State of Wisconsin
Department of Natural Resources
P.O. Box 7921, Madison, WI 53707-7921

GIS REGISTRY (Cover Sheet)
Form 4400-280 (R 6/13)

Source Property Information

CLOSURE DATE: 11/26/2013

BRRTS #: **02-68-520809**

FID #: 268166140

ACTIVITY NAME: POLYONE INC

DATCP #:

PROPERTY ADDRESS: 21300 Doral Rd

PECFA#:

MUNICIPALITY: Waukesha

PARCEL ID #: BKFT1126011

***WTM COORDINATES:**

X: **668330** Y: **287174**

** Coordinates are in WTM83, NAD83 (1991)*

WTM COORDINATES REPRESENT:

- (●) Approximate Center Of Contaminant Source
- ( ) Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

CONTINUING OBLIGATIONS

Contaminated Media for Residual Contamination:

- [x] Groundwater Contamination > ES *(236)*
  - [ ] Contamination in ROW
  - [ ] Off-Source Contamination

  *(**note:** for list of off-source properties see "Impacted Off-Source Property Information, Form 4400-246")*

- [x] Soil Contamination > *RCL or **SSRCL *(232)*
  - [ ] Contamination in ROW
  - [ ] Off-Source Contamination

  *(**note:** for list of off-source properties see "Impacted Off-Source Property Information, Form 4400-246")*

Site Specific Obligations:

- [ ] Soil: maintain industrial zoning *(220)*

  *(**note:** soil contamination concentrations between non-industrial and industrial levels)*

- [ ] Structural Impediment *(224)*
- [ ] Site Specific Condition *(228)*
- [ ] Cover or Barrier *(222)*
  - [ ] Direct Contact
  - [ ] Soil to GW Pathway
- [ ] Vapor Mitigation *(226)*
- [ ] Maintain Liability Exemption *(230)*

  *(**note:** local government unit or economic development corporation was directed to take a response action)*

Monitoring Wells:

Are all monitoring wells properly abandoned per NR 141? *(234)*

(●) Yes ( ) No ( ) N/A

** Residual Contaminant Level*
***Site Specific Residual Contaminant Level*

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Waukesha Service Center
141 NW Barstow St
Waukesha WI 53188

Scott Walker, Governor
Cathy Stepp, Secretary
Eric Nitschke, Regional Director
Telephone 262 574-2100
Toll Free 1-888-936-7463
TTY Access via relay – 711

November 26, 2013

PolyOne Corporation
Attention: Ernie Schaub
33587 Walker Road
Avon, OH 44012

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

Subject: Final Closure with Continuing Obligations.
Former PolyOne Corporation Facility
21300 Doral Road, Waukesha, WI 53186
FID# 268166140, BRRTS# 02-68-520809

Dear Mr. Schaub:

The Department of Natural Resources (DNR) considers the Former PolyOne Corporation Facility closed, with continuing obligations. No further investigation or remediation is required at this time. However, you and future property owners, and occupants 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 to anyone who purchases, rents or leases this property from you.

This final closure decision is based on the correspondence and data provided, and is issued under ch. NR 726, Wisconsin Administrative Code. The DNR Southeast Region (SER) Project Manager reviewed the request for closure on November 18, 2013. The Project Manager reviewed this environmental remediation case for compliance with state laws and standards. A conditional closure letter was issued by the DNR on July 25, 2013, and documentation that the conditions in that letter were met was received on October 16, 2013.

The former PolyOne facility produced plastisols for inks used in the printing of T-shirts. Contamination was discovered during a Phase II site investigation in January 2000. All potential operational sources were located within the building, which was demolished in May and June 2006. Remedial actions completed include soil excavation (including the upper four feet of impacted areas) and groundwater monitoring. Groundwater impacts consisted of low level phthalates relating to the plastisols and Diesel Range Organics (DRO). There are no off-site impacts. The conditions of closure and continuing obligations required were based on the property being used for industrial purposes (M-1 Town of Brookfield zoning).

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 above ch. NR 140 enforcement standards.
- Residual soil contamination exists that must be properly managed should it be excavated or removed.

The DNR fact sheet, "Continuing Obligations for Environmental Protection", RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. 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/rrsm.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 SER Regional DNR office, at 141 MW Barstow Street, Room 180, Waukesha, WI 53188. This letter and information that was submitted with your closure request application, including the maintenance plan, will be included on the GIS Registry in a PDF attachment. To review the site on the GIS Registry web page, visit the RR Sites Map page at http://dnr.wi.gov/topic/Brownfields/rrsm.html.

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. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property.

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

Residual Groundwater Contamination (chs. NR 140 and 812, Wis. Adm. Code)

Groundwater contamination greater than enforcement standards is present on this contaminated property as shown on the **attached map Figure B.3b.** 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, or ch. 289, Stats.; chs. 500 to 536, Wis. Adm. Code)

Soil contamination remains in the northern portion of the property as indicated on the **attached map Figure B.2b**. If soil in the specific location described above is excavated in the future, the property owner 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 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.

In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

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.

General Wastewater Permits for Construction Related Dewatering Activities

The DNR's Water Quality Program regulates point source discharges of contaminated water, including discharges to surface waters, storm sewers, pits, or to the ground surface. This includes discharges from construction related dewatering activities, including utility and building construction.

If you or any other person plan to conduct such activities, you or that person must contact that program, and if necessary, apply for the necessary discharge permit. Additional information regarding discharge permits is available at dnr.wi.gov/topic/wastewater/GeneralPermits.html. 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 water collecting in a pit/trench that requires dewatering is expected to be free of pollutants other than suspended solids and oil and grease, a general permit for Pit/Trench Dewatering may be needed.

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 me at (262) 574-2145.

Sincerely,

James C. Delwiche

James C. Delwiche, P.G.
Hydrogeologist
Bureau for Remediation & Redevelopment

Attachments:

- Post Remedial Soil Concentrations Exceeding RCL – Figure B.2b
- Horizontal Extent of Groundwater Concentrations – Figure B.3b

cc: Jon Tortomasi – CH2M Hill Inc.
SER Case File

N

0 16 32
Feet

Notes: Limit of detection (LOD) values that exceed the RCL are shown and treated as RCL exceedances

No phthalates exceeded RCL; only DRO results posted

FIGURE B.2b
Post Remedial Soil Concentrations Exceeding RCL
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

0 30 60
Feet

Note: This detection is the only 2012 groundwater concentration value that exceeds an NR140 PAL (DEHP=0.6 ug/L). The NR140 ES (DEHP =6.0 ug/L) is also exceeded.

The apparent groundwater flow direction in April 2012 was radially away from MW-01

Figure B.3b
Horizontal Extent of Groundwater Concentrations (April 2012) Exceeding WDNR ES
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

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State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Waukesha Service Center
141 NW Barstow St
Waukesha WI 53188

Scott Walker, Governor
Cathy Stepp, Secretary
Eric Nitschke, Regional Director
Telephone 262 574-2100
Toll Free 1-888-936-7463
TTY Access via relay – 711

July 25, 2013

PolyOne Corporation
Attention: Ernie Schaub
33587 Walker Road
Avon, OH 44012

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

Subject: Conditional Closure - with requirements to achieve final closure.
Former PolyOne Corporation Facility
21300 Doral Road, Waukesha, WI 53186
FID# 268166140, BRRTS# 02-68-520809

Dear Mr. Schaub:

The Department of Natural Resources (the Department) has reviewed your request for closure of the case described above. The Department 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, the Department has determined that the phthalate and petroleum contamination on the site from the resin and liquid plasticizer operation at the former facility 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
All 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 the Department staff at Milwaukee Headquarters on Form 3300-005, found at http://dnr.wi.gov/topic/DrinkingWater/documents/forms/3300005.pdf or provided by the Department.

PURGE WATER, WASTE AND SOIL PILE REMOVAL
Any remaining purge water, waste and/or soil piles generated as part of site investigation or remediation activities must be removed from the site and disposed of or treated in accordance with Department of Natural Resources' rules. Once that work is completed, please send appropriate documentation regarding the treatment or disposal of the remaining purge water, waste and/or soil piles.

When the above issues have been addressed, please submit a cover letter, together with the required documentation (with the site FID# and BRRTS# noted) to: Victoria Stovall, Wisconsin Department of Natural Resources, 2300 N. Dr. ML King Dr., Milwaukee, WI 53212.

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://dnrmaps.wi.gov/imf/imf.jsp?site=brrts2.

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

The 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 me at the address above or by calling (262) 574-2145.

Sincerely,

James C. Delwiche

James C. Delwiche, P.G.
Hydrogeologist
Bureau for Remediation & Redevelopment

cc: Jon Tortomasi – CH2M Hill Inc.
SER Case File

State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

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. Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided. Any section of the form not relevant to the case closure request must be fully filled out or explained on a separate page and attached to the relevant section of this form. 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.).

Site Information

BRRTS No. 02-68-520809	Parcel ID No. BKFT 1126-0011		
BRRTS Activity (Site) Name POLYONE INC [should be PolyOne Corporation]	WTM Coordinates X 668330m	Y 287174m	
Street Address 21300 Doral Road	City Waukesha	State WI	ZIP Code 53186
Responsible Party (RP) Name Mr. Ernie Schaub			
Company Name POLYONE Corporation			
Street Address 33587 Walker Road	City Avon Lake	State OH	ZIP Code 44012
Phone Number (440) 930-3611	Email Ernie.Schaub@Polyone.com		

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

Environmental Consultant Name Jon Tortomasi			
Consulting Firm CH2M HILL Inc			
Street Address 135 S. 84th Street Suite 400	City Milwaukee	State WI	ZIP Code 53214
Phone Number (414) 272-2426	Email Jon.Tortomasi@ch2m.com		
Acres Ready For Use 2.12	Voluntary Party Liability Exemption Site? ○ Yes ◉ No		

Fees and Mailing of Closure Request

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

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

   ☒ $750 Closure Fee

   ☒ $200 GIS Registry Fee for Soil

   ☒ $250 GIS Registry Fee for Groundwater Lost Well(s)

   Total Amount of Payment $ $1,200

2. **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 section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may 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 property is in the SE 1/4 of the NW 1/4 of Section 30 of Township 7 North, Range 20 East, in the Town of Brookfield, Waukesha County (Figure B.1a). The site is located within an industrial park (Attachment G3). The street address is 21300 Doral Road, Waukesha, WI 53186

B. **Prior and current site usage**: Specifically describe the current and historic occupancy and types of use.
The former facility at the property produced plastisols for inks for the printing of T-shirts. The process involved mixing certain solid resins with liquid plasticizers, adding pigment and heat stabilizers, and shipping them to customers in drums and other containers. Pigments were historically used at the facility, primarily in dry powder form. Petroleum-based, hydrocarbon "mineral spirits" were also stored and used. Current use is an unoccupied, vacant lot.

C. Describe how and when site contamination was discovered.
A Phase II site assessment was completed in January 2000. Soil samples were collected from 18 direct-push/probe locations. The samples were analyzed for phthalate esters and diesel range organics as appropriate to former site activities.

D. Describe the type(s) and source(s) or suspected source(s) of contamination.
Complete details regarding suspected contamination sources are not available. A historical facility drawing shows a building containing a former aboveground storage tank (AST) area, a former sump pit, a pipe ditch emanating from the southern portion of the tank farm, a wash station, and a scale pit trench. All of the potential operational sources were located within the building, which was demolished in May and June 2006.

E. Other relevant site description information (or enter Not Applicable).
Not Applicable.

F. List BRRTS activity site name and number for all other BRRTS activities at this property, including closed cases.
02-68-520809 "POLYONE INC" (open) and 04-68-550962 "POLYONE CORP" (2001 Spill - closed - non-chlorinated VOC solvents - SW side [former] building) [note: POLYONE INC should be PolyOne Corp or Corporation]

G. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to this site, and those impacted by contamination from this site.
(A) Immediately adjacent on west (Not related to PolyOne): 02-68-546798, Koch Tech, 21320 Doral Road, Waukesha. Polynuclear aromatic hydrocarbon (PAH) soil and potential groundwater contamination from petroleum.
(B) Immediately adjacent on north (not related to PolyOne): 03-68-0003998, Mavroff Landscaping, 21305 Watertown Road, Waukesha. Gasoline and diesel fuel soil contamination from a leaking underground storage tank (LUST). Groundwater contamination not specified.
(C) Immediately adjacent on east (not related to PolyOne): 03-68-004009 (Open Case), Continental Baking Company, 21200 Doral Road, Waukesha. Gasoline and diesel fuel soil contamination from LUST, and free product contamination.

H. **Current zoning** (e.g. industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
The PolyOne site and neighboring properties are islocated in an industrial area designated as an M-1 per a Town of Brookfield zoning map. Per Town of Brookfield Chapter 17 Zoning Code (Chapter 17.04 (14)): M-1, Limited Manufacturing District, "is intended to provide for manufacturing, industrial and related uses of a limited nature and size, which on the basis of actual physical and operational characteristics would not be detrimental to the surrounding area or to the Town as a whole by reason of smoke, noise, dust, odor, traffic, physical appearance or other similar factors."

The map and coding descriptions are included in Attachment G.

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.
The U.S. Department of Agriculture (USDA) soil survey information indicates the soil types in the area in the 1970s included "Lu" ("Loamy land") with no slopes provided, Kla (Kendall silt loam 1 to 3 percent slopes) and HtA (Houghton muck [peat] 0 to 2 percent slopes). The thickness of the soil column varies as follows: approximately 20 feet or greater in the northern portion of the site (TPZ01, TPZ02, and MW-2); 20 feet or greater in the middle of the site (MW-1, MW-3, and MW-4); and from 8 to at least 36 feet at the southern site boundary (TPZ-04, TPZ-03, and MW-05). The soil type for the backfilled excavation is extremely variable, ranging from clean, excavated material to imported fill (undocumented soil or rock type). The excavation depth ranges from approximately 3.5 to 17 feet deep depending on the site location. Outside of the excavation, the soil types very generally consist of approximately 5 feet of silty clay (CL) material overlaying 5 feet of gravelly sand (SW), which, in turn, overlies clayey or sandy silt and silty

sand from 3 to 8 feet thick (Figures B.3ai, B.3aii, and B.3aiii)

ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
The soil type for the backfilled excavation is extremely variable, ranging from clean, excavated material to imported fill (undocumented soil or rock type) to clean site soil. The excavation depth ranges from approximately 3.5 to 17 feet deep depending on the site location. Additional details regarding the depths and locations of the excavated areas are included in Attachment C.4, Excavation Completion Report and Groundwater Monitoring Plan, November 2006. Depths are also shown conceptually on the project cross sections, Figures B.3ai through B.3aiii.

iii. Depth to bedrock, bedrock type, and whether or not it was encountered during the investigation.
The depth to the limestone/dolostone bedrock varies as follows: approximately 20 feet or greater in the northern portion of the site (TPZ01, TPZ02, and MW-2); 20 feet or greater in the middle of the site (MW-1, MW-3, and MW-4); and from 8 to at least 36 feet at the southern site boundary (TPZ-04, TPZ-03, and MW 05). Bedrock depth was confirmed at MW-3 and TPZ-03, and potentially at MW-05 and TPZ-04 (Figures B.3ai and B.3aii).

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).
After building demolition, soil excavation, and backfill, the site was covered with topsoil and seeded. Grassy vegetation extends across most of the site, with concrete areas remaining from the former facility's loading docks, an asphalt parking lot in the southern portion of the site, and a former auxiliary gravel parking lot in the north that has since been overgrown with vegetation (Figure 3.1b).

B. Groundwater

i. **Discuss depth to groundwater and piezometric elevations.** Describe and explain depth variations, and whether free product affects measurement or water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.
Observations recorded during groundwater well purging, sampling, and slug testing indicate that the shallow unconsolidated soils where the water table is encountered are comprised of lower yield water-supplying materials. Observations include the fact that all wells were easily purged dry during initial development and during sampling efforts, low-flow methods induced measurable drawdown before stabilizing at very low discharge rates (less than 300 milliliters per minute). On average, the all time (during a 6-year period of record) low groundwater table depth (measured in February 2013) is approximately 15 feet below ground surface (bgs), and the record high (measured in April 2011) is approximately 3 to 7 feet bgs. Free product may affect the water elevations measured at MW-04 (as noted in Table A.6). The water table is encountered in a wide range of soil types (silty clays to gravelly sands) within shallow fill and/or natural materials at the property. The recorded high and low groundwater elevations are shown in 3 cross sections included in the closure package (Figures B.3ai, B.3aii, and B.3aiii).

ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.
The groundwater elevations and flow directions are shown in two maps included in the closure package (Figures B.3c.i and B.3c.ii) to present the variation seen in potential horizontal flow directions across the entire period of record (6 years). The apparent horizontal flow direction varies significantly from southerly to northerly as indicated in Figures B.3c.i and B.3c.ii.

iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.
Apparent groundwater flow direction at the site can vary up to 180 degrees, largely controlled by the groundwater elevations observed in monitoring well MW-05 on the south end of the site. Hydraulic conductivity (K) of the unconsolidated saturated soils intersecting well screens of monitoring wells MW-01, MW-02, and MW-03 was determined by rising-head slug test (6 tests). The geometric mean horizontal K observed in these tests for the site unconsolidated saturated soils was 8.69 x 10-4 centimeters per second. The slug test graphs for the three wells are included in Attachment C.1.

iv. Identify and describe locations/distance of potable and/or municipal Wells within 1200 feet of the site.
One private water supply well was identified within a 1,200-foot radius of the PolyOne site—21060 Heather Drive (Figure B.1a). The well is 182 feet deep and is cased to 127 feet (Wisconsin Unique Well #AF075). Because of its depth, it is assumed that the well is installed in the limestone/ dolostone bedrock. The following databases were searched: WDNR Drinking Water Data for private and high-capacity wells (http://prodoasext.dnr.wi.gov/inter1/watr$.startup), the U.S. Environmental Protection Agency's (USEPA's) Public Water Systems Database (http://iaspub.epa.gov/enviro/sdw_form_v2.create_page?state_abbr=WI), and the U.S. Geologic Survey's (USGS's) National Water Inventory System (http://maps.waterdata.usgs.gov/mapper/index.html). Addresses or township/range descriptions (if available) were used in association with a licensed copy of Google Earth to identify map locations.

