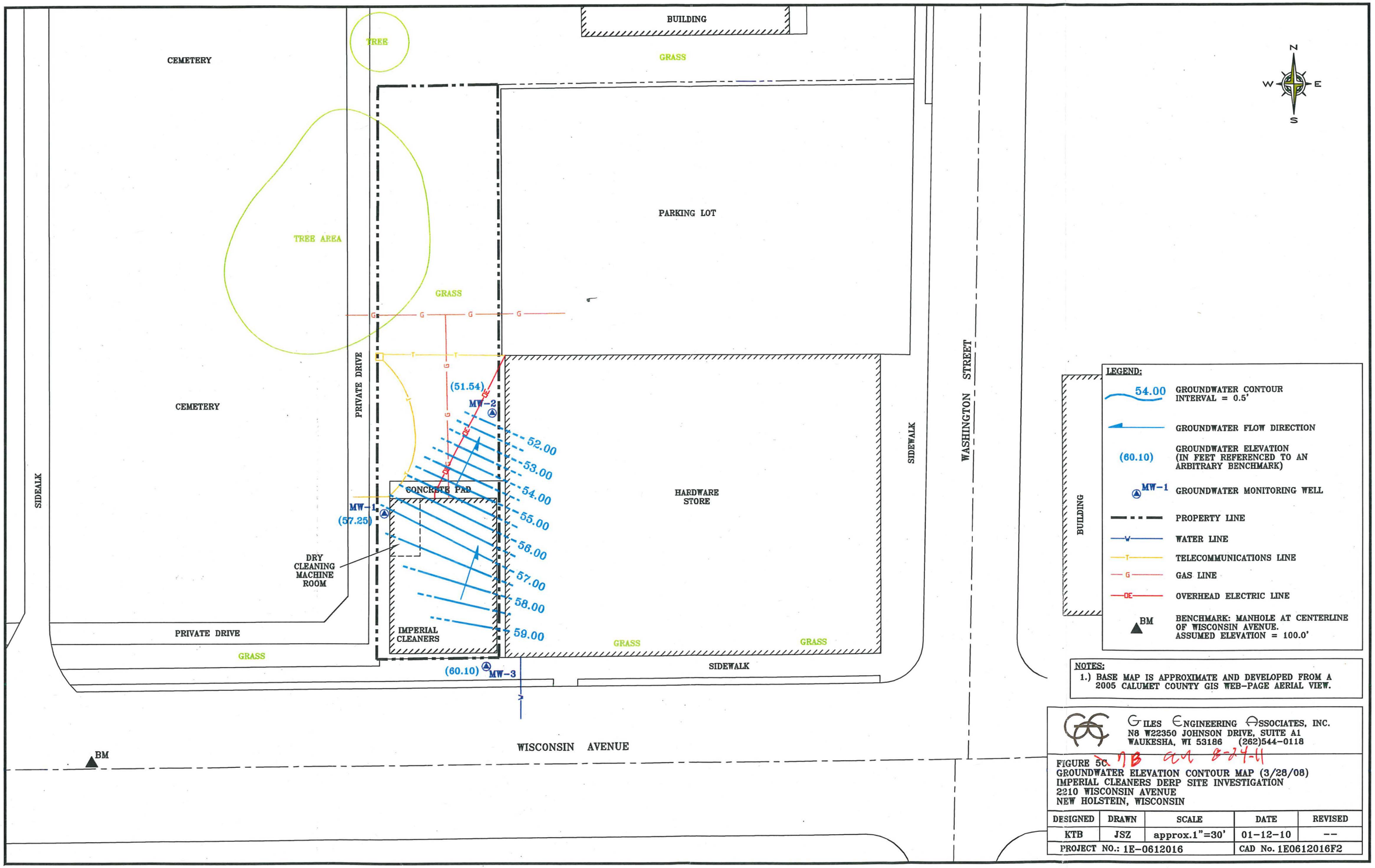


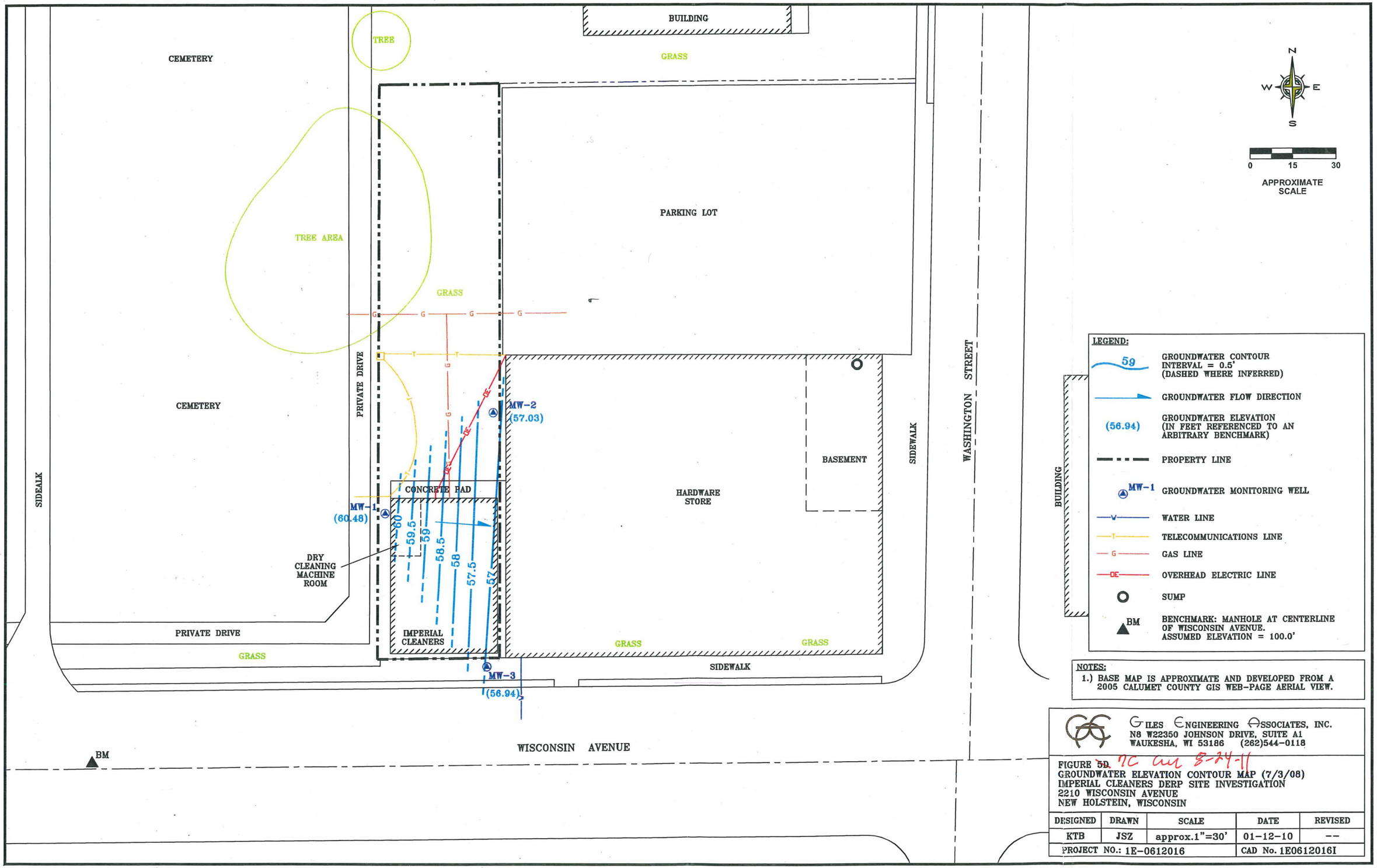
NOTES:
1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 5B
GROUNDWATER ELEVATION CONTOUR MAP (1/4/08)
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	01-12-10	--
PROJECT NO.: 1E-0612016			CAD No. 1E0612016D2	