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.

• 2000 Preliminary Environmental Assessment ("Phase 2").
• 2003 Facility Equipment Decommissioning, Soil Excavation, and Confirmation Sampling, RCL calculation (RCL Calculation Memorandum originally submitted in February 2004 [Soil Excavation Remedial Action Report, Appendix C] and again in May 2006 [Remedial Action Plan, Appendix A] and also included in Attachment C.3 of this package).
• 2004 Soil Excvation Remedial Action Report (previously submitted Soil Excavation Remedial Action Report, February 2004
• October 2004 (MW-01, MW-02, and MW-03) and November 2005 (TPZ-01 and TPZ-02) monitoring well installation (logs included in the previously submitted May 2006 Remedial Action Plan).
• 2006 Remedial Action Plan (previously submitted Remedial Action Plan, May 2006).
• 2006 Building Demolition, Excavation, and Soil Confirmation Sampling (previously submitted Excavation Completion Report and Groundwater Monitoring Plan, November 2006).
• January 2007 installed "source" wells MW-04 and MW-05.
• Periodic Groundwater Monitoring Results reports (previously submitted) beginning with Quarterly Reports for 2007, Semi-Annual Reports for 2008 and 2009, and Annual Reports for 2010, 2011, and 2012.
• October 2012 volatile organic compound (VOC) groundwater sampling in all onsite monitoring wells per the Wisconsin Department of Natural Resources' (WDNR's) suggestion.

ii. Identify whether contamination extends beyond the source property boundary, describe the off-site media (e.g., soil, groundwater, etc.) impacted, and the vertical and horizontal extent of off-site impacts.

There are no offsite impacts. Soil contamination was limited to the PolyOne property (and was excavated in 2003 and 2006), and groundwater contamination is also limited to the property. The only detection of constituents in groundwater in 2012 was at MW-04, central to the PolyOne property. Monitoring wells at the boundaries of the PolyOne property and at the Continental Baking Company property to the east-northeast (ISB-MW05 and ISB-MW07) are all nondetect for the PolyOne site-related constituents (Figure B.3b, Table A.1.i). (There were 3 monitoring events at the offsite/ Continental Baking Company wells in 2005 and 2007, and all three had non-detect results for PolyOne site-related constituents.)

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 former site building was demolished in May and June 2006, as described in the Excavation Completion Report (CH2M HILL, November 2006). The building foundation and subsurface supporting wall structures were removed at that time. There are no structures remaining to serve as a barrier for infiltration of rainwater to the groundwater nor as a barrier to groundwater flow, with the exception of a small 20-inch by 50-inch (approximate) concrete slab remaining from the previous loading dock area and the asphalt parking lot in the southern portion of the property (Figure B.1b).

B. Soil

i. Describe degree and extent of **soil contamination** at and from this site. Relate this to known or suspected sources and known or potential receptors/migration pathways.

Soil contamination at the site originated from handling of chemical products inside the former facility in tanks and piping. The extent of soil contamination prior to excavation is indicated in the series of figures labeled "B.2ax" that show the sample location of all pre-remedial, unsaturated contaminated soil and a single contour of the horizontal extent of each area of contiguous residual soil contamination where a Residual Contaminant Level (RCL) is exceeded.

ii. Describe the level and types of **soil contaminants** found in the upper four feet of the soil column.

The upper 4 feet of soil contamination has been excavated and disposed of offsite. The types of contaminants in the excavated soil were the following diesel range organics (DRO) and phthalates: Bis 2(ethylhexyl)phthalate [DEHP]; Di-n-octyl phthalate [DNOP]; Di-n-butyl phthalate [DBP]; Butyl benzyl phthalate [BBP].

iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site: for example, a Residual Contaminant Level (RCL) , a Site-Specific Residual Contaminant Level (SSRCL), or a Performance Standard as determined under ss NR 720.09, 720.11 and 720.19, Wis. Adm. Code. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/information in Attachment C.

The WDNR guidance PUB-RR-682 was followed, and the USEPA Web calculator with WDNR default assumptions was used. The exact methods and assumptions were previously reported in a February 2004 Soil Excavation Remedial Action Report as Appendix C, and in the May 2006 Remedial Action Report as Appendix A. Long-term occupational/ industrial exposure was assumed (250 days per year for 25 years for a 70-kilogram individual). The memorandum documenting methods and assumptions is again included with this submittal as Attachment C.3.

C. Groundwater

i. Describe degree and extent of groundwater contamination at or from this site. 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.

Groundwater contamination extent at the site is limited (Figure B.3b). The only detection of phthalates in groundwater in 2012 was at MW-04, central to the PolyOne property. Monitoring wells at the boundaries of the PolyOne property and at the Continental Baking Company property to the east-northeast are all nondetect for phthalates across 3 sampling events in 2005 and 2007 (Table A.1.i). Low concentrations of DRO were detected at all onsite monitoring wells (no PAL or Enforcement Standard [ES] for DRO). Wells at adjoining properties to both the west and the east may contain or have contained DRO due to their own operations and reported spills. There are no receptors to onsite groundwater contamination. The onsite production well was abandoned in 2002, and the nearest water supply well is just within a 1,200-foot radius from the site and is screened/open in dolostone/limestone bedrock below a depth of 126 feet.

ii. Describe the presence of free product at the site, including the thickness, depth, and locations.
Free product containing primarily DRO, several phthalates, and minor concentrations of several VOCs (reported in October 2007 Groundwater Report) was identified in MW-04, central to the site and within the footprint of the former facility building. The material was encountered during groundwater sampling activities at MW-04 and was not encountered in any of the other monitoring wells that are located in a radial pattern outward from it. The thickness of free product over time and the amount of free product removed over time are summarized in Tables A.6 and A.8, respectively.

D. Vapor

i. Describe how the vapor migration pathway was assessed, including locations where vapor or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.
Not applicable. Site groundwater constituents are not volatile, and there are no onsite structures.

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).

Not applicable. Site groundwater constituents are not volatile, and there are no onsite structures.

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.
This pathway was not assessed. There are no waterbodies with sediment and/or surface water available for sampling adjacent to this site.

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.
This pathway was not assessed. There are no waterbodies with sediment and/or surface water available for sampling adjacent to this site.

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.

• 2003 Indoor Tank Farm decommissioning and soil excavation (beneath tank farm).
• 2006 Soil Excavation and Confirmation Sampling (2003 and 2006 activities summarized in previously submitted Excavation Completion Report and Groundwater Monitoring Plan, November 2006).
• LNAPL was initially observed in MW-04 in March 2007, during a water level collection event.
• During subsequent groundwater sampling events, LNAPL was actively pumped from MW-04 seven times from May 2007 through April 2009 (Table A.8), and then passively collected using an absorbent sock within MW-04 between May 2009 and March 2011.

• LNAPL removal activities and measurements were previously reported in the groundwater reports for that particular sampling event. A total of approximately 22 liters was removed.

B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.
NR 708 does not appear to be applicable to the remedial actions undertaken at this site.

C. Describe the *active* remedial actions taken at the site, including: type of remedial system(s) used for each media impacted; 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.

• 2003: six ASTs were removed from within the building and properly disposed of along with concrete and soil beneath the following features: former tank farm, former pipe ditch that extended south from the tank farm, and the former scale pit area west of the pipe ditch.
• 2006: building materials, concrete, and other foundation materials were demolished and removed from the site along with 3,860 tons (~2,570 cubic yards) of contaminated soil.
• "System" performance has been excellent because phthalate-impacted groundwater is limited only to one onsite, centralized well (MW-04) within the source area.
• Active and passive LNAPL collection are described in this closure form at location 1.C.ii

D. Provide a discussion of the nature, degree and extent of residual contamination that will remain at the site or on off-site affected properties after case closure.
There is no residual contamination from the PolyOne site present at the offsite properties. One onsite soil sample location at one depth contains a concentration of DRO that exceeds the NR 720.09(4)(a)1 groundwater pathway protection RCL of 100 milligrams per kilogram (mg/kg). (Sample No. PEX-028 at the location shown in Figure B.2b at a depth of 11 feet, which was near the water table during the sample date, had a DRO concentration of 280 mg/kg). Residual groundwater at onsite monitoring well location MW-04 remains and contains concentrations of phthalates and DRO. The concentration DEHP was above WDNR's ES in a 2012 sample (23.1 micrograms per liter [µg/L] versus an ES of 6 µg/L), and a small amount of light non-aqueous phase liquid (LNAPL) also remains near MW-04.

E. Describe the remaining soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds the ch. NR720, Wis. Adm. Code, standard(s) for direct contact.
There is no residual contamination within 4 feet of the ground surface (direct contact zone) that attains or exceeds the NR 720 Wisconsin Administrative Code standard for direct contact.

F. Describe the remaining soil contamination in the vadose zone that attains or exceeds the soil standard(s) for the groundwater pathway.
One onsite soil sample location at one depth within the vadose zone (measured using the lowest groundwater elevation on record) contains a concentration (280 mg/kg) of DRO that exceeds the NR 720.09(4)(a)1 groundwater pathway protection RCL of 100 mg/kg (Sample No. PEX-028 at the location shown in Figure B.2b at a depth of 11 feet).

G. 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 and the limited mobility of groundwater flow (based on the historical groundwater analytical record) will be used to address the residual groundwater contamination at the site.

H. 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).
Both the extent of detected contaminants in groundwater and the concentrations in groundwater have decreased over time (Table A.1), and are expected to continue to decrease as the source of the contaminants has been remediated.

I. Identify how all exposure pathways were removed and/or adequately addressed by immediate and/or remedial action(s) described above in paragraphs, B, C, D, E and F.
The direct contact pathway to human health or the environment is not complete. There is no residual soil or groundwater contamination within the upper 4 feet of the soil column that exceed site-specific RCLs. Residual soil concentration (DRO = 280 mg/kg) at one location (PEX-28, 11-foot depth) exceeds the protection of groundwater standard. The groundwater-use exposure pathway will be addressed by the registration of the property on WDNR's geographic information system (GIS) registry and by the fact that City of Waukesha water is available to this industrial subdivision. Site constituents (phthalates and DRO) are not sufficiently volatile to cause soil-to-air or groundwater-to-air exposures, and there are no buildings on the property. The surface water and/or sediment pathways are not applicable to this property based on its physical conditions (no surface waterbodies adjacent to this site).

J. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
Not applicable; all site monitoring wells would be abandoned after site closure.

K. 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.
This project site, when closed, requires an ES exemption for the DEHP concentrations at MW-04 that exceed the ES.

L. 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.
Not Applicable.

M. 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.
Not Applicable.

5. Continuing Obligations: Situations where a maintenance plan(s) and inclusion on DNR's GIS Registry are required.

Directions: Check all that apply to this case closure request:

	This scenario Applies to this Case Closure		Case Closure Scenario: Maintenance Plans and GIS Registry	Maintenance Plan (s) Required in Attachment D	GIS Registry Listing
	A. On-Site	B. Off-Site			
i.	☐	☐	Engineering Control/Barrier for Direct Contact	✓	✓
ii.	☐	☐	Engineering Control/Barrier for Groundwater Infiltration	✓	✓
iii.	☐	☐	Vapor Mitigation - post closure passive system	✓	✓
iv.	☐	☐	Vapor Mitigation - post closure active system	✓	✓
v.	☐	☐	None of the above scenarios apply to this case closure	NA	NA

6. Continuing Obligations: Situations where inclusion on DNR's GIS Registry is required.

Directions: Check all that apply to this case closure request:

	This scenario Applies to this Case Closure		Case Closure Scenario: GIS Registry Only	GIS Registry Listing
	A. On-Site	B. Off-Site		
i.	☒	☐	Residual soil contamination exceeds ch. NR 720 generic or site-specific RCLs	✓
ii.	☒	☐	Sites with groundwater contamination equal to or greater than the ch. NR 140, enforcement standards (ES)	✓
iii.	☐	☐	Monitoring wells: lost, transferred or remaining in use	✓
iv.	☐	☐	Structural Impediment (not as a performance standard)	✓
v.	☐	☐	Residual soil contamination remaining at ch. NR 720 Industrial Use levels	✓
vi.	☐	☐	Vapor intrusion may be future, post-closure issue if building use or land use changes	✓
vii.	☐	☐	None of the above scenarios apply to this case closure	NA

7. 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. SPS 310, Wis. Adm. Code, exist on the property? ○ Yes ◉ No

C. If the answer to question 7b is yes, is the leak detection system currently being monitored? ○ Yes ○ No

Data Tables (Attachment A)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form.All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General directions for Data Tables:

- Use bold and italics font on information of importance on tables and figures. Use **bold font** for ch. NR 140, Wis. Adm. Code, groundwater enforcement standard (ES) attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, groundwater preventive action limit (PAL) standard attainments or exceedances.
- 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 (2)(g)3, Wis. Adm. Code, in the format required in s. NR 716.15(2)(h)3, 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. Pre-remedial Soil Analytical Table, etc).
- For required documents, each table (e.g., A.1., A.2., etc.,) should be a separate 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, any potable wells and any other wells, extraction wells and any potable wells for which samples have been collected.

A.2. **Pre-remedial Soil Analytical Table(s):** Table(s) showing the soil analytical results and collection dates - prior to conducting the interim and/or remedial action. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).

A.3. **Post-remedial Soil Analytical Table(s):** Table(s) showing the post-remedial action soil analytical results and collection dates. Indicate if sample was collected above or below the all-time low water table (unsaturated verses saturated).

A.4. **Pre and Post Remaining Soil Contamination Soil Analytical Table(s):** Table(s) showing only the pre and post remedial action soil analytical results that exceed a Residual Contaminate Level (RCL) or a Site-Specific Residual Level (SSRCL).

A.5. **Vapor Analytical Table:** 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.6. **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, time period for sample collection, method and results sampling.

A.7. **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.8. **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 and Figures (Attachment B)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions for all Maps and Figures:

- If any map or figure is not relevant to the case closure request, you must fully explain the reason(s) why and attach that explanation (properly labeled with the map/ figure title) in Attachment B.
- 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 11x17 inches, in a portable document format (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(2)(h)1 and 726.05(3)(a)4.d, Wis Adm. Code.
- Do not use shading or highlights on any of the analytical tables.
- 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.

B.1. Location Maps

B.1.a. **Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all impacted 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 on-site and applicable off-site 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 exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under ss. NR 720.09, 720.11 and 720.19, Wis. Adm. Code.

B.1.c. **RR Site Map:** From RR Sites Map (http://dnrmaps.wi.gov/imf/imf.jsp?site=brrts2) 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. **Pre-remedial Soil Contamination:** Figure(s) showing the sample location of all pre-remedial, unsaturated contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeded a Residual Contaminant Level (RCL) or a Site-Specific Residual Contaminant Level (SSRCL) as determined under ss. NR 720.09, 720.11 and 720.19, Wis. Adm. Code.

B.2.b. **Post-remedial Soil Contamination :** Figure(s) showing the sample location of all post-remedial, unsaturated contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) or a Site-Specific Residual Contaminant Level (SSRCL) as determined under ss. NR 720.09, 720.11 and 720.19, Wis. Adm. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.

B.2.c. **Pre/Post Remaining Soil Contamination:** Figure(s) showing the only location of all pre and post remedial residual soil sample location(s) where unsaturated contaminated soil remains after remediation and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminate Level (RCL) or a Site-Specific Residual Level (SSRCL) as determined under ss. NR 720.09, 720.11 and 720.19, Wis. Admin. Code. A separate contour line should be used to indicate the extent of residual direct contact exceedances.

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 a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).
- Source location(s) and lateral and vertical extent if groundwater contamination exceeds a ch. NR 140 Enforcement Standard (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.1b)

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, Preventive Action Limit (PAL) and/or an Enforcement Standard (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 previously 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 remaining soil and groundwater contamination, including sub-slab, indoor air, soil vapor, 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)

Documentation of Remedial Action (Attachment C)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

- 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 is "not applicable" to the site-specific circumstances, include a brief explanation to support that conclusion.
- If the documentation requested below has already been submitted to the Department, please note the title and date of the report for that particular document requested.

C.1. **Site investigation documentation,** that has not otherwise been previously submitted.

C.2. **Investigative waste** disposal documentation.

C.3. **NR 720.19 analysis,** assumptions and calculations for site specific RCLs (SSRCLs) , with justification, including EPA Soil Screening Level Model Calculations and results.

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 upon receiving conditional closure.

C.6. **Photos.** For sites 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 should be visible and discernible. Photographs must be labeled with the site name, the features shown, location and the date on which the photograph was taken.

C.7. **Other.** Include any other relevant documentation not otherwise noted above. (This section may remain blank)

Maintenance Plan(s) (Attachment D)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

When one or more "maintenance plans" are required for a site closure, include in each maintenance plan all required information in sections D.1. through D.5. below, and attach the plan(s) in Attachment D. The following "model" maintenance plans can be located at: (1) Maintenance plan for a engineering control or cover: http://dnr.wi.gov/topic/Brownfields/documents/maintenance-plan.pdf; and (2) Maintenance plan for vapor intrusion: http://dnr.wi.gov/topic/Brownfields/documents/appendix5_606.pdf.

D.1. **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) and all property boundaries.

D.2. **Brief descriptions** of the type, depth and location of residual contamination.

D.3. **Description of maintenance action(s)** required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.

D.4. **Inspection log,** to be maintained on site, or at a location specified in the maintenance plan or approval letter.

D.5. **Contact Information,** including the name, address and phone number of the individual or facility who will be conducting the maintenance.

Monitoring Well Information (Attachment E)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

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) for all wells that will remain in-use, be transferred to another party or that could not be located. A figure of these wells should be included in Attachment B.3.d.

Select One:

○ No monitoring wells were required 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 description of efforts made to locate the "lost" wells.

☐ One or more 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).

☐ 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.

Notifications to Owners of Impacted Properties (Attachment F)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

General Directions:

- State law requires that the responsible party provide a 30-day, written advance notice (i.e., a letter) 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.
- A model "template letter" for these mandatory notifications can be downloaded at: http://dnr.wi.gov/files/PDF/pubs/rr/RR919.pdf.

Check all that apply to the site-specific circumstances of this case closure:

	A. Impacted Source Property and Owner is not Conducting Cleanup	B. Impacted Right of Way	C. Impacted Off-Site Property Owner	Impacted Property Notification Situations: Ch. NR 726 Appendix A Letter
1.	☒	☐	☐	Residual groundwater contamination exceeds Ch. NR 140 Wis. Administrative Code enforcement standards.
2.	☒	☐	☐	Residual soil contamination that attains or exceeds standards is present after the remedial action is complete, and must be properly managed should it be excavated or removed.
3.	☐	☐	☐	An engineered cover or a soil barrier (e.g. pavement) must be maintained over contaminated soil for direct contact or groundwater infiltration concerns.
4.	☐	☐	☐	Industrial land use soil standards were used for the clean-up standard.
5.	☐	☐	☐	A vapor mitigation system (or other specific vapor protection) must be operated and maintained.
6.	☐	☐	☐	Vapor assessment needed if use changes.
7.	☐	☐	☐	Structural impediment.
8.	☐	☐	☐	Lost, transferred or open monitoring wells.
9.	☐	☐	☐	Not Applicable.

If any of the previous boxes in rows 1 thru 8 were checked, include the following as part of Attachment F:

- FORM 4400-246;
- Copy of each letter sent, 30 days or more prior to requesting closure; and
- Proof of receipt for each letter.
- For this site closure, ___0___ (number) property (ies) has/have been impacted, the owners have been notified, and copies of the letters and receipts are included in Attachment F.

Source Legal Documents (Attachment G)

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form.All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Include all of the following documents, in this order, in Attachment G:

G.1. **Deeds - Source Property and Other Impacted Properties:** The most recent deed with legal descriptions clearly labeled for (1) the **Source Property** (where the contamination originated) and (2) all **off-source** (off-site) properties where letters were required to be sent per the ch. NR 700, Wis. Adm. Code, rule series (e.g., off-site cover maintenance required, lost monitoring well, off-site cover property impacts to groundwater exceeding the ch. NR 140, Wis. Adm. Code.

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.

G.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.* (Lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

G.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.

G.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.

Signatures and Findings for Closure Determination

If any section is not relevant to the case closure request, you must fully explain the reasons why and attach that explanation to the relevant section of the form. All information submitted shall be legible. Providing illegible information may result in a submittal being considered incomplete until corrected.

Check the correct signature block below for this case closure request, and have the proper environmental professional(s) sign this document, in accordance with the ch. NR 700 Wis. Adm. Code rule series. Both boxes may be checked if applicable to this case closure.

☒ A response action(s) for this site addresses groundwater contamination (including natural attenuation remedies). In this situation, the closure request must be prepared by, or under the supervision of, a professional engineer and a hydrogeologist, as defined in ch. NR 712, Wis. Adm. Code. Include both signatures provided below with the submittal.

☐ The response action(s) for this site addresses media other than groundwater. In this situation, the case closure request must be prepared by, or under the supervision of, a professional engineer, as defined in ch. NR 712, Wis. Adm. Code. The "engineering certification" language below, at a minimum, must be signed.

Engineering Certification

I Erin E. Laude 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 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. All phases of work necessary to obtain data, develop conclusions, recommendations and prepare submittals for this case closure request have been prepared by me, or their preparation has been supervised by me. 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."

Erin E. Laude	Professional Engineer
Printed Name	Title
Erin E Laude	
Signature	P.E. Stamp and Number

6/6/2013
Date

WISCONSIN ERIN E. LAUDE 33705 MILWAUKEE PROFESSIONAL ENGINEER

Hydrogeologist Certification

I Cynthia L. Nemke 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 in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code. All phases of work necessary to address groundwater contamination including obtaining data, developing conclusions, recommendations and preparing submittals for this case closure request have been prepared by me, or their preparation has been supervised by me. 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."

Cynthia L. Nemke	Geologist
Printed Name	Title
	6/7/2013
Signature	Date

WISCONSIN CYNTHIA L. NEMKE 337 MILWAUKEE, WI PROFESSIONAL GEOLOGIST

TABLE A.1.i
Summary of Groundwater Analytical Results—Phthalates and DRO
PolyOne Corporation, 21300 Doral Road, Waukesha, Wisconsin

		Di-n-butyl phthalate (DBP)	Di-n-octyl phthalate (DNOP)	bis (2-Ethylhexyl) phthalate (DEHP)	Diethyl phthalate (DEP)	Diesel Range Organics (DRO)
State of WI	***Preventive Action Limit***	*100*	*NS*	*0.6*	*NS*	*NS*
Standards	***Enforcement Standard***	*1,000*	*NS*	*6*	*NS*	*NS*
Sample Location	**Sample Date**					
W-1 (Onsite production well: pre-existing)	1/26/2000	<5	<5	<5	<5	NA
MW-01	10/22/2004	<1.8	<0.7	<0.57	<1.7	<21
	12/29/2004	<1.8	<0.7	<0.57	<1.7	NA
	2/22/2005	<2	<0.76	<0.62	<1.9	NA
	2/1/2007	<0.99	<1.5	<1.1	<1.0	<110
	5/3/2007	<0.99	<1.4	*1.5 J*	<1.0	<120
	8/1/2007	NA	NA	NA	NA	NA
	11/7/2007	<1.0	<1.5	<1.1	<1.1	<120
	4/8/2008	<0.91	<1.6	<2.7	<1.4	20 J
	11/4/2008	<0.85	<1.5	<2.5	<1.3	82
	4/22/2009	<0.85	<1.5	<2.5	<1.3	<10
	4/5/2010	<4.2	<7.2	<12.2	<6.4	20 J
	4/27/2011	<0.91	<1.6	<2.7	<1.4	16 J
	4/25/2012	<0.85	<1.5	<2.5	<1.3	12 J
MW-02	10/22/2004	1.8	<0.67	<0.55	<1.7	180
	12/29/2004	<1.8	<0.7	***6.3***	<1.7	NA
	2/22/2005	<2	<0.76	*2.6*	<1.9	NA
	2/1/2007	<0.95	<1.4	<1.0	<0.99	<110
	5/3/2007	<0.98	<1.4	<1.1	<1.0	<120
	8/1/2007	NA	NA	NA	NA	NA
	11/7/2007	<1.0	<1.5	<1.0	<1.1	<110
	4/8/2008	<0.93	<1.6	<2.7	<1.4	54 J
	11/4/2008	<0.89	<1.5	<2.6	<1.3	27 J
	4/22/2009	<0.85	<1.5	<2.5	<1.3	18 J
	4/5/2010	<0.84	<1.4	<2.4	<1.3	55
	4/27/2011	<9.4	<16.1	<27.3	<14.2	44 J
	4/25/2012	<0.84	<1.4	<2.4	<1.3	230
MW-03	10/22/2004	<1.9	<0.73	*1.9*	<1.8	1,000
	12/29/2004	<1.7	9.4	***34***	<1.6	NA
	2/22/2005	<17	65	***380***	<16	NA
	2/1/2007	<1.0	<1.5	<1.1	<1.1	300
	5/7/2007	<0.98	<1.4	<1.1	<1.0	<110
	8/1/2007	<1.1	<1.7	<1.2	<1.2	190
	11/8/2007	<0.98	<1.4	<1.1	<1.0	1,100
	4/9/2008	<0.89	<1.5	<2.6	<1.3	140
	11/4/2008	<0.85	<1.5	<2.5	<1.3	720
	4/22/2009	<0.86	<1.5	<2.5	<1.3	260
	4/5/2010	<0.84	<1.4	<2.4	<1.3	210
	4/27/2011	<0.92	<1.6	<2.7	<1.4	200
	4/26/2012	<0.84	<1.4	<2.4	<1.3	180
MW-04	2/1/2007	*280*	<7.2	<5.4	<5.1	7,300
	5/3/2007	<20	1,200	***1,400***	<20	30,000
	8/1/2007	*550*	630	***660***	<24	8,700
	11/7/2007	<8.5	220	***400***	<8.9	4,300
	4/8/2008	<19	132	***325***	<28.7	59,000
	11/4/2008	<86.1	15,500	***16,500***	<129	121,000
	4/22/2009	<21.5	569	***731***	<32.4	5,100
	4/5/2010	<16.9	782	***845***	<25.4	3,500
	4/27/2011	<0.96	37.4	***34.2***	<1.4	580
	4/26/2012	<3.4	25.1	***23.1***	<5.1	1,700

TABLE A.1.i

Summary of Groundwater Analytical Results—Phthalates and DRO

PolyOne Corporation, 21300 Doral Road, Waukesha, Wisconsin

		Di-n-butyl phthalate (DBP)	Di-n-octyl phthalate (DNOP)	bis (2-Ethylhexyl) phthalate (DEHP)	Diethyl phthalate (DEP)	Diesel Range Organics (DRO)
State of WI	***Preventive Action Limit***	*100*	*NS*	*0.6*	*NS*	*NS*
Standards	***Enforcement Standard***	*1,000*	*NS*	*6*	*NS*	*NS*
Sample Location	**Sample Date**					
MW-05	2/1/2007	<0.96	<1.4	<1.0	<1.0	<120
	5/4/2007	<1.0	<1.5	<1.1	<1.1	<110
	8/2/2007	<1.1	<1.6	<1.2	<1.2	<120
	11/7/2007	<1.1	<1.6	<1.2	<1.1	<110
	4/9/2008	<0.9	<1.5	<2.6	<1.4	16 J
	11/4/2008	<0.86	<1.5	<2.5	<1.3	23 J
	4/22/2009	<0.86	<1.5	<2.5	<1.3	<10
	4/5/2010	<0.84	<1.4	<2.4	<1.3	24 J
	4/27/2011	<0.91	<1.6	<2.7	<1.4	65
	4/26/2012	<0.85	<1.5	<2.5	<1.3	31 J
IBC-MW-05	9/13/2005	<5.0	<7.3	*5.6*	<5.2	2,200
	5/4/2007	<1.0	<1.5	<1.1	<1.1	<110
	8/2/2007	<1.1	<1.6	<1.2	<1.2	<110
IBC-MW-07	9/13/2005	1.6	<1.4	<1.0	<0.96	130
	5/4/2007	<1.0	<1.5	<1.1	<1.1	<110
	8/2/2007	<1.1	<1.6	<1.2	<1.2	<110
TPZ-01	2/2/2007	<1.0	<1.4	<1.1	<1.0	<110
	5/3/2007	<1.0	<1.5	<1.1	<1.1	<120
	8/1/2007	<1.1	<1.6	<1.2	<1.2	<120
	11/8/2007	<0.93	<1.4	<1.0	<0.97	<100
	4/9/2008	<0.91	<1.6	<2.7	<1.4	86
	11/4/2008	<0.88	<1.5	<2.5	<1.3	62
	4/22/2009	<0.85	<1.5	<2.5	<1.3	27
	4/5/2010	<0.84	<1.4	<2.4	<1.3	39 J
	4/27/2011	<0.9	<1.5	<2.6	<1.4	51
	4/25/2012	<0.86	<1.5	<2.5	<1.3	39 J
TPZ-02	2/2/2007	<1.0	<1.4	<1.1	<1.0	<100
	5/4/2007	<1.0	<1.5	<1.1	<1.1	<120
	8/2/2007	<1.1	<1.6	<1.2	<1.1	<110
	11/8/2007	<0.97	<1.4	<1.0	<0.84	<110
	4/9/2008	<0.9	<1.5	<2.6	<1.3	47
	11/4/2008	<0.89	<1.5	<2.6	<1.3	49 J
	4/22/2009	<0.85	<1.5	<2.5	<1.3	56
	4/5/2010	<0.84	<1.4	<2.4	<1.3	64
	4/27/2011	<0.91	<1.6	<2.7	<1.4	56
	4/26/2012	<0.86	<1.5	<2.5	<1.3	32 J

Results are reported in micrograms per liter (µg/L)
DRO Analysis Method = WI MOD DRO
Phthalate/SVOC Analysis Method = SW846 3510C 8270
Notes:
Sample locations MW-05-IBC and MW-07-IBC are offsite wells located on a neighboring property.
J = Detection between the Limit of Detection (LOD) and the Limit of Quantitation (LOQ).
NS = No standard
NA = Not analyzed
< = Not detected at the limit of detection shown
Italicized Value = Exceedence of ch. NR 140, Wis. Adm. Code, Groundwater Preventive Action Limit (PAL)
***Bold Italicized* Value** = Excedence of ch. NR 140, Wis. Adm. Code, Groundwater Enforcement Standard (ES)

TABLE A.1.ii

Summary of Groundwater Analytical Results—Volatile Organic Compounds

PolyOne Corporation, 21300 Doral Road, Brookfield, Wisconsi

Parameter	Units	Enforcement Standard[a]	Preventive Action Limit[a]	W-1	MW-01	MW-02	MW-03	MW-04	MW-05	TPZ-01	TPZ-02
Volatile Organic Compounds by SW-846 8260B											
1,1,1,2-Tetrachloroethane	µg/L	70	7	NA	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
1,1,1-Trichloroethane	µg/L	200	40	0.53 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
1,1,2,2-Tetrachloroethane	µg/L	0	0.02	0.68 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1,2-Trichloroethane	µg/L	5	0.5	0.47 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U
1,1-Dichloroethane	µg/L	850	85	0.61 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene	µg/L	7	0.7	0.47 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
1,1-Dichloropropene	µg/L	NS	NS	NA	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,2,3-Trichlorobenzene	µg/L	NS	NS	NA	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
1,2,3-Trichloropropane	µg/L	60	12	NA	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
1,2,4-Trichlorobenzene	µg/L	70	14	NA	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
1,2,4-Trimethylbenzene	µg/L	480	96	NA	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
1,2-Dibromo-3-chloropropane	µg/L	0	0.02	NA	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
1,2-Dibromoethane (EDB)	µg/L	0	0.005	NA	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
1,2-Dichlorobenzene	µg/L	600	60	NA	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
1,2-Dichloroethane	µg/L	5	0.5	0.54 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,2-Dichloropropane	µg/L	5	0.5	0.34 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,3,5-Trimethylbenzene	µg/L	480	96	NA	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
1,3-Dichlorobenzene	µg/L	600	120	NA	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U	0.87 U
1,3-Dichloropropane	µg/L	NS	NS	NA	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,4-Dichlorobenzene	µg/L	75	15	NA	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
2,2-Dichloropropane	µg/L	NS	NS	NA	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
2-Chlorotoluene	µg/L	NS	NS	NA	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
4-Chlorotoluene	µg/L	NS	NS	NA	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U
Benzene	µg/L	5	0.5	0.44 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Bromobenzene	µg/L	NS	NS	NA	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
Bromochloromethane	µg/L	NS	NS	NA	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
Bromodichloromethane	µg/L	1	0.06	0.41 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
Bromoform	µg/L	4	0.44	0.58 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U	0.94 U
Bromomethane	µg/L	10	1	0.94 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Carbon tetrachloride	µg/L	5	0.5	0.90 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
Chlorobenzene	µg/L	100	20	0.43 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
Chloroethane	µg/L	400	80	0.63 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
Chloroform	µg/L	6	0.6	0.41 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Chloromethane	µg/L	30	3	0.44 U	0.24 U	0.24 U	0.24 U	0.24 U	0.34	0.24 U	0.24 U
Dibromochloromethane	µg/L	60	6	0.43 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
Dibromomethane	µg/L	NS	NS	NA	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
Dichlorodifluoromethane	µg/L	1,000	200	NA	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
Diisopropyl ether	µg/L	NS	NS	NA	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Ethylbenzene	µg/L	700	140	0.50 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
Hexachloro-1,3-butadiene	µg/L	NS	NS	NA	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Isopropylbenzene (Cumene)	µg/L	NS	NS	NA	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
Methyl-tert-butyl ether	µg/L	60	12	NA	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
Methylene Chloride	µg/L	5	0.5	0.38 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
Naphthalene	µg/L	100	10	NA	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U
Styrene	µg/L	100	10	0.37 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U	0.86 U
Tetrachloroethene	µg/L	5	0.5	0.41 U	0.45 U	0.45 U	0.45 U	0.45 U	*1.9*	0.45 U	0.45 U

TABLE A.1.ii

Summary of Groundwater Analytical Results—Volatile Organic Compounds

PolyOne Corporation, 21300 Doral Road, Brookfield, Wisconsi

Parameter	Units	Enforcement Standard[a]	Preventive Action Limit[a]	W-1	MW-01	MW-02	MW-03	MW-04	MW-05	TPZ-01	TPZ-02
Toluene	µg/L	800	160	0.40 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
Trichloroethene	µg/L	5	0.5	0.49 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Trichlorofluoromethane	µg/L	3,490	698	NA	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
Vinyl chloride	µg/L	0	0.02	0.17 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
cis-1,2-Dichloroethene	µg/L	70	7	NA	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
cis-1,3-Dichloropropene	µg/L	0	0.04	0.54 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
m&p-Xylene	µg/L	2,000	400	NA	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
n-Butylbenzene	µg/L	NS	NS	NA	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
n-Propylbenzene	µg/L	NS	NS	NA	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
o-Xylene	µg/L	2,000	400	NA	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
p-Isopropyltoluene	µg/L	NS	NS	NA	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
sec-Butylbenzene	µg/L	NS	NS	NA	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U
tert-Butylbenzene	µg/L	NS	NS	NA	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
trans-1,2-Dichloroethene	µg/L	100	20	NA	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U	0.89 U
trans-1,3-Dichloropropene	µg/L	0.4	0.04	0.26 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U

Notes:

[a] Public Health Groundwater Quality Standards from Wisconsin Administrative Code, Department of Natural Resources Chapter 140 (January 2012).