BUILDING
TREE
GRASS
CEMETERY
PARKING LOT
TREE AREA
GRASS
PRIVATE DRIVE
(51.54)
MW-2
CEMETERY
SIDEALK
52.00
53.00
54.00
55.00
56.00
57.00
58.00
59.00
CONCRETE PAD
MW-1
(57.25)
HARDWARE
STORE
SIDEWALK
WASHINGTON STREET
DRY
CLEANING
MACHINE
ROOM
PRIVATE DRIVE
IMPERIAL
CLEANERS
GRASS
GRASS
SIDEWALK
(60.10)
MW-3
WISCONSIN AVENUE
BM
N
W
E
S
LEGEND:
54.00 GROUNDWATER CONTOUR INTERVAL = 0.5'
GROUNDWATER FLOW DIRECTION
(60.10) GROUNDWATER ELEVATION (IN FEET REFERENCED TO AN ARBITRARY BENCHMARK)
MW-1 GROUNDWATER MONITORING WELL
PROPERTY LINE
W WATER LINE
T TELECOMMUNICATIONS LINE
G GAS LINE
OE OVERHEAD ELECTRIC LINE
BM BENCHMARK: MANHOLE AT CENTERLINE OF WISCONSIN AVENUE. ASSUMED ELEVATION = 100.0'
NOTES:
1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.
GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118
FIGURE 5C
GROUNDWATER ELEVATION CONTOUR MAP (3/28/08)
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN
DESIGNED KTB | DRAWN JSZ | SCALE approx.1"=30' | DATE 01-12-10 | REVISED --
PROJECT NO.: 1E-0612016 | CAD No. 1E0612016F2

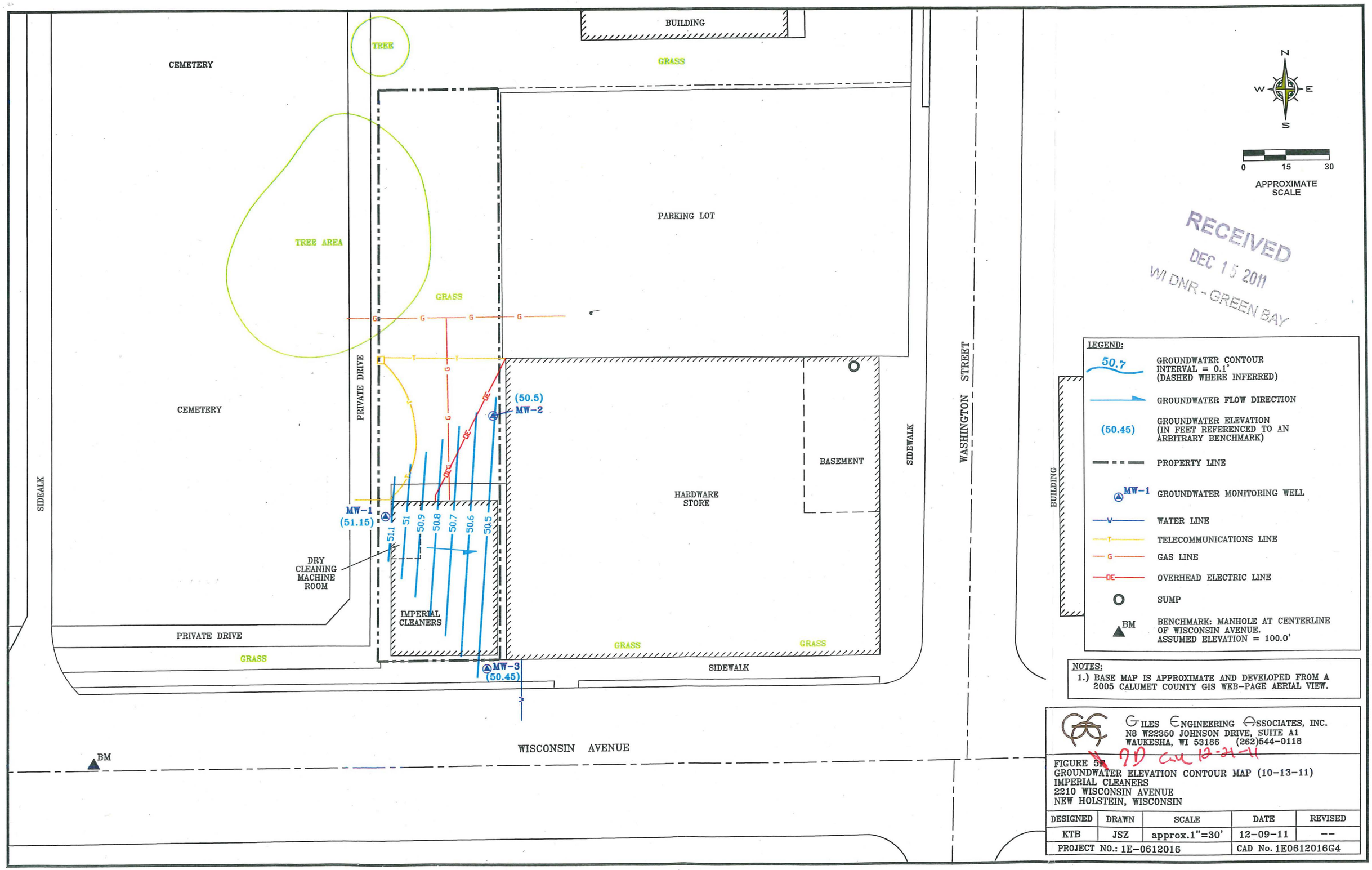


NOTES:
1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE ~~5D~~ TC ltr 8-24-11
GROUNDWATER ELEVATION CONTOUR MAP (7/3/08)
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	01-12-10	--
PROJECT NO.: 1E-0612016			CAD No. 1E0612016I	



GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 5B
GROUNDWATER ELEVATION CONTOUR MAP (10-13-11)
IMPERIAL CLEANERS
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx.1"=30'	12-09-11	--
PROJECT NO.: 1E-0612016			CAD No. 1E0612016G4	

TABLE 3 as of 8-24-11

PRE- & POST-REMEDIATION SUB-SLAB SOIL VAPOR RESULTS SUMMARY
DETECTED VOCS

Imperial Cleaners
2210 West Wisconsin
New Holstein, Wisconsin
Project No. 1E-0612016

* Interim removal action completed 11/4/09. Sub-slab depressurization systems installed 4/21/10.

Sample Location	Sample Date	Detected Volatile Organic Compounds (VOCs) (ug/m^3)																				
		Acetone	Benzene	2-Butanone	Chloroform	Cyclohexane	1,3-Dichlorobenzene	Ethyl Acetate	Ethylbenzene	n-Heptane	n-Hexane	Methylene Chloride	Propylene	1,1,1-Trichloroethane	Styrene	Tetrachloroethene (PCE)	Tetrahydrofuran	Toluene	Trichloroethene (TCE)	1,2-Dichloroethane	m&p-Xylene	o-Xylene
Molecular Weight		58.08	78.11	72.11	119.38	84.16	147.00	88.10	106.16	100.20	86.18	50.49	42.08	133.42	104.14	165.83	72.11	92.13	131.39	96.98	106.16	106.16
VP-1 (RVP-1)	07/03/08	--	<781	--	<1,194	--	--	--	<1,062	--	--	<1,262	--	<1,334	<1,041	269,474	--	<921	<1,314	--	<1,062	<1,062
	12/21/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	49,611	--	--	903.3	<5.4	--	--
	04/21/10	101	<9.3	24.3	<14.2	21.9	<17.2	16.2	37.2	15.7	14.3	55.0	<5.0	<15.7	<20.0	145	<8.6	90.6	55.1	<5.0	47.1	19.8