µg/L = micrograms per liter

NS = No standard

U = Not detected at the limit of detection shown

(There are no concentrations that exceed State of Wisconsin Enforcement Standards [ES])

TABLE A.2.iii

Pre-remedial Soil Sample Results—Metals

October 2003 Soil Excavation Inside Former Building

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Sample No.	Collection Date	Sample Depth (feet bgs)	Excavation Depth (feet bgs)	Sample Collected Near/Above or Below All-time Low Water Level (~15 feet bgs)	Mercury (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Total Chromium (not speciated into CrVI orCrIII) (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)
Preliminary Samples (removed during 2003 or 2006 excavation)												
PWK-003	10/7/2003	8-9	9	Above	<0.0451	<2.82	<28.2	<0.564	**7.89**	**6.01**	<2.82	<2.82
PWK-004	10/7/2003	6-7	10	Above	**0.0575**	<3.08	**55.3**	<0.616	**13.4**	**10.4**	<3.08	<3.08
PWK-005	10/7/2003	6-7	10	Above	**0.0543**	<3.04	**53.3**	<0.607	**13.2**	**9.85**	<3.04	<3.04
PWK-009	10/7/2003	6-7	NR	Above	<0.0483	<3.02	**58.4**	<0.603	**11.5**	**9.44**	<3.02	<3.02
PWK-012	10/7/2003	6-7	7	Above	**0.0550**	**3.97**	**57.1**	<0.610	**13.6**	**10.1**	<3.05	<3.05
PWK-017	10/8/2003	8.5-9.5	9.5	Above	<0.0490	<3.06	**48.4**	<0.612	**14.2**	**12.2**	<3.06	**3.52**
PWK-019	10/8/2003	8-9	NR	Above	<0.0477	<2.98	**53.4**	<0.597	**13.2**	**10.5**	<2.98	<2.98
PWK-020	10/8/2003	5.5-6.5	6.5	Above	**0.0415**	<3.01	**57**	<0.601	**16.2**	**11.4**	<3.01	<3.01
PWK-021	10/8/2003	5-6	NR	Above	<0.0428	<3.00	**95.1**	<0.599	**8.93**	**11.5**	<3.00	<3.00
PWK-024	10/8/2003	5-6	6	Above	<0.0411	<3.03	**69.2**	<0.607	**11.2**	**9.76**	<3.03	<3.03

Bold number = detection at that number's value

< = constituent not detected at the level of detection indicated

bgs = below ground surface

NR = not recorded

CrVI = hexavalent chromium

CrIII = trivalent chromium

mg/kg = milligram per kilogram

TABLE A.2ii

Pre-remedial Soil Sample Results - Volatile Organic Constituents (ug/kg)

January 2000 Direct-push probe samples

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

				Chemical Name																				
Sample No.	**Collection Date**	**Sample Depth (feet bgs)**	**Sample Collected Near/Above or Below All-time Low Water Level (~15 feet bgs)**	**1,1,1-Trichloroethane**	**1,1,2,2-Tetrachloroethane**	**1,1,2-Trichloroethane**	**1,1-Dichloroethane**	**1,1-Dichloroethene**	**1,2-Dichloroethane**	**1,2-Dichloroethene, total**	**1,2-Dichloropropane**	**2-Butanone**	**2-Hexanone**	**4-Methyl-2-pentanone**	**Acetone**	**Benzene**	**Bromodichloromethane**	**Bromoform**	**Bromomethane**	**Carbon disulfide**	**Carbon tetrachloride**	**Chlorobenzene**	**Chlorodibromomethane**	**Chloroethane**
Preliminary Samples—Direct-push Locations Inside Former Building (soil excavated during 2003 or 2006)																								
Inside Building—2000 Preliminary Geoprobe Investigation																								
P2	1/25/2000	0.5-1.5	Above	<30	<30	<30	<30	<30	<30	<30	<30	**80JB**	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
P2	1/25/2000	5.5-6.5	Above	<40	<40	<40	<40	<40	<40	<40	<40	**230B**	<40	<40	**680**	<28	<28	<40	<40	<40	<40	<40	<40	<40
P3	1/25/2000	0.5-1.5	Above	<28	<28	<28	<28	<28	<28	<28	<28	**120B**	<28	<28	**3,600**	<28	<28	<28	<28	<28	<28	<28	<28	<28
P3	1/25/2000	7.5-8.5	Above	<31	<31	<31	<31	<31	<31	<31	<31	<44	<31	<31	**910**	<31	<31	<31	<31	<31	<31	<31	<31	<31
P13	1/25/2000	3.5-4.5	Above	<4.2	<30	<30	<30	<30	<30	<30	<30	<44	<30	<30	<110	<30	<30	<30	<30	<30	<30	<30	<30	<30
P17	1/25/2000	8-9	Above	<3.6	<28	<28	<28	<28	<28	<28	<28	<40	<28	<28	<100	<28	<28	<28	<28	<28	<28	<28	<28	<28

Bold number = detection at that number's value

bgs = below ground surface

B = Analyte was also detected in the Laboratory Blank

J = Indicates an estimated quantity - result was detectable but below quantitation limit

< = Constituent not detected at the level of detection indicated

TABLE A.2ii

Pre-remedial Soil Sample Results - Volatile Organic Constituents (ug/kg)

January 2000 Direct-push probe samples

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Sample No.	Collection Date	Sample Depth (feet bgs)	Sample Collected Near/Above or Below All-time Low Water Level (~15 feet bgs)	Chloroform	Chloromethane	cis-1,3-Dichloropropene	Ethylbenzene	Methylene chloride	Styrene	Tetrachloroethene	Toluene	trans-1,3-Dichloropropene	Trichloroethene	Vinyl chloride	Xylene, total
Preliminary Samples—Direct-push Locations Inside Form															
Inside Building—2000 Preliminary Geoprobe Investigatio															
P2	1/25/2000	0.5-1.5	Above	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
P2	1/25/2000	5.5-6.5	Above	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
P3	1/25/2000	0.5-1.5	Above	<28	<28	<28	<28	<28	<28	<28	**52J**	<28	<28	<28	**52J**
P3	1/25/2000	7.5-8.5	Above	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31	<31
P13	1/25/2000	3.5-4.5	Above	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
P17	1/25/2000	8-9	Above	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28	<28

Bold number = detection at that number's value

bgs = below ground surface

B = Analyte was also detected in the Laboratory Blank

J = Indicates an estimated quantity - result was detectable but below quantitation limit

< = Constituent not detected at the level of detection indicated

TABLE A.2i

Pre-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics

Samples Collected Prior to Remedial Action

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

						Constituent Name								
Sample No.	**Collection Date**	**Sample Location**	**Sample Depth (feet bgs)**	**Excavation Depth (feet bgs)**	**Sample Collected Near/above or below all time low water level (~15 feet)**	**bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)**	**Butylbenzyl phthalate (BBP) (mg/kg)**	**Diethyl phthalate (mg/kg)**	**Dimethyl phthalate (mg/kg)**	**Di-n-butyl phthalate (DBP) (mg/kg)**	**Di-n-octyl phthalate (DOP) (mg/kg)**	**Diesel Range Organics (DRO) (mg/kg)**	**Gasoline Range Organics (GRO) (mg/kg)**	**Comments**
RCL—Ingestion (The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA	NA	
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100	100	
Preliminary Samples—Geoprobe Investigation—2000 (removed during 2003 or 2006 excavation)														
P1	**1/25/2000**		0.5-1.0	EB	Above	**1.2**	**0.81**	<0.40	<0.40	<0.40	**1.1**	NS	NS	
P2	**1/25/2000**		0.5-1.5	EB	Above	***72 J***	**1.9**	<0.38	<0.38	<0.38	***10***	NS	NS	
P2	**1/25/2000**		5.5-6.5	EB	Above	**1.3**	<0.39	<0.39	<0.39	<0.39	<0.39	NS	NS	
P3	**1/25/2000**		0.5-1.5	EB	Above	***960 J***	<3.75	<3.75	<3.75	<3.75	***2300 J***	NS	NS	
P3	**1/25/2000**		7.5-8.5	EB	Above	**2.8**	**4**	<2.01	<2.01	<2.01	***420 J***	NS	NS	
P3E	**1/25/2000**		0.5-1.0	EB	Above	***69 J***	***25 J***	<0.40	<0.40	<0.40	***160 J***	NS	NS	
P3E	**1/25/2000**		4.0-4.5	EB	Above	**4.7**	**0.46**	<0.41	<0.41	<0.41	<0.41	NS	NS	
P3W	**1/25/2000**		0.5-1.0	EB	Above	***52 J***	**4.2**	<0.42	<0.42	<0.42	***29 J***	NS	NS	
P3W	**1/25/2000**		4.0-4.5	EB	Above	**4.7**	**0.45**	<0.40	<0.40	<0.40	**3.2**	NS	NS	
P4	**1/25/2000**		0.5-1.0	EB	Above	***67 J***	**14**	<0.38	<0.38	**0.56**	***220 J***	NS	NS	
P4	**1/25/2000**		6.0-6.5	EB	Above	**14**	**3.8**	<0.39	<0.39	<0.39	***97 J***	NS	NS	
P5	**1/25/2000**		0.5-1.0	EB	Above	***140 J***	***73 J***	<0.39	<0.39	**0.4**	***110 J***	NS	NS	
P5	**1/25/2000**		5.5-6.0	EB	Above	***120 J***	***140 J***	<0.38	<0.38	<0.38	***73 J***	NS	NS	
P6	**1/25/2000**		0.5-1.0	EB	Above	***150 J***	***110 J***	<0.35	<0.35	**1.1**	***48 J***	NS	NS	
P6	**1/25/2000**		6.0-6.5	EB	Above	**1.4**	<0.37	<0.37	<0.37	<0.37	**0.37**	NS	NS	
P7	**1/25/2000**		0.5-1.0	EB	Above	**21**	***550 J***	<1.8	<1.8	***55***	***840 J***	NS	NS	
P7A	**1/25/2000**		1.5-2.5	EB	Above	**5.3**	**12**	<0.39	<0.39	<0.39	***130 J***	NS	NS	
P7A	**1/25/2000**		4.0-4.5	EB	Above	**0.75**	**0.96**	<0.39	<0.39	<0.39	**2**	NS	NS	
P9	**1/25/2000**		1.2-1.7	EB	Above	***71 J***	***25 J***	<0.41	<0.41	<0.41	<0.41	NS	NS	
P9	**1/25/2000**		4.7-5.2	EB	Above	**5.6**	<0.40	<0.40	<0.40	<0.40	**1.2**	NS	NS	
P10	**1/25/2000**		1.2-1.7	EB	Above	***210 J***	***33 J***	<0.40	<0.40	<0.40	***33 J***	NS	NS	
P12	**1/25/2000**		3.5-4.5	EB	Above	**1.9**	<0.40	<0.40	<0.40	<0.40	**2.1**	NS	NS	
P13	**1/25/2000**		3.5-4.5	EB	Above	**17**	<0.39	<0.39	<0.39	<0.39	***53 J***	NS	NS	
P14	**1/25/2000**		3.0-3.5	EB	Above	***180 J***	***65 J***	<0.41	<0.41	<0.41	***150 J***	NS	NS	
P16	**1/25/2000**		0.5-1.0	EB	Above	***120 J***	<0.37	<0.37	<0.37	<0.37	***64 J***	NS	NS	
P16	**1/25/2000**		4.0-4.5	EB	Above	**4.2**	<0.40	<0.40	<0.40	<0.40	**0.67**	NS	NS	
P17	**1/25/2000**		8-9	EB	Above	**1.1**	<0.36	<0.36	<0.36	<0.36	**1.2**	NS	NS	
Preliminary Samples—Supporting 2003 Excavation (removed during 2003 or 2006 excavation)														
PWK-001	**10/7/2003**		8-9	9	Above	***47.6***	**0.26**	<0.023	<0.028	<0.031	***51.1***	NS	NS	
PWK-001-C	**10/14/2003**		9-10	10	Above	**34.7**	<4.83	<4.64	<5.67	<6.36	***59.2***	***683***	NS	
PWK-002	**10/7/2003**		8-9	9	Above	***262***	**3.52**	<0.023	<0.028	<0.032	***197***	NS	NS	
PWK-002-C	**10/14/2003**		9-10	10	Above	***67.9***	<4.91	<4.72	<5.76	<6.46	***105***	***2,660***	NS	
PWK-003	**10/7/2003**		8-9	9	Above	***70.9***	<11.5	<11.0	<13.4	<15.1	***103***	***931***	<5.71	
PWK-003-C	**10/14/2003**		9-10	10	Above	***58.9***	<4.67	<4.49	<5.48	<6.14	***159***	NS	NS	
PWK-004	**10/7/2003**		6-7	10	Above	***528***	<12.5	<12.0	<14.7	<16.4	***436***	***941***	<6.04	
PWK004-C	**10/14/2003**		9-10	10	Above	**33**	<4.79	<4.61	<5.62	<6.31	***58.5***	NS	NS	
PWK-005 (dup of 004)	**10/7/2003**		6-7	10	Above	***613***	<12.3	<11.8	<14.4	<16.2	***489***	***477***	<6.11	
PWK-006	**10/7/2003**		8-9	10	Above	***94.4***	<0.025	<0.024	<0.029	<0.033	***177***	NS	NS	

TABLE A.2i

Pre-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics

Samples Collected Prior to Remedial Action

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

						Constituent Name								
Sample No.	**Collection Date**	**Sample Location**	**Sample Depth (feet bgs)**	**Excavation Depth (feet bgs)**	**Sample Collected Near/above or below all time low water level (~15 feet)**	**bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)**	**Butylbenzyl phthalate (BBP) (mg/kg)**	**Diethyl phthalate (mg/kg)**	**Dimethyl phthalate (mg/kg)**	**Di-n-butyl phthalate (DBP) (mg/kg)**	**Di-n-octyl phthalate (DOP) (mg/kg)**	**Diesel Range Organics (DRO) (mg/kg)**	**Gasoline Range Organics (GRO) (mg/kg)**	**Comments**
RCL—Ingestion (The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA	NA	
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100	100	
Preliminary Samples—Supporting 2003 Excavation (removed during 2003 or 2006 excavation), Continued														
PWK-006C	**10/14/2003**		9-10	10	Above	<8.04	<5.03	<4.84	<5.9	<6.62	<10.7	NS	NS	
PWK-007	**10/7/2003**		6-7	NR	Above	**0.949**	<0.024	<0.023	<0.028	<0.032	**0.971**	NS	NS	
PWK-008	**10/7/2003**		6-7	7	Above	**1.9**	**0.048**	<0.024	<0.029	<0.032	**7.88**	NS	NS	
PWK-009	**10/7/2003**		6-7	NR	Above	**0.287**	<0.025	<0.024	<0.029	<0.032	**0.104**	**8.12**	<6.01	
PWK-010	**10/7/2003**		6-7	7	Above	**15.7**	<0.025	<0.024	<0.029	<0.032	***29.1***	NS	NS	
PWK-010-C	**10/14/2003**		6-7	7	Above	<7.92	<4.96	<4.77	<5.82	<6.53	<10.5	NS	NS	
PWK-011	**10/7/2003**		6-7	NR	Above	**0.151**	<0.024	<0.023	<0.028	<0.032	**0.173**	NS	NS	
PWK-012	**10/7/2003**		6-7	7	Above	**0.134**	<0.025	<0.024	<0.029	<0.033	<0.053	**12.7**	<6.08	
PWK-012-C	**10/14/2003**		6-7	7	Above	<7.31	<4.58	<4.40	<5.37	<6.02	<9.70	<5.64	NS	
PWK-013	**10/7/2003**		6-7	NR	Above	**1.66**	<0.024	<0.023	<0.028	<0.032	**1.24**	NS	NS	
PWK-017	**10/8/2003**		8.5-9.5	9.5	Above	<7.93	<4.97	<4.77	<5.83	<6.54	***605***	***1,400***	**7.04**	
PWK-017C	**10/14/2003**		8.5-9.5	9.5	Above	***96.1***	***35.1***	<4.41	<5.38	<6.04	***606***	***3,430***	NS	
PWK-018	**10/8/2003**		8-9	NR	Above	<8.19	<5.13	<4.93	<6.02	<6.75	***1,900***	NS	NS	
PWK-019	**10/8/2003**		8-9	NR	Above	***81.1***	<4.85	<4.65	<5.68	<6.37	***45.8***	***323***	**20.6**	
PWK-020	**10/8/2003**		5.5-6.5	6.5	Above	<7.79	<4.88	<4.69	<5.72	<6.42	<10.3	<6.09	<6.09	
PWK-021	**10/8/2003**		5-6	NR	Above	<7.77	<4.87	<4.67	<5.71	<6.4	<10.3	***274***	**6.27**	
PWK-022	**10/8/2003**		5-6	6	Above	<7.62	<4.78	<4.59	<5.60	<6.28	<10.1	NS	NS	
PWK-024	**10/8/2003**		5-6	6	Above	<7.86	<4.93	<4.73	<5.78	<6.48	<10.4	NS	NS	
Preliminary Samples—Main Excavation Area—Removed during 2006 Excavation														
PEX-007	**7/6/2006**	Sidewall	8	16	Above	**29**	<0.95	<0.980	<1	<1.3	***59***	***1,500***	NS	Sidewall extended to PEX-011
PEX-012	**7/13/2006**	Sidewall	8	11	Above	***960***	<13	<13	<14	<18	***47***	***1,400***	NS	Sidewall extended to PEX-027
PEX-013	**7/13/2006**	Bottom	8	8	Above	***130***	<1.5	<1.5	<1.6	<2	**8.2**	**14**	NS	Dug deeper see PEX-028
PEX-020	**7/19/2006**	Sidewall	5	7.5	Above	**3.8**	<0.54	<0.55	<0.57	<0.73	<0.86	***100***	NS	Sidewall extended, see PEX-020-2
PEX-022	**7/19/2006**	Sidewall	4	6	Above	***330***	***21***	<2.3	<2.3	<3	***200***	***3,300***	NS	Sidewall extended to PEX-029
PEX-023	**7/21/2006**	Bottom	8	8	Above	***61***	<2.1	<2.1	<2.2	<2.9	***8.8***	***2,100***	NS	Dug deeper, see PEX-023-3

TABLE A.2i
Pre-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics
Samples Collected Prior to Remedial Action
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

						Constituent Name								
Sample No.	**Collection Date**	**Sample Location**	**Sample Depth (feet bgs)**	**Excavation Depth (feet bgs)**	**Sample Collected Near/above or below all time low water level (~15 feet)**	**bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)**	**Butylbenzyl phthalate (BBP) (mg/kg)**	**Diethyl phthalate (mg/kg)**	**Dimethyl phthalate (mg/kg)**	**Di-n-butyl phthalate (DBP) (mg/kg)**	**Di-n-octyl phthalate (DOP) (mg/kg)**	**Diesel Range Organics (DRO) (mg/kg)**	**Gasoline Range Organics (GRO) (mg/kg)**	**Comments**
RCL—Ingestion (The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA	NA	
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100	100	
Preliminary Samples—Main Excavation Area—Removed during 2006 Excavation, Continued														
PEX-023-2	**7/28/2006**	Bottom	11	11	Above	**13**	<0.22	<0.23	<0.24	<0.31	***9.5***	**87**	NS	Dug deeper, see PEX-023-3
PEX-026	**7/21/2006**	Sidewall	6	9	Above	**9.6**	<0.069	<0.071	<0.074	<0.095	**4**	***110***	NS	Sidewall extended, see PEX-026-2
PEX-032	**7/21/2006**	Sidewall	5.5	8	Above	**1.1**	<0.034	<0.035	<0.036	<0.047	**0.076**	***630***	NS	Sidewall extended, see PEX-038
PEX-037	**7/28/2006**	Bottom	10	10	Above	***2100***	<28	<29	<30	<39	<45	***1,900***	NS	Bottom sample below 4 feet, extended to groundwater table, see PEX-047
FR-006 (PEX-037)	**7/28/2006**	Bottom	10	10	Above	***2300***	<28	<29	<30	<38	<45	***1,700***	NS	Bottom sample below 4 feet, extended to groundwater table, see PEX-047
PEX-039	**7/28/2006**	Sidewall	4	10	Above	**2.4**	<0.037	<0.038	<0.039	<0.050	<0.059	***250***	NS	Sidewall extended, see PT-024-NSW-2, PEX-038 and PT-039-NSW

TABLE A.2i

Pre-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics

Samples Collected Prior to Remedial Action

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

						Constituent Name								
Sample No.	**Collection Date**	**Sample Location**	**Sample Depth (feet bgs)**	**Excavation Depth (feet bgs)**	**Sample Collected Near/above or below all time low water level (~15 feet)**	**bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)**	**Butylbenzyl phthalate (BBP) (mg/kg)**	**Diethyl phthalate (mg/kg)**	**Dimethyl phthalate (mg/kg)**	**Di-n-butyl phthalate (DBP) (mg/kg)**	**Di-n-octyl phthalate (DOP) (mg/kg)**	**Diesel Range Organics (DRO) (mg/kg)**	**Gasoline Range Organics (GRO) (mg/kg)**	**Comments**
RCL—Ingestion (The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA	NA	
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100	100	
Preliminary Samples—Pipe Trench Area Within 2006 Excavation (material excavated in 2006)														
PT09-BTM	**7/11/2006**	Bottom	2	2	Above	***160***	<1.4	<1.4	<1.5	<1.9	<2.2	**13**	NS	Extended excavation, see PT09-BTM-2
FR-003 (PT24-NSW)	**7/19/2006**	Sidewall	2.5	3.5	Above	***130***	<1.2	<1.2	<1.3	<1.7	<1.9	**34**	NS	extended Excavation, see PT-024-NSW-2
PT-033-SSW	**7/19/2006**	Sidewall	2.6	3.5	Above	***110***	<1.3	<1.3	<1.4	<1.8	<2.1	**64**	NS	Extended excavation all the way to PEX-051
Preliminary Samples—Old Tank Farm Area (Excavated in 2006)														
PEX-041	**7/28/2006**	Bottom	2	2	Above	***2,800***	<33	<34	<35	<46	<53	***2,700***	NS	Dug deeper, see PEX-056

Bold number = detection at that number's value

Italicized and bolded number = Exceeds groundwater pathway RCL (lowest RCL)

Exceeds Direct Contact pathway RCL

< = constituent not detected at the level of detection indicated

bgs = below ground surface

EB = Exploratory Boring

FR = Field replicate at location given

J = Estimated concentration detected at a value less than the level of detection

NA = Not Available

NR = Not Recorded

NS = Not Sampled/Analyzed for this Constituent

P = Prefix used for 2000 Direct Push Probe soil investigation inside Main Building

PWK = Prefix used for 2003 subsurface excavation inside Main Building

PEX = Prefix used for Old Tank Farm and Main Excavation Areas

PT = Prefix used for Pipe Trench Area

TP = Test Pit

mg/kg = milligrams per kilogram

RCL = Site Specific Residual Contaminant Levels originally submitted to WDNR in February 2004 (Soil Excavation Remedial Action Report)

TABLE A.2iv

Pre-remedial Soil Sample Results—Polychlorinated Biphenyls

January 2000 - Direct Push Samples Inside Former Building

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

				Constituent Name						
Sample No.	**Collection Date**	**Sample Depth (feet bgs)**	**Sample Collected Near/above or below all time low water level (~15 feet bgs)**	**Aroclor 1016**	**Aroclor 1221**	**Aroclor 1232**	**Aroclor 1242**	**Aroclor 1248**	**Aroclor 1254**	**Aroclor 1260**
Preliminary Direct-push Samples (excavated during 2003 or 2006)										
P12	1/25/2000	3.5-4.5	Above	<12	<12	<12	<12	<12	<12	<12

Bold number = detection at that number's value

bgs = below ground surface

< = constituent not detected at the level of detection indicated

TABLE A.3
Post-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics (mg/kg)
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Sample No.	Collection Date	Sample Location	Sample Depth (feet bgs)	Excavation Depth (feet bgs)	Sample Collected Near/Above or Below All-time Low Water Level (~15 feet bgs)	bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)	Butylbenzyl phthalate (BBP) (mg/kg)	Diethyl phthalate (mg/kg)	Dimethyl phthalate (mg/kg)	Di-n-butyl phthalate (DBP) (mg/kg)	Di-n-octyl phthalate (DOP) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)
RCL - Direct Contact (Ingestion - The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100
Final Samples—Main Building Area (Not excavated)												
PEX-001	**7/6/2006**	Bottom	8.5	8.5	Above	**4**	<0.075	<0.078	<0.080	<0.100	**7.5**	**10**
PEX-002	**7/6/2006**	Sidewall	5	8.5	Above	<0.034	<0.033	<0.034	<0.035	<0.045	<0.053	<3.3
PEX-003	**7/6/2006**	Sidewall	5	8.5	Above	**0.11**	<0.034	<0.035	<0.036	<0.046	<0.054	<3.6
PEX-004	**7/6/2006**	Sidewall	5	8.5	Above	<0.034	<0.033	<0.034	<0.036	<0.046	<0.054	<3.4
PEX-005	**7/6/2006**	Sidewall	5	8.5	Above	<0.035	<0.034	<0.036	<0.037	<0.047	<0.055	<3.6
PEX-006	**7/6/2006**	Bottom	15-16	16	Below	**8.8**	**0.96**	<0.068	<0.071	<0.091	**4.7**	<3.2
PEX-008	**7/7/2006**	Sidewall	2.5	2.5	Above	**21**	<0.35	<0.36	<0.38	<0.48	<0.57	**31**
PEX-009	**7/13/2006**	Sidewall	7	9.5	Above	<0.038	<0.037	<0.038	<0.040	<0.051	<0.06	<4.6
PEX-010	**7/13/2006**	Bottom	9.5	9.5	Above	**4.1**	<0.039	<0.041	<0.042	<0.054	**1.3**	**4.6**
PEX-011	**7/13/2006**	Sidewall	7	10	Above	**0.25**	<0.038	<0.039	<0.040	<0.052	**0.18**	<3.8
PEX-014	**7/13/2006**	Sidewall	5	8	Above	<0.054	<0.053	<0.054	<0.056	<0.072	<0.085	<5.8
FR-001 (PEX-014)	**7/13/2006**	Sidewall	5	8	Above	<0.050	<0.049	<0.050	<0.052	<0.067	<0.078	<5.2
PEX-015	**7/13/2006**	Sidewall	3.5	5	Above	<0.055	<0.053	<0.055	<0.057	<0.073	<0.086	**54**
FR-002 (PEX-015)	**7/13/2006**	Sidewall	3.5	8	Above	<0.054	<0.053	<0.055	<0.056	<0.073	<0.085	**12**
PEX-016	**7/13/2006**	Bottom	5	5	Above	**3.6**	**0.42**	<0.038	<0.040	<0.051	**0.44**	**18**
PEX-017	**7/13/2006**	Sidewall	5	8	Above	<0.040	<0.039	<0.040	<0.042	<0.054	<0.063	<3.9
PEX-018	**7/19/2006**	Sidewall	8	12	Above	**0.086**	<0.038	<0.039	<0.041	<0.052	<0.061	<4.1
PEX-019	**7/19/2006**	Sidewall	6	9	Above	**0.59**	<0.043	<0.044	<0.045	<0.058	**0.34**	<4.5
PEX-020-2	**7/28/2006**	Sidewall	4	7.5	Above	<0.038	<0.037	<0.038	<0.039	<0.050	<0.059	<3.8
PEX-021	**7/19/2006**	Sidewall	5	7.5	Above	**0.2**	<0.057	<0.059	<0.061	<0.078	<0.092	<6.1
PEX-023-3	**8/2/2006**	Bottom	13	13	Above	**16**	<0.28	<0.28	<0.29	<0.38	**8**	**25**
PEX-024	**7/21/2006**	Bottom	7	7	Above	**0.073**	<0.037	<0.038	<0.039	<0.05	**0.14**	<3.8
FR-004 (PEX-024)	**7/21/2006**	Bottom	7	7	Above	**0.079**	<0.037	<0.038	<0.039	<0.05	<0.059	<4
PEX-025	**7/21/2006**	Bottom	7	7	Above	<0.036	<0.035	<0.036	<0.038	<0.048	<0.057	<3.6
PEX-026-2	**7/28/2006**	Sidewall	4	15	Above	**0.078**	<0.039	<0.040	<0.041	<0.053	<0.062	<4.0
PEX-027	**7/21/2006**	Sidewall	10	15	Above	<0.038	<0.037	<0.038	<0.04	<0.051	<0.06	<4.5
FR-005 (PEX-027)	**7/21/2006**	Sidewall	10	15	Above	<0.038	<0.037	<0.038	<0.039	<0.05	<0.059	<3.7
PEX-028	**7/21/2006**	Bottom	11	11	Above	**19**	<0.23	<0.24	<0.24	<0.31	**6.9**	***280***
PEX-029	**7/21/2006**	Sidewall	5	7	Above	<0.058	<0.056	<0.058	<0.06	<0.077	<0.091	**6.6**
PEX-030	**7/21/2006**	Sidewall	5	7	Above	**0.32**	<0.037	<0.038	<0.039	<0.051	<0.059	<3.7
PEX-031	**7/21/2006**	Sidewall	5	7	Above	**0.066**	<0.037	<0.038	<0.039	<0.051	<0.059	<3.7
PEX-033	**7/21/2006**	Bottom	7	7	Above	**0.036**	<0.032	<0.033	<0.034	<0.044	<0.052	<3.1
PEX-038	**7/28/2006**	Sidewall	4	10	Above	**0.27**	<0.037	<0.038	<0.039	<0.050	<0.059	<4.2
PEX-047	**8/2/2006**	Sidewall	13	15	Above	**0.77**	<0.033	<0.034	<0.035	<0.045	<0.053	<3.7
PEX-040	**7/28/2006**	Sidewall	4	11	Above	**0.29**	<0.056	<0.057	<0.059	<0.076	<0.089	<5.8
PEX-046	**8/2/2006**	Sidewall	13	15	Above	**19**	**0.32**	<0.21	<0.22	<0.28	<0.33	**11**

TABLE A.3
Post-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics (mg/kg)
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Sample No.	Collection Date	Sample Location	Sample Depth (feet bgs)	Excavation Depth (feet bgs)	Sample Collected Near/Above or Below All-time Low Water Level (~15 feet bgs)	bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)	Butylbenzyl phthalate (BBP) (mg/kg)	Diethyl phthalate (mg/kg)	Dimethyl phthalate (mg/kg)	Di-n-butyl phthalate (DBP) (mg/kg)	Di-n-octyl phthalate (DOP) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)
RCL - Direct Contact (Ingestion - The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100
Final Samples—Pipe Trench Area (Not excavated)												
PT09-BTM-2	**7/19/2006**	Bottom	3.5	3.5	Above	**0.05**	<0.039	<0.04	<0.041	<0.053	<0.062	<4.0
PT09-SSW	**7/11/2006**	Sidewall	1.25	2	Above	**9**	<0.18	<0.19	<0.19	<0.25	<0.29	**83**
PT09-NSW	**7/11/2006**	Sidewall	1.25	2	Above	**0.23**	<0.037	<0.038	<0.039	<0.051	<0.059	**23**
PT18-SSW	**7/11/2006**	Sidewall	1.25	2	Above	**0.96**	<0.037	<0.038	<0.039	<0.050	<0.059	**6.9**
PT24-BTM	**7/19/2006**	Bottom	3.5	3.5	Above	**1**	<0.036	<0.037	<0.038	<0.049	<0.058	<3.7
PT24-NSW	**7/19/2006**	Sidewall	2.5	3.5	Above	**9.9**	<0.23	<0.24	<0.24	<0.31	<0.37	**24**
PT-024-NSW-2	**7/28/2006**	Sidewall	2.5	3.5	Above	**0.85**	<0.040	<0.041	<0.042	<0.054	<0.064	<3.9
PT-039-NSW	**7/19/2006**	Sidewall	2.5	3.5	Above	**5.6**	<0.033	<0.034	<0.035	<0.045	**0.14**	**34**
PT-039-BTM	**7/19/2006**	Bottom	3.5	3.5	Above	**6.6**	<0.07	<0.072	<0.075	<0.096	**0.12**	**14**
PT-048-SSW	**7/19/2006**	Sidewall	2.5	3.5	Above	**20**	<0.32	<0.33	<0.34	<0.44	**4.4**	**32**
PT-054-BTM	**7/19/2006**	Bottom	3.5	3.5	Above	**0.055**	<0.035	<0.036	<0.038	<0.048	<0.057	<3.5
PT-054-NSW	**7/19/2006**	Sidewall	2.5	3.5	Above	**12**	<0.17	<0.17	<0.18	<0.23	<0.27	**14.0**
Final Samples—Old Tank Farm Area (Not excavated)												
PEX-044	**8/2/2006**	Sidewall	2	5	Above	<0.04	<0.039	<0.04	<0.041	<0.053	<0.062	<0.38
PEX-045	**8/2/2006**	Sidewall	4	5	Above	<0.033	<0.033	<0.034	<0.035	<0.045	<0.052	<3.4
PEX-048	**8/2/2006**	Sidewall	3	4.5	Above	<0.037	<0.036	<0.038	<0.039	<0.050	<0.059	<3.8
PEX-049	**8/2/2006**	Sidewall	2.5	2.5	Above	<0.038	<0.037	<0.038	<0.039	<0.050	<0.059	<3.7
PEX-050	**8/2/2006**	Sidewall	2	3	Above	**4**	<0.036	<0.038	<0.039	<0.050	<0.059	<3.5
PEX-051	**8/2/2006**	Sidewall	1	1	Above	<0.035	<0.034	<0.035	<0.036	<0.047	<0.055	<3.6
PEX-052	**8/2/2006**	Bottom	3	3	Above	**1.6**	<0.032	<0.033	<0.034	<0.044	<0.051	<3.3
FR-007 (PEX-052)	**8/2/2006**	Bottom	3	3	Above	**7.4**	<0.16	<0.16	<0.17	<0.22	<0.26	<3.4
PEX-053	**8/2/2006**	Bottom	2	2	Above	<0.033	<0.032	<0.033	<0.034	<0.044	<0.051	<3.5
PEX-054	**8/2/2006**	Bottom	2	2	Above	<0.035	<0.034	<0.035	<0.036	<0.046	<0.054	<3.7
PEX-055	**8/2/2006**	Bottom	2	2	Above	**1.8**	<0.033	<0.034	<0.035	<0.045	<0.052	<3.4
PEX-034	**7/28/2006**	Bottom	2.5	2.5	Above	<0.037	<0.036	<0.037	<0.039	<0.050	<0.059	<3.7
PEX-035	**7/28/2006**	Bottom	2	2	Above	**0.34**	**<0.038**	<0.039	<0.04	<0.052	**0.28**	<4.1
PEX-036	**7/28/2006**	Bottom	2.5	2.5	Above	<0.036	<0.035	<0.036	<0.037	<0.048	<0.056	<4.4
PEX-056	**8/2/2006**	Bottom	3	3	Above	**0.11**	<0.032	<0.033	<0.034	<0.044	<0.051	<3.5
FR-008 (PEX-056)	**8/2/2006**	Bottom	3	3	Above	**1.1**	<0.032	<0.033	<0.034	<0.043	<0.051	<4.0
PEX-042	**7/28/2006**	Bottom	3	3	Above	**0.12**	<0.032	<0.033	<0.034	<0.044	<0.052	<3.3
PEX-043	**7/28/2006**	Sidewall	2	3	Above	**0.47**	<0.033	<0.034	<0.035	<0.045	<0.052	<3.2
Test Pits (Exploratory locations, unsaturated soil samples)												
TP03-05	**7/11/2006**	Bottom	5	15	Above	<0.038	<0.037	<0.038	<0.039	<0.050	<0.059	<4.7
TP03-10	**7/11/2006**	Bottom	10	15	Above	**0.21**	<0.035	<0.036	<0.038	<0.048	**0.088**	<4.5
TP04-05	**7/11/2006**	Bottom	5	15	Above	**0.83**	**0.15**	<0.37	<0.38	<0.49	**0.42**	**5.1**
TP04-10	**7/11/2006**	Bottom	10	15	Above	<0.038	<0.037	<0.039	<0.040	<0.051	<0.060	<4.7