	08/26/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3400	--	--	<108.4	<5.3	--	--
VP-2	07/03/08	--	<123,674	--	<189,018	--	--	--	<168,087	--	--	<199,848	--	<211,248	<164,888	69,095,833	--	<145,873	<208,034	--	<168,087	<168,087
OA-1	12/21/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29.0	--	--	<3.6	<5.1	--	--
A-1 (AR/RA-1)	03/06/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	85.0	--	--	16.4	<6.8	--	--
	12/21/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6,834	--	--	68.4	<5.8	--	--
sub-slab	04/21/10	322	<17.4	74.5	56.2	31.4	<32.2	31.8	39.7	25.9	32.0	112	<9.4	<29.5	24.6	2,100	157	318	<29.5	<22.0	128	45.3
A-2 (AR/RA-2)	03/06/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	281.2	--	--	7.7	<6.8	--	--
	12/21/09	--	--	--	--	--	--	--	--	--	--	--	--	19.5	--	257.7	--	--	24.1	<14.1	--	--
sub-slab	04/21/10	131	<21.6	35.7	44.4	<22.6	<39.8	<24.2	77.1	<27.6	<23.9	60.4	<11.6	<36.5	<28.9	2,290	<19.9	142	<36.5	<11.6	90.2	38.5
	08/26/10	--	--	--	--	--	--	--	--	--	--	--	--	<6.7	--	34.5	--	--	<7.1	<5.3	--	--
A-3 (AR/RA-3)	03/06/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	228.7	--	--	9.9	<6.8	--	--
	12/21/09	--	--	--	--	--	--	--	--	--	--	--	--	<4.1	--	11,884	--	--	50.4	<5.8	--	--
sub-slab	04/21/10	123	7.9	24.7	<7.3	27.6	18.3	19.5	51.1	21.5	17.3	72.1	5.7	<8.1	<6.4	49.4	16.2	109	<8.1	<6.1	70.4	26.0
	08/26/10	--	--	--	--	--	--	--	--	--	--	--	--	<20.6	--	51.8	--	--	<20.3	30.3	--	--
Target Sub-slab Vapor Screening Level		14,000,000	160	NS	53	NS	NS	NS	490	NS	310,000	2,600	NS	2,200,000	440,000	210	NS	2,200,000	610	47	310,000	310,000