TABLE A.3
Post-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics (mg/kg)
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Sample No.	Collection Date	Sample Location	Sample Depth (feet bgs)	Excavation Depth (feet bgs)	Sample Collected Near/Above or Below All-time Low Water Level (~15 feet bgs)	bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)	Butylbenzyl phthalate (BBP) (mg/kg)	Diethyl phthalate (mg/kg)	Dimethyl phthalate (mg/kg)	Di-n-butyl phthalate (DBP) (mg/kg)	Di-n-octyl phthalate (DOP) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)
RCL - Direct Contact (Ingestion - The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100
Test Pits (Exploratory Locationcs, saturated soil samples—represent groundwater conditions)												
TP1-15	**7/7/2006**	Bottom	15	15	Below	<0.035	<0.034	<0.035	<0.036	<0.046	<0.054	<3.8
TP2-15	**7/7/2006**	Bottom	15	15	Below	***840***	***90***	<21	<22	<28	***340***	***380***
TP03-15	**7/11/2006**	Bottom	15	15	Below	***66***	**1**	<0.58	<0.61	<0.78	***28***	***440***
TP04-15	**7/11/2006**	Bottom	15	15	Below	***98***	**15**	<2.1	<2.2	<2.8	***42***	***1,000***

Bold number = detection at that number's value
Italicized and bolded number = Exceeds groundwater pathway RCL (lowest RCL)
Exceeds Direct Contact pathway RCL
bgs = below ground surface
FR = Field replicate at location given
TP = Test Pit
P = Prefix used for 2000 Direct Push Probe soil investigation inside Main Building
PWK = Prefix used for 2003 subsurface excavation inside Main Building
PEX = Prefix used for Old Tank Farm and Main Excavation Areas
PT = Prefix used for Pipe Trench Area
NS = Not Sampled/analyzed for this constituent
NA = Not Available
< = constituent not detected at the level of detection indicated
mg/kg = milligram per kilogram
RCL = Site Specific Residual Contaminant Levels originally submitted to WDNR in February 2004 (Soil Excavation Remedial Action Report)

TABLE A.4
Pre- and Post-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics Exceeding RCLs
Soil Samples Collected Prior to Remedial Action
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

						Chemical Name								
Sample No.	Collection Date	Sample Location	Sample Depth (feet bgs)	Excavation Depth (feet bgs)	Sample Collected Near/above or below all time low water level (~15 feet bgs)	bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)	Butylbenzyl phthalate (BBP) (mg/kg)	Diethyl phthalate (mg/kg)	Dimethyl phthalate (mg/kg)	Di-n-butyl phthalate (DBP) (mg/kg)	Di-n-octyl phthalate (DOP) (mg/kg)	Diesel Range Organics (DRO) (mg/kg)	Gasoline Range Organics (GRO) (mg/kg)	Comments
RCL—Ingestion (The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA	NA	
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100	100	
Preliminary Samples—Geoprobe Investigation—2000 (removed during 2003 or 2006 excavation)														
P2	**1/25/2000**		0.5-1.5	EB	Above	***72 J***	**1.9**	<0.38	<0.38	<0.38	***10***	NS	NS	
P3	**1/25/2000**		0.5-1.5	EB	Above	***960 J***	<3.75	<3.75	<3.75	<3.75	***2,300 J***	NS	NS	
P3	**1/25/2000**		7.5-8.5	EB	Above	**2.8**	**4**	<2.01	<2.01	<2.01	***420 J***	NS	NS	
P3E	**1/25/2000**		0.5-1.0	EB	Above	***69 J***	***25 J***	<0.40	<0.40	<0.40	***160 J***	NS	NS	
P3W	**1/25/2000**		0.5-1.0	EB	Above	***52 J***	**4.2**	<0.42	<0.42	<0.42	***29 J***	NS	NS	
P4	**1/25/2000**		0.5-1.0	EB	Above	***67 J***	**14**	<0.38	<0.38	**0.56**	***220 J***	NS	NS	
P4	**1/25/2000**		6.0-6.5	EB	Above	**14**	**3.8**	<0.39	<0.39	<0.39	***97 J***	NS	NS	
P5	**1/25/2000**		0.5-1.0	EB	Above	***140 J***	***73 J***	<0.39	<0.39	**0.4**	***110 J***	NS	NS	
P5	**1/25/2000**		5.5-6.0	EB	Above	***120 J***	***140 J***	<0.38	<0.38	<0.38	***73 J***	NS	NS	
P6	**1/25/2000**		0.5-1.0	EB	Above	***150 J***	***110 J***	<0.35	<0.35	**1.1**	***48 J***	NS	NS	
P7	**1/25/2000**		0.5-1.0	EB	Above	**21**	***550 J***	<1.8	<1.8	***55***	***840 J***	NS	NS	
P7A	**1/25/2000**		1.5-2.5	EB	Above	**5.3**	**12**	<0.39	<0.39	<0.39	***130 J***	NS	NS	
P9	**1/25/2000**		1.2-1.7	EB	Above	***71 J***	***25 J***	<0.41	<0.41	<0.41	<0.41	NS	NS	
P10	**1/25/2000**		1.2-1.7	EB	Above	***210 J***	***33 J***	<0.40	<0.40	<0.40	***33 J***	NS	NS	
P13	**1/25/2000**		3.5-4.5	EB	Above	**17**	<0.39	<0.39	<0.39	<0.39	***53 J***	NS	NS	
P14	**1/25/2000**		3.0-3.5	EB	Above	***180 J***	***65 J***	<0.41	<0.41	<0.41	***150 J***	NS	NS	
P16	**1/25/2000**		0.5-1.0	EB	Above	***120 J***	<0.37	<0.37	<0.37	<0.37	***64 J***	NS	NS	
Preliminary Samples—Supporting 2003 Excavation (removed during 2003 or 2006 excavation)														
PWK-001	**10/7/2003**		8-9	9	Above	***47.6***	**0.26**	<0.023	<0.028	<0.031	***51.1***	NS	NS	
PWK-002	**10/7/2003**		8-9	9	Above	***262***	**3.52**	<0.023	<0.028	<0.032	***197***	NS	NS	
PWK-002-C	**10/14/2003**		9-10	10	Above	***67.9***	<4.91	<4.72	<5.76	<6.46	***105***	***2,660***	NS	
PWK-003	**10/7/2003**		8-9	9	Above	***70.9***	<11.5	<11.0	<13.4	<15.1	***103***	***931***	<5.71	
PWK-003-C	**10/14/2003**		9-10	10	Above	***58.9***	<4.67	<4.49	<5.48	<6.14	***159***	NS	NS	
PWK-004	**10/7/2003**		6-7	10	Above	***528***	<12.5	<12.0	<14.7	<16.4	***436***	***941***	<6.04	
PWK004-C	**10/14/2003**		9-10	10	Above	**33**	<4.79	<4.61	<5.62	<6.31	***58.5***	NS	NS	
PWK-005 (dup of 004)	**10/7/2003**		6-7	10	Above	***613***	<12.3	<11.8	<14.4	<16.2	***489***	***477***	<6.11	
PWK-006	**10/7/2003**		8-9	10	Above	***94.4***	<0.025	<0.024	<0.029	<0.033	***177***	NS	NS	
PWK-010	**10/7/2003**		6-7	7	Above	**15.7**	<0.025	<0.024	<0.029	<0.032	***29.1***	NS	NS	
PWK-017	**10/8/2003**		8.5-9.5	9.5	Above	<7.93	<4.97	<4.77	<5.83	<6.54	***605***	***1,400***	**7.04**	
PWK-017C	**10/14/2003**		8.5-9.5	9.5	Above	***96.1***	***35.1***	<4.41	<5.38	<6.04	***606***	***3,430***	NS	
PWK-018	**10/8/2003**		8-9	NR	Above	<8.19	<5.13	<4.93	<6.02	<6.75	***1,900***	NS	NS	
PWK-019	**10/8/2003**		8-9	NR	Above	***81.1***	<4.85	<4.65	<5.68	<6.37	***45.8***	***323***	**20.6**	
PWK-021	**10/8/2003**		5-6	NR	Above	<7.77	<4.87	<4.67	<5.71	<6.4	<10.3	***274***	**6.27**	
Preliminary Samples—Main Excavation Area—(Removed during 2006 Excavation)														
PEX-007	**7/6/2006**	Sidewall	8	16	Above	**29**	<0.95	<0.980	<1	<1.3	***59***	***1,500***	NS	Sidewall extended to PEX-011
PEX-012	**7/13/2006**	Sidewall	8	11	Above	***960***	<13	<13	<14	<18	***47***	***1,400***	NS	Sidewall extended to PEX-027

TABLE A.4
Pre- and Post-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics Exceeding RCLs
Soil Samples Collected Prior to Remedial Action
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

						Chemical Name								
Sample No.	**Collection Date**	**Sample Location**	**Sample Depth (feet bgs)**	**Excavation Depth (feet bgs)**	**Sample Collected Near/above or below all time low water level (~15 feet bgs)**	**bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)**	**Butylbenzyl phthalate (BBP) (mg/kg)**	**Diethyl phthalate (mg/kg)**	**Dimethyl phthalate (mg/kg)**	**Di-n-butyl phthalate (DBP) (mg/kg)**	**Di-n-octyl phthalate (DOP) (mg/kg)**	**Diesel Range Organics (DRO) (mg/kg)**	**Gasoline Range Organics (GRO) (mg/kg)**	**Comments**
RCL—Ingestion (The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA	NA	
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100	100	
Preliminary Samples—Main Excavation Area—(Removed during 2006 Excavation), Continued														
PEX-013	**7/13/2006**	Bottom	8	8	Above	***130***	<1.5	<1.5	<1.6	<2	**8.2**	**14**	NS	Dug deeper see PEX-028
PEX-020	**7/19/2006**	Sidewall	5	7.5	Above	**3.8**	<0.54	<0.55	<0.57	<0.73	<0.86	***100***	NS	Sidewall extended, see PEX-020-2
PEX-022	**7/19/2006**	Sidewall	4	6	Above	***330***	***21***	<2.3	<2.3	<3	***200***	***3,300***	NS	Sidewall extended to PEX-029
PEX-023	**7/21/2006**	Bottom	8	8	Above	***61***	<2.1	<2.1	<2.2	<2.9	***8.8***	***2,100***	NS	Dug deeper, see PEX-023-3
PEX-023-2	**7/28/2006**	Bottom	11	11	Above	**13**	<0.22	<0.23	<0.24	<0.31	***9.5***	**87**	NS	Dug deeper, see PEX-023-3
PEX-026	**7/21/2006**	Sidewall	6	9	Above	**9.6**	<0.069	<0.071	<0.074	<0.095	**4**	***110***	NS	Sidewall extended, see PEX-026-2
PEX-032	**7/21/2006**	Sidewall	5.5	8	Above	**1.1**	<0.034	<0.035	<0.036	<0.047	**0.076**	***630***	NS	Sidewall extended, see PEX-038
PEX-037	**7/28/2006**	Bottom	10	10	Above	***2,100***	<28	<29	<30	<39	<45	***1,900***	NS	Bottom sample below 4 feet, extended to groundwater table, see PEX-047
FR-006 (PEX-037)	**7/28/2006**	Bottom	10	10	Above	***2,300***	<28	<29	<30	<38	<45	***1,700***	NS	Bottom sample below 4 feet, extended to groundwater table, see PEX-047
PEX-039	**7/28/2006**	Sidewall	4	10	Above	**2.4**	<0.037	<0.038	<0.039	<0.050	<0.059	***250***	NS	Sidewall extended, see PT-024-NSW-2, PEX-038 and PT-039-NSW
Preliminary Samples—Pipe Trench Area Within 2006 Excavation (material excavated in 2006)														
PT09-BTM	**7/11/2006**	Bottom	2	2	Above	***160***	<1.4	<1.4	<1.5	<1.9	<2.2	**13**	NS	Extended excavation, see PT09-BTM-2
FR-003 (PT24-NSW)	**7/19/2006**	Sidewall	2.5	3.5	Above	***130***	<1.2	<1.2	<1.3	<1.7	<1.9	**34**	NS	Extended excavation, see PT-024-NSW-2
PT-033-SSW	**7/19/2006**	Sidewall	2.6	3.5	Above	***110***	<1.3	<1.3	<1.4	<1.8	<2.1	**64**	NS	Extended excavation all the way to PEX-051

TABLE A.4
Pre- and Post-remedial Soil Sample Results—Phthalates and Diesel/Gasoline Range Organics Exceeding RCLs
Soil Samples Collected Prior to Remedial Action
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

						Chemical Name								
Sample No.	**Collection Date**	**Sample Location**	**Sample Depth (feet bgs)**	**Excavation Depth (feet bgs)**	**Sample Collected Near/above or below all time low water level (~15 feet bgs)**	**bis(2-Ethyl hexyl) phthalate (DEHP) (mg/kg)**	**Butylbenzyl phthalate (BBP) (mg/kg)**	**Diethyl phthalate (mg/kg)**	**Dimethyl phthalate (mg/kg)**	**Di-n-butyl phthalate (DBP) (mg/kg)**	**Di-n-octyl phthalate (DOP) (mg/kg)**	**Diesel Range Organics (DRO) (mg/kg)**	**Gasoline Range Organics (GRO) (mg/kg)**	**Comments**
RCL—Ingestion (The conservative direct contact value)						204	204,000	NA	NA	102,000	40,090	NA	NA	
RCL—Groundwater Protection						45	31	NA	NA	13.6	8.3	100	100	
Preliminary Samples—Old Tank Farm Area (Excavated in 2006)														
PEX-041	**7/28/2006**	Bottom	2	2	Above	***2,800***	<33	<34	<35	<46	<53	***2,700***	NS	Dug deeper, see PEX-056
Final Samples—Main Building Area (Not excavated)														
PEX-028	**7/21/2006**	Bottom	11	11	Above	**19**	<0.23	<0.24	<0.24	<0.31	**6.9**	***280***	NS	Only DRO exceeds GW RCL
Test Pits (Exploratory locations indicating material at depth is affected from groundwater only outside main excavation areas)														
TP2-15	**7/7/2006**	Bottom	15	15	Below	***840***	***90***	<21	<22	<28	***340***	***380***	NS	Below 4 feet, at water table
TP03-15	**7/11/2006**	Bottom	15	15	Below	***66***	**1**	<0.58	<0.61	<0.78	***28***	***440***	NS	At water table
TP04-15	**7/11/2006**	Bottom	15	15	Below	***98***	**15**	<2.1	<2.2	<2.8	***42***	***1,000***	NS	At water table

Bold number = detection at that number's value
Italicized and bolded number = Exceeds groundwater pathway RCL (lowest RCL)
Exceeds Direct Contact pathway RCL
< = constituent not detected at the level of detection indicated
bgs = below ground surface
EB = Exploratory Boring Not associated with an excavation; material excavated later
FR = Field replicate at location given
J = Constituent detected at an estimated concentration less than the limit of detection
TP = Test Pit
P = Prefix used for 2000 Direct-push Probe soil investigation inside Main Building
PWK = Prefix used for 2003 subsurface excavation inside Main Building
PEX = Prefix used for Old Tank Farm and Main Excavation Areas
PT = Prefix used for Pipe Trench Area
NA = Not Available
NS = Not Sampled/analyzed for this constituent
NR = Not Recorded
mg/kg = milligram per kilogram
RCL = Site Specific Residual Contaminant Levels originally submitted to WDNR in February 2004 (Soil Excavation Remedial Action Report)

TABLE A.5
Vapor Analytical Table
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Analysis of vapor was not applicable to the site-related constituents (phthalates and/or DRO) and therefore vapor samples were not collected at this project site.