Notes:

VOCs: Volatile Organic Compounds
PCE: Tetrachloroethene
TCE: Trichloroethene
ug/m3: Micrograms per cubic meter
" -- ": No data collected and/or well not installed.
NS: No Established Standard
WDNR: Wisconsin Department of Natural Resources
US EPA: United States Environmental Protection Agency
WDNR Target Sub-slab Vapor Screening Level for Protection aganst Vapor Intrusion (100X the US EPA Region III Target Industrial Air Screening Level)

VP-1/RVP-1: Interior vapor point (VP) near the northeast corner of the Imperial Cleaners Building.
VP-2: Interior vapor point (VP) near the west wall of the Imperial Cleaners Building by the DCM.
OA-1: Outside-Sub-slab air sample collected from beneath the sidewalk over sewer lateral.
A-1/RA-1: Interior subslab sample near the southwest corner of the Hardware Store Building.
A-2/RA-2: Interior subslab sample near the west-central wall of the Hardware Store Building.
A-3/RA-3: Interior/basement subslab sample near the northeast corner of the Hardware Store Building.

TABLE 3 → 6 on 12-21-11

PRE- & POST-REMEDIATION SUB-SLAB SOIL VAPOR RESULTS SUMMARY
DETECTED VOCS

Imperial Cleaners
2210 West Wisconsin
New Holstein, Wisconsin
Project No. 1E-0612016

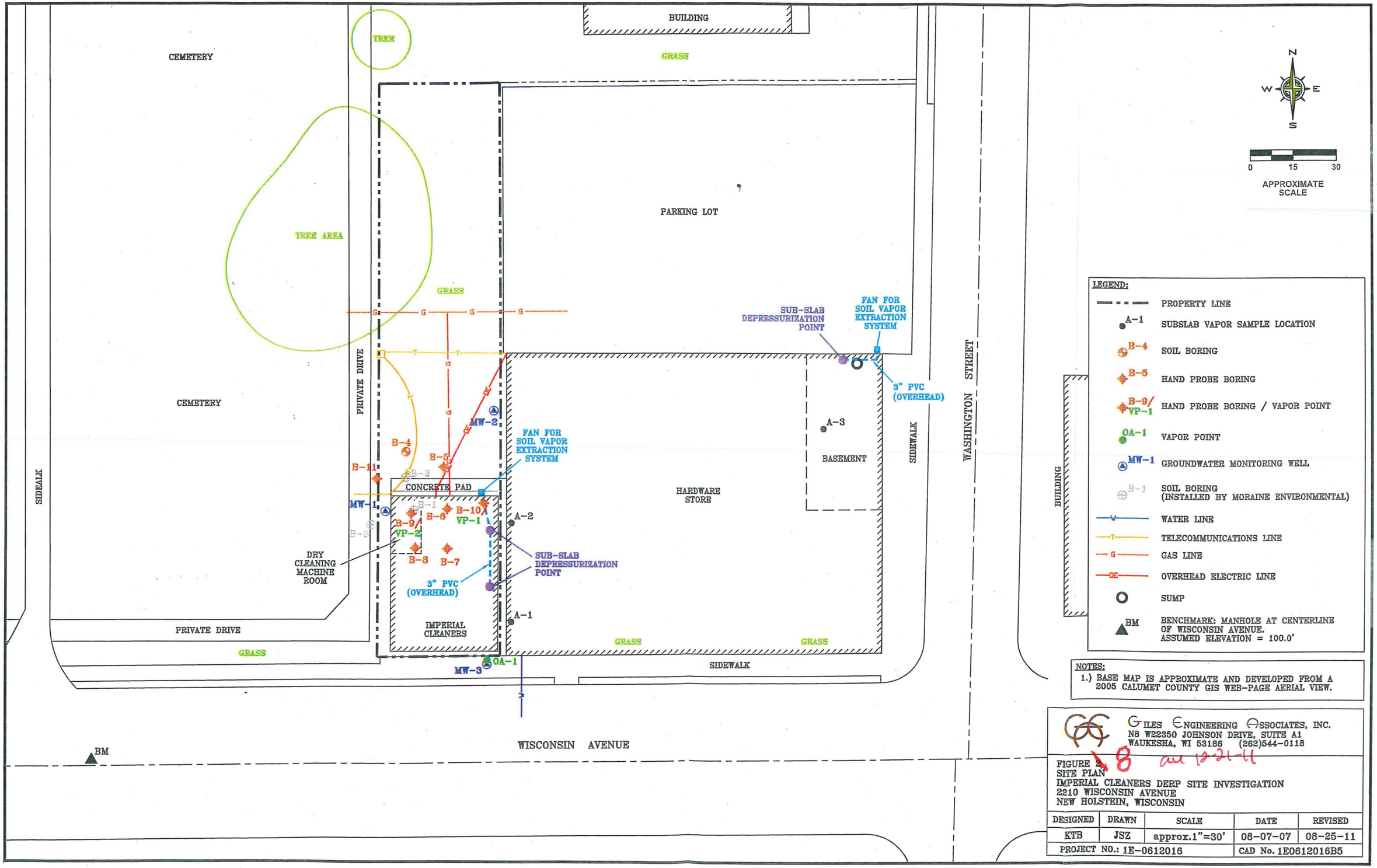
SSDS Activated 4-21-10

Detected Volatile Organic Compounds (VOCs) (ug/m^3)								
Sample Location	Sample Date	Tetrachloroethene (PCE)	Tetrahydrofuran	Toluene	Trichloroethene (TCE)	1,2-Dichloroethane	m&p-Xylene	o-Xylene
Molecular Weight		165.83	72.11	92.13	131.39	96.98	106.16	106.16
VP-1 (RVP-1)	07/03/08	269,474	--	<921	<1,314	--	<1,062	<1,062
	12/21/09	49,611	--	--	903.3	<5.4	--	--
SSDS Activated →	04/21/10	145	<8.6	90.6	55.1	<5.0	47.1	19.8
	08/26/10	3,400	--	--	<108.4	<5.3	--	--
	10/13/11	396	--	--	210	<5.3	--	--
VP-2	07/03/08	69,095,833	--	<145,873	<208,034	--	<168,087	<168,087
OA-1	12/21/09	29.0	--	--	<3.6	<5.1	--	--
A-1 (AR/RA-1)	03/06/09	85.0	--	--	16.4	<6.8	--	--
	12/21/09	6,834	--	--	68.4	<5.8	--	--
SSDS Activated →	04/21/10	2,100	157	318	<29.5	<22.0	128	45.3
	10/13/11	62	--	--	<4.4	<3.3	--	--
A-2 (AR/RA-2)	03/06/09	281.2	--	--	7.7	<6.8	--	--
	12/21/09	257.7	--	--	24.1	<14.1	--	--
SSDS Activated →	04/21/10	2,290	<19.9	142	<36.5	<11.6	90.2	38.5
	08/26/10	34.5	--	--	<7.1	<5.3	--	--
	10/13/11	292	--	--	6.56	<3.3	--	--
A-3 (AR/RA-3)	03/06/09	228.7	--	--	9.9	<6.8	--	--
	12/21/09	11,884	--	--	50.4	<5.8	--	--
SSDS Activated →	04/21/10	49.4	16.2	109	<8.1	<6.1	70.4	26.0
	08/26/10	51.8	--	--	<20.3	30.3	--	--
	10/13/11	25.5	--	--	<4.2	<3.2	--	--
Target Sub-slab Vapor Screening Level		210	NS	2,200,000	610	47	310,000	310,000

Notes:

VOCs: Volatile Organic Compounds
PCE: Tetrachloroethene
TCE: Trichloroethene
ug/m3: Micrograms per cubic meter
" -- ": No data collected and/or well not installed.
NS: No Established Standard