TABLE A.6

Other Media—Summary of LNAPL Thickness Recorded at MW-04

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Date LNAPL Thickness Recorded	LNAPL Thickness (feet)	Comment(s)
10/22/12	NM	LNAPL thickness not measured prior to sampling event; LNAPL absorbent recovery sock #12 installed
10/05/12	0.61	LNAPL thickness stabilized between 0.60 and 0.68 foot; water level below top of screen
09/22/12	0.68	LNAPL thickness appears to be stabilizing; water level below top of screen; water level in MW-04 at historical low
09/05/12	0.60	LNAPL thickness appears to be stabilizing; water level below top of screen
08/22/12	0.62	LNAPL continues to thicken; water level below top of screen
08/08/12	0.18	LNAPL continues to thicken; water level below top of screen
07/25/12	0.10	LNAPL continues to thicken; water level below top of screen
07/11/12	0.02	LNAPL appears to be thickening; water level below top of screen; site water levels continue to drop
06/27/12	0.01	Thin film of LNAPL observed; water level below top of screen
05/31/12	~0	No product observed in MW-04; water level now below top of screen
04/25/12	~0	No product observed in MW-04; water level now below top of screen
03/08/12	~0	No product observed in MW-04; water level now below top of screen
02/01/12	~0	No product observed in MW-04; water level now below top of screen
11/10/11	~0	No product observed in MW-04; water level now below top of screen
09/23/11	<0.01	Thin film of LNAPL observed; water level below top of screen
08/26/11	<0.01	Thin film of LNAPL observed; water level below top of screen
07/31/11	~0	No product observed in MW-04; water level below top of screen
04/27/11	~0	No product observed in MW-04; water level above top of screen
03/17/11	0.01	Thickness following removal of LNAPL absorbent sock #11; approximately 20 oz. of water +
01/19/11	0.10	Water level below top of screen; NAPL recovery sock installed
11/03/10	~0	No product observed in MW-04; water level now below top of screen
09/01/10	~0	No product observed in MW-04; water level now below top of screen
06/28/10	~0	No product observed in MW-04; water level now above top of screen
05/28/10	~0	Thickness following removal of LNAPL absorbent sock #10; approximately 18 oz. of water +
04/05/10	~0	Thickness immediately following April 2010 sampling event
03/22/10	~0	Thickness following removal of LNAPL absorbent sock #9; approximately 20 ounces of water +
02/05/10	~0	Thickness following removal of LNAPL absorbent sock #8; approximately 15 ounces of water +
12/01/09	0.01	Thickness following removal of LNAPL absorbent sock #7; approximately 17 ounces of water +
10/08/09	~0	Thickness following removal of LNAPL absorbent sock #6; approximately 17ounces of water +
08/25/09	~0	Thickness following removal of LNAPL absorbent sock #5; approximately 18 ounces of water +
07/22/09	0.005	Thickness following removal of LNAPL absorbent sock #4; approximately 6 ounces of water +

TABLE A.6

Other Media—Summary of LNAPL Thickness Recorded at MW-04

PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Date LNAPL Thickness Recorded	LNAPL Thickness (feet)	Comment(s)
06/24/09	0.005	Thickness following removal of LNAPL absorbent sock #3; approximately 16 ounces of water +
05/20/09	0.005	Thickness following removal of LNAPL absorbent sock #2; approximately 6 ounces of water +
04/30/09	~0	Thickness following removal of first LNAPL absorbent sock (installed 4/23/2009)
04/23/09	0.02	Thickness immediately following April 2009 sampling event
04/22/09	0.53	Thickness prior to April 2009 sampling event LNAPL removal
11/04/08	1.96	Thickness prior to November 2008 sampling event LNAPL removal
07/08/08	1.85	Water level below top of screen
04/09/08	~0	Thickness immediately following April 2008 sampling event
04/08/08	1.69	Thickness prior to April 2008 sampling event LNAPL removal
11/08/07	~0	Thickness immediately following 4th Quarter sampling event
11/07/07	1.49	Thickness prior to 4th Quarter sampling event LNAPL removal
10/26/07	1.54	LNAPL appears to be at a 'steady state' thickness
10/15/07	1.74	Water level below top of screen
08/22/07	0.95	Water level below top of screen
08/02/07	~0	Thickness immediately following 3rd Quarter sampling event
08/01/07	1.99	Thickness prior to 2007 3rd Quarter sampling event LNAPL removal
07/19/07	1.18	Water level below top of screen
07/06/07	0.52	Water level below top of screen
06/18/07	0.24	Water level below top of screen
06/01/07	~0	Thickness immediately following LNAPL characterization sampling and removal
05/30/07	1.44	Thickness prior to characterization sampling
05/03/07	1.62	Initial thickness measurement (2007 2nd Quarter sampling event)

LNAPL = Low Density Non Aqueous Phase Liquid

Note: LNAPL thickness presented in reverse chronological order.

TABLE A.7
Groundwater Elevation
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Well Designation	Northing	Easting	TOC Elev. (ft amsl)	Top of Screen elevation (ft amsl)	Ground Surface Elevation (ft amsl)	2/1/2007	3/9/2007	5/3/2007	8/1/2007	11/7/2007	4/8/2008	11/4/2008	4/22/2009
MW-01*	385310.62	2486745.98	860.08*	848.35	857.35	848.46	847.82	851.01	NM	849.63	850.94	849.93	851.89
MW-02	385476.64	2486734.91	859.16	846.72	856.72	848.24	847.93	850.72	NM	848.00	850.80	847.90	851.03
MW-03	385412.33	2486891.15	864.25	849.98	861.48	848.13	847.77	850.86	847.94	847.82	850.93	847.73	850.77
MW-04	385369.66	2486831.96	863.25	850.75	860.95	847.69	NM	NM	NM	NM	850.76**	845.99**	850.57**
MW-05	385203.76	2486796.83	863.80	852.80	860.80	845.01	843.78	848.21	844.50	846.07	848.15	847.46	849.96
TPZ-01	385538.19	2486696.16	858.60	844.70	855.59	848.29	847.97	850.63	848.40	848.01	850.71	847.91	851.00
TPZ-02	385550.06	2486784.71	860.48	845.87	857.53	848.21	847.89	850.71	848.16	847.83	850.78	847.71	850.90
ISB-MW05								3.94#	6.91#				
ISB-MW07								6.60#	9.65#				
					Feet above/below								
MW-01						0.11	-0.53	2.66		1.28	2.59	1.58	3.54
MW-02						1.52	1.21	4.00		1.28	4.08	1.18	4.31
MW-03						-1.85	-2.21	0.88	-2.04	-2.16	0.95	-2.25	0.79
MW-04						-3.06	NM	NM	NM	NM	0.01**	-4.76**	-0.18**
MW-05						-7.79	-9.02	-4.59	-8.30	-6.73	-4.65	-5.34	-2.84
TPZ-01						3.59	3.27	5.93	3.70	3.31	6.01	3.21	6.30
TPZ-02						2.34	2.02	4.84	2.29	1.96	4.91	1.84	5.03

TABLE A.7
Groundwater Elevation
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Well Designation	12/1/2009	4/5/2010	New TOC Elevation for MW-01	4/22/2011	7/31/2011	8/26/2011	9/23/2011	11/10/2011	2/1/2012	3/8/2012	4/25/2012	5/31/2012	6/27/2012
MW-01*	850.97	850.66	859.75	852.65	851.53	850.59	849.95	850.94	849.88	849.98	850.33	850.57	849.17
MW-02	849.36	849.51		852.21	849.65	848.28	847.93	850.06	849.00	849.82	849.76	849.69	848.63
MW-03	849.26	849.39		852.55	849.48	848.07	847.67	849.42	848.60	849.17	849.68	849.48	847.43
MW-04	NM	849.46		852.80	849.74	848.42**	847.96**	849.53	849.54	850.35	849.68	849.55	847.60**
MW-05	849.61	849.52		853.75	853.05	849.65	848.51	849.03	848.32	848.36	849.05	849.27	846.67
TPZ-01	849.35	849.47		851.96	849.62	848.28	847.97	850.27	849.19	850.15	849.75	849.74	847.63
TPZ-02	849.21	849.37		852.14	849.36	848.01	847.73	849.93	848.87	849.74	849.68	849.60	847.43
ISB-MW05													
ISB-MW07													
MW-01	2.62	2.31	4.30	4.30	3.18	2.24	1.60	2.59	1.53	1.63	1.98	2.22	0.82
MW-02	2.64	2.79	5.49	5.49	2.93	1.56	1.21	3.34	2.28	3.10	3.04	2.97	1.91
MW-03	-0.72	-0.59	2.57	2.57	-0.50	-1.91	-2.31	-0.56	-1.38	-0.81	-0.30	-0.50	-2.55
MW-04	NM	-1.29	2.05	2.05	-1.01	-2.33**	-2.79**	-1.22	-1.21	-0.40	-1.07	-1.20	-3.14**
MW-05	-3.19	-3.28	0.95	0.95	0.25	-3.15	-4.29	-3.77	-4.48	-4.44	-3.75	-3.53	-6.13
TPZ-01	4.65	4.77	7.26	7.26	4.92	3.58	3.27	5.57	4.49	5.45	5.05	5.04	2.93
TPZ-02	3.34	3.50	6.27	6.27	3.49	2.14	1.86	4.06	3.00	3.87	3.81	3.73	1.56

TABLE A.7
Groundwater Elevation
PolyOne, 21300 Doral Road, Waukesha, Wisconsin

Well Designation	7/11/2012	7/25/2012	8/8/2012	8/22/2012	9/5/2012	9/22/2012	10/5/2012	10/22/2012	1/24/2013	2/15/2013	3/23/2013
MW-01*	848.36	848.02	847.68	847.55	847.35	846.79	846.05	847.30	847.94	848.84	848.91
MW-02	846.68	846.37	846.11	846.42	846.59	845.67	845.02	847.35	848.05	849.23	849.23
MW-03	846.51	846.11	845.98	846.20	846.05	845.48	844.90	847.00	847.96	849.08	849.24
MW-04	846.52**	845.98**	845.67**	845.35**	845.11**	844.54**	844.59**	NM	847.78***	849.12***	849.30***
MW-05	845.33	844.86	844.40	844.08	843.54	843.29	DRY	843.34	845.48	845.72	845.79
TPZ-01	846.68	846.43	846.10	846.49	847.03	845.77	845.00	847.53	848.08	849.32	849.22
TPZ-02	846.52	846.20	845.98	846.29	846.47	845.56	844.94	847.31	848.02	849.22	849.24
ISB-MW05											
ISB-MW07											
MW-01	0.01	-0.33	-0.67	-0.80	-1.00	-1.56	-2.30	-1.05	-0.41	0.49	0.56
MW-02	-0.04	-0.35	-0.61	-0.30	-0.13	-1.05	-1.70	0.63	1.33	2.51	2.51
MW-03	-3.47	-3.87	-4.00	-3.78	-3.93	-4.50	-5.08	-2.98	-2.02	-0.90	-0.74
MW-04	-4.23**	-4.77**	-5.08**	-5.40**	-5.64**	-6.21**	-6.16**	NM	-2.97***	-1.63***	-1.45***
MW-05	-7.47	-7.94	-8.40	-8.72	-9.26	-9.51	-10.09	-9.46	-7.32	-7.08	-7.01
TPZ-01	1.98	1.73	1.40	1.79	2.33	1.07	0.30	2.83	3.38	4.62	4.52
TPZ-02	0.65	0.33	0.11	0.42	0.60	-0.31	-0.93	1.44	2.15	3.35	3.37

* The TOC Elevation for this well changed in April 2011 to 859.75 as the well casing had heaved upward and was required to be cut off
**LNAPL present; water level indicated affected by product
***LNAPL absorbtion sock in place. May not be able to determine the DTP.
# Well on neighboring property; elevation data not available
DRY = Well was dry; no measurement possible
NM = Not Measured
ft amsl = feet ablove mean sea level
TOC = Top of Casing (measuring point)

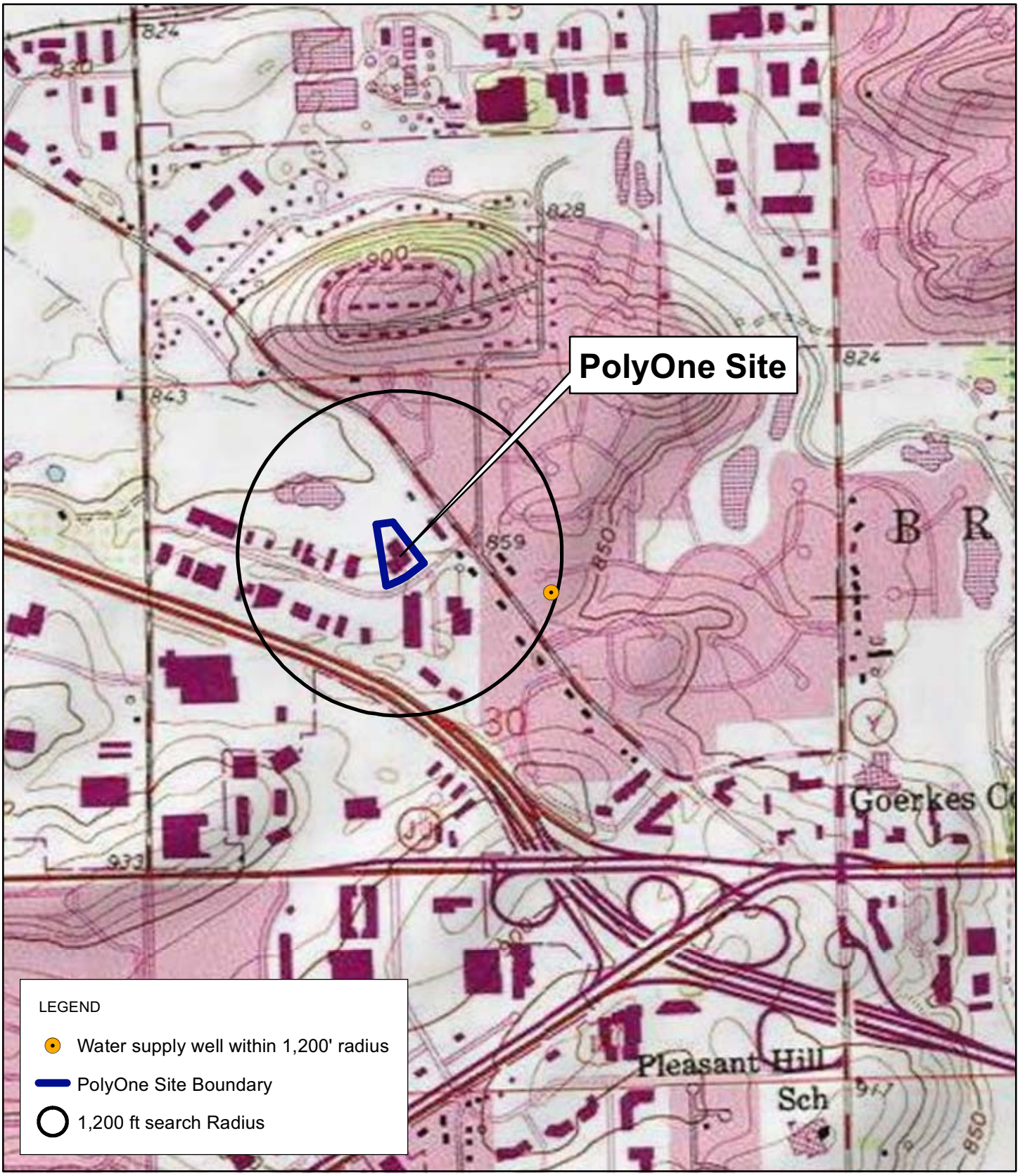
TABLE A.8

LNAPL Volume Recovery Tracking

PolyOne, 21300 Doral Road, Waukesha Wisconsin

Date	Approximate Volume of LNAPL Removed (Liters) from MW-04	Event Type
5/30/2007	0.8	Active removal (direct pumping)
6/1/2007	0.8	Active removal (direct pumping)
8/1/2007	4.4	Active removal (direct pumping)
11/7/2007	3.3	Active removal (direct pumping)
4/8/2008	2	Active removal (direct pumping)
11/4/2008	4.3	Active removal (direct pumping)
4/22/2009	2	Active removal (direct pumping)
5/20/2009	0.2	Passive removal (absorbent sock)
6/24/2009	0.5	Passive removal (absorbent sock)
7/22/2009	0.2	Passive removal (absorbent sock)
8/25/2009	0.5	Passive removal (absorbent sock)
10/8/2009	0.5	Passive removal (absorbent sock)
12/1/2009	0.5	Passive removal (absorbent sock)
2/5/2010	0.5	Passive removal (absorbent sock)
3/22/2010	0.6	Passive removal (absorbent sock)
5/28/2010	0.5	Passive removal (absorbent sock)
3/17/2011	0.6	Passive removal (absorbent sock)

Total LNAPL Removed = ~22 Liters

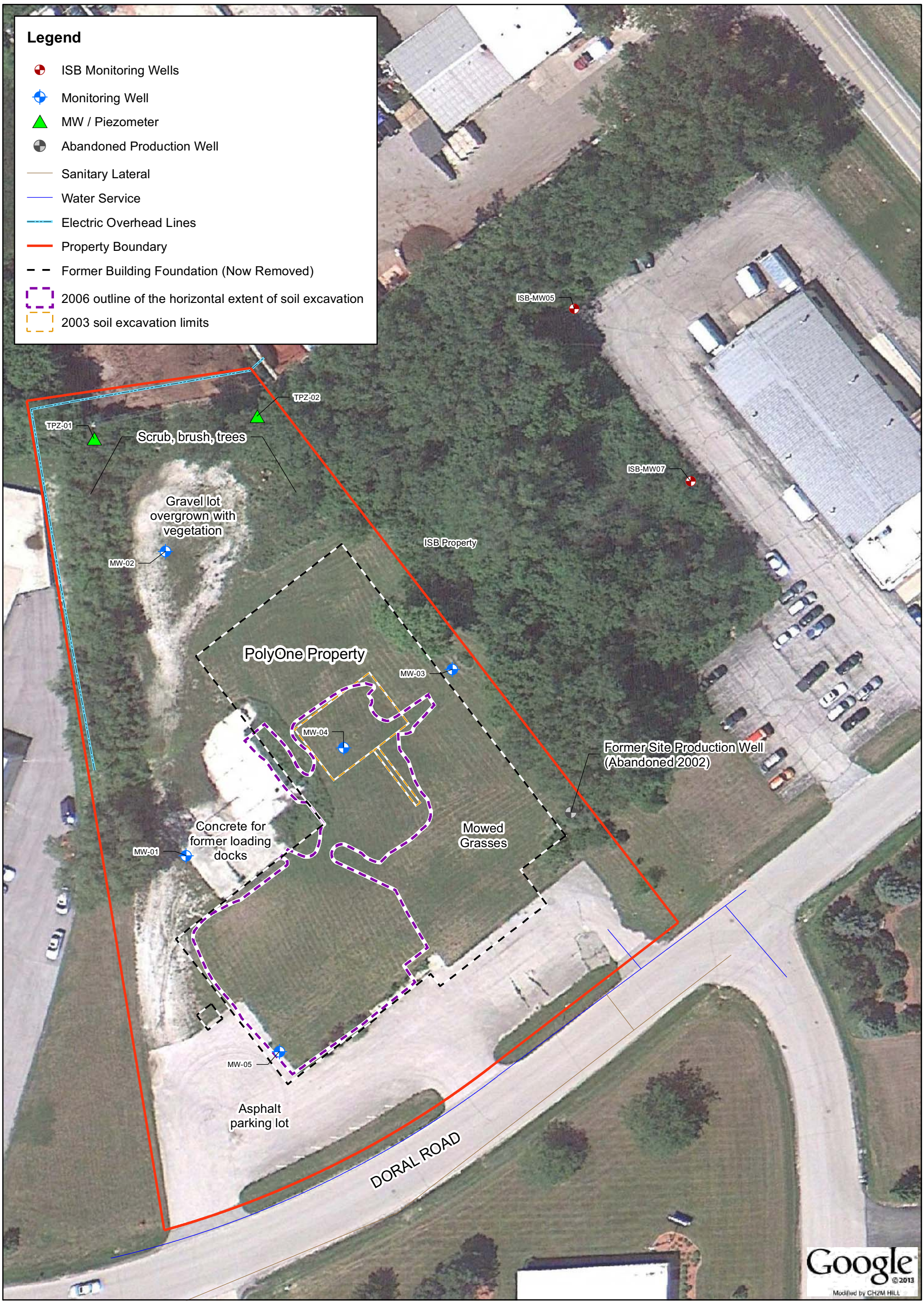


0 1,000 2,000
Feet

Note:
7.5 minute quadrangle named Waukesha with USGS Quad ID 43088-A2 was used as a base for this map.