WDNR: Wisconsin Department of Natural Resources
US EPA: United States Environmental Protection Agency

WDNR Target Sub-slab Vapor Screening Level for Protection aganst Vapor Intrusion (100X the US EPA Region III Target Industrial Air Screening Level)


BUILDING
TREE
CEMETERY
GRASS
PARKING LOT
TREE AREA
GRASS
SUB-SLAB DEPRESSURIZATION POINT
FAN FOR SOIL VAPOR EXTRACTION SYSTEM
3" PVC (OVERHEAD)
PRIVATE DRIVE
CEMETERY
MW-2
FAN FOR SOIL VAPOR EXTRACTION SYSTEM
A-3
BASEMENT
SIDEWALK
WASHINGTON STREET
B-4
B-5
B-1
B-2
CONCRETE PAD
HARDWARE STORE
MW-1
B-10/VP-1
B-6
A-2
B-9/VP-2
B-8
B-7
DRY CLEANING MACHINE ROOM
SUB-SLAB DEPRESSURIZATION POINT
3" PVC (OVERHEAD)
IMPERIAL CLEANERS
A-1
PRIVATE DRIVE
GRASS
GRASS
GRASS
SIDEWALK
MW-3
OA-1
WISCONSIN AVENUE
BM
BUILDING
N
W
E
S
0
15
30
APPROXIMATE SCALE
LEGEND:
PROPERTY LINE
A-1 SUBSLAB VAPOR SAMPLE LOCATION
B-4 SOIL BORING
B-5 HAND PROBE BORING
B-9/VP-1 HAND PROBE BORING / VAPOR POINT
OA-1 VAPOR POINT
MW-1 GROUNDWATER MONITORING WELL
B-1 SOIL BORING (INSTALLED BY MORAINE ENVIRONMENTAL)
WATER LINE
TELECOMMUNICATIONS LINE
GAS LINE
OVERHEAD ELECTRIC LINE
SUMP
BM BENCHMARK: MANHOLE AT CENTERLINE OF WISCONSIN AVENUE. ASSUMED ELEVATION = 100.0'
NOTES:
1.) BASE MAP IS APPROXIMATE AND DEVELOPED FROM A 2005 CALUMET COUNTY GIS WEB-PAGE AERIAL VIEW.
GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118
FIGURE 2
SITE PLAN
IMPERIAL CLEANERS DERP SITE INVESTIGATION
2210 WISCONSIN AVENUE
NEW HOLSTEIN, WISCONSIN
DESIGNED KTB | DRAWN JSZ | SCALE approx.1"=30' | DATE 08-07-07 | REVISED 08-25-11
PROJECT NO.: 1E-0612016 | CAD No. 1E0612016B5