FIGURE B.1a
Site Location Map
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL



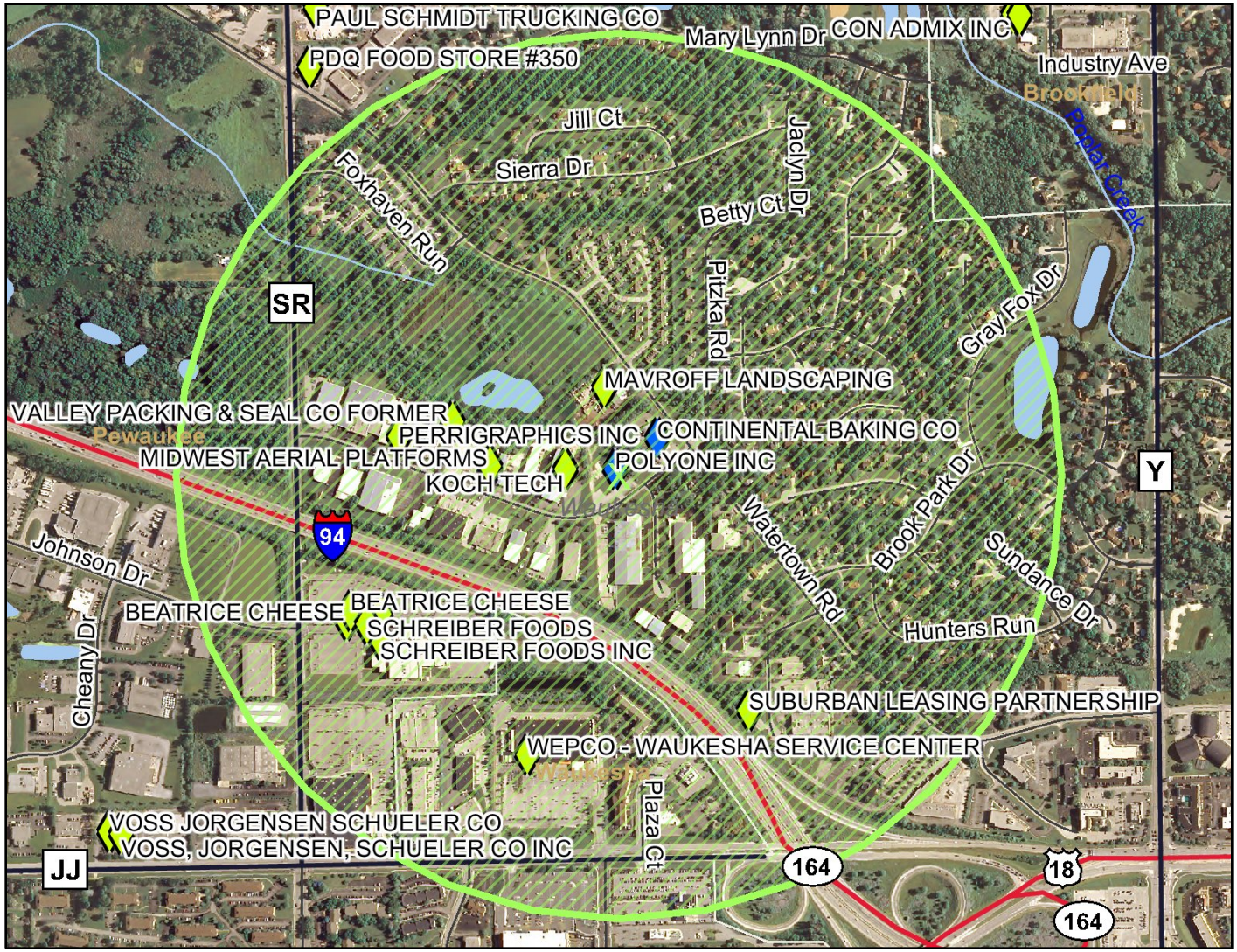
0 30 60
Feet

FIGURE B. 1b
Detailed Site Map
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

E:\POLYONE_WAUKESHA\GIS\MAPDOCS\2013_POLYONEWAUKESHA_CLOSUREPACKAGE\DRAFT_FINAL\FIGUREB.1B_DETAILEDSITEMAP.MXD MPETERSH 5/30/2013 7:45:45 AM

FIGURE B.1c: BRRTS Sites w/in Half-Mile Radius



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

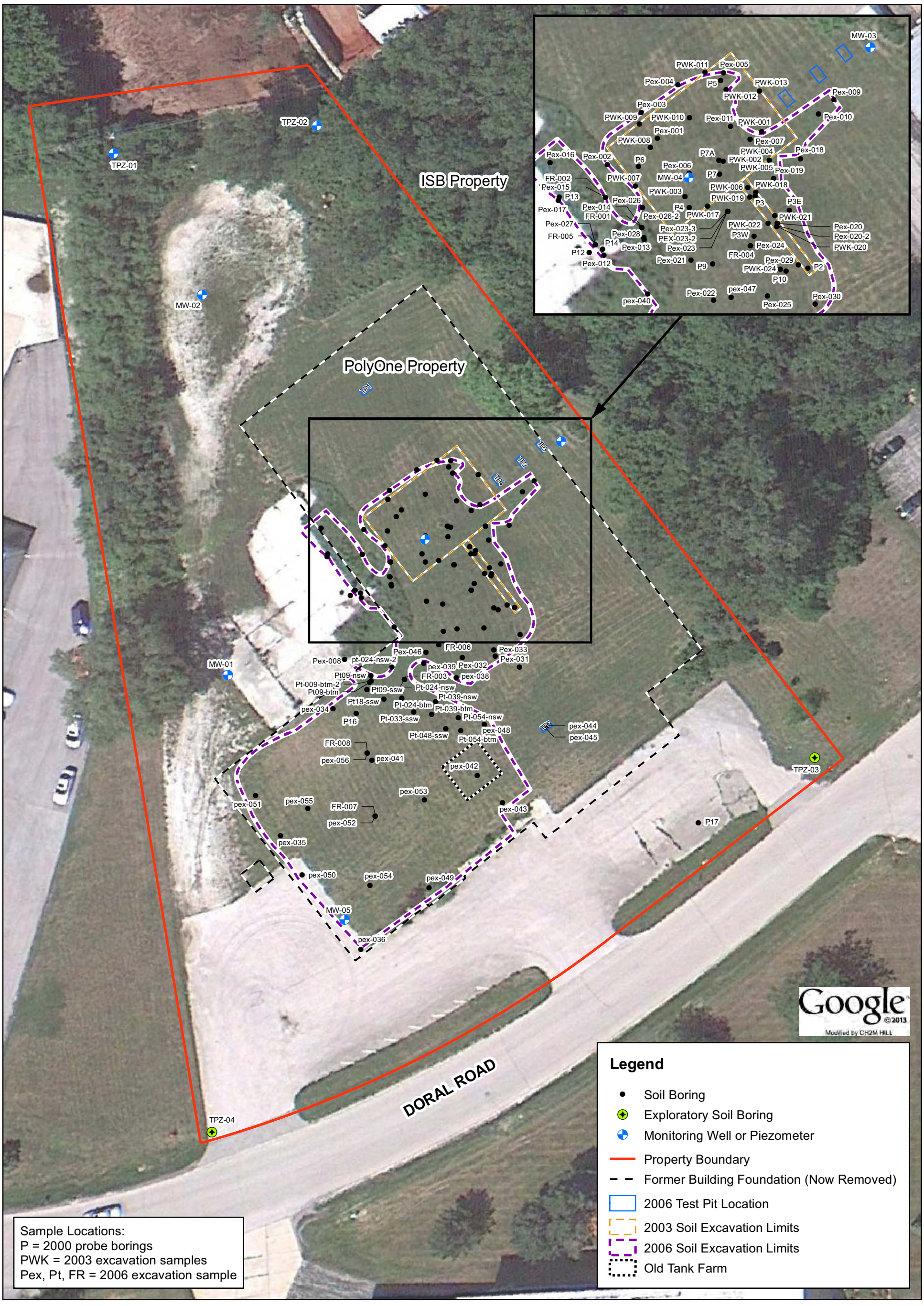
0 1200 2400 3600 ft.

Map created on Apr 5, 2013

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

Scale: 1:12,020

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



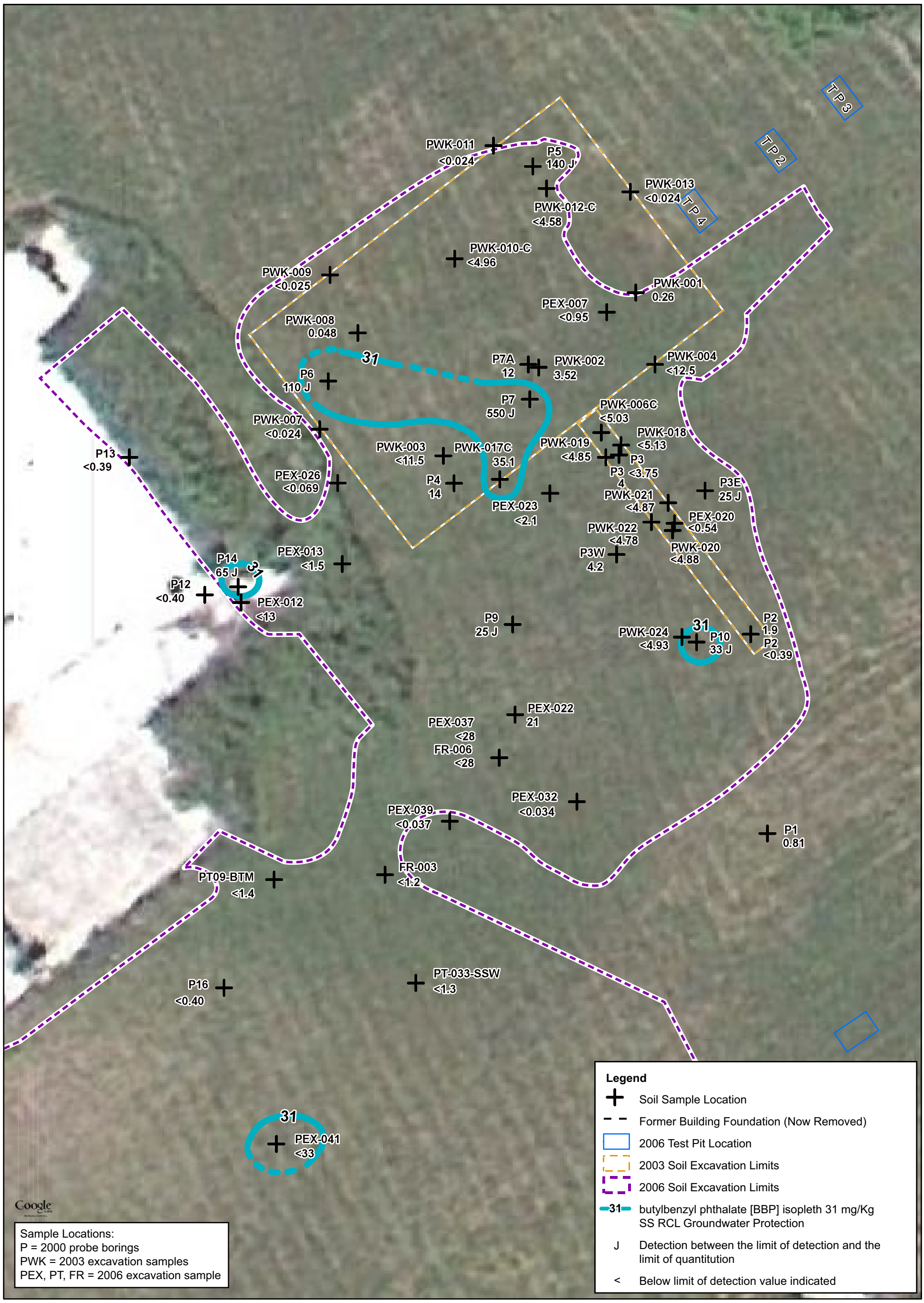
N

0 30 60
Feet

FIGURE B.2
Monitoring Wells, Piezometers, and Soil Boring Locations
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

E:\POLYONE_WAUKESHA\GIS\MAPDOCS\2013_POLYONEWAUKESHA_CLOSUREPACKAGE\DRAFT_FINAL\FIGUREB.2_SAMPLELOCATIONS.MXD MPETERSH 5/30/2013 7:50:00 AM



N

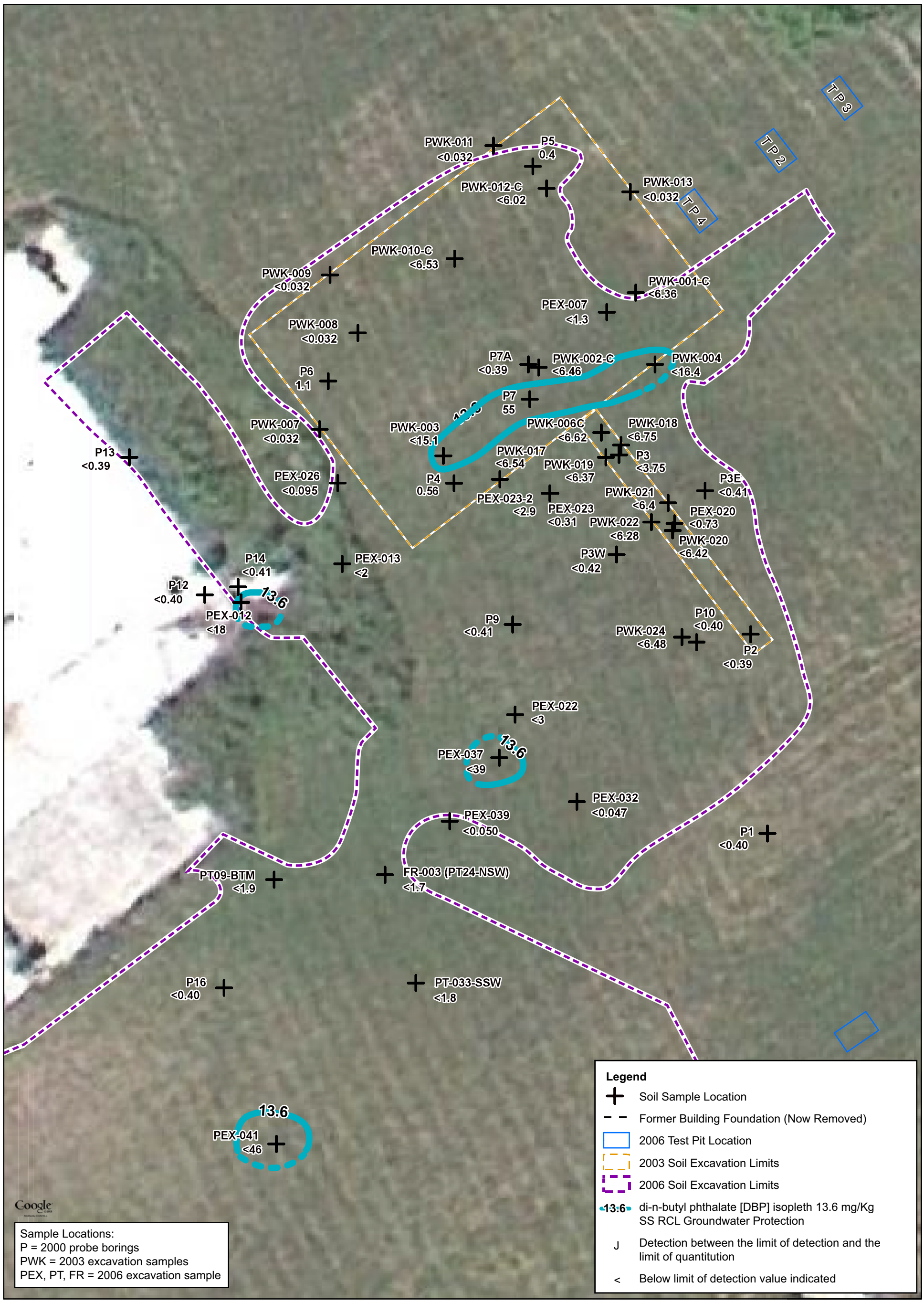
0 12 24
Feet

Note: Limit of detection (LOD) values that exceed the RCL are shown and treated as RCL exceedances

FIGURE B.2a.i
Pre-remedial BBP Soil Concentrations (mg/Kg)
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.2a.i_PreBBP_v4 05.29.13 sls

CH2MHILL



N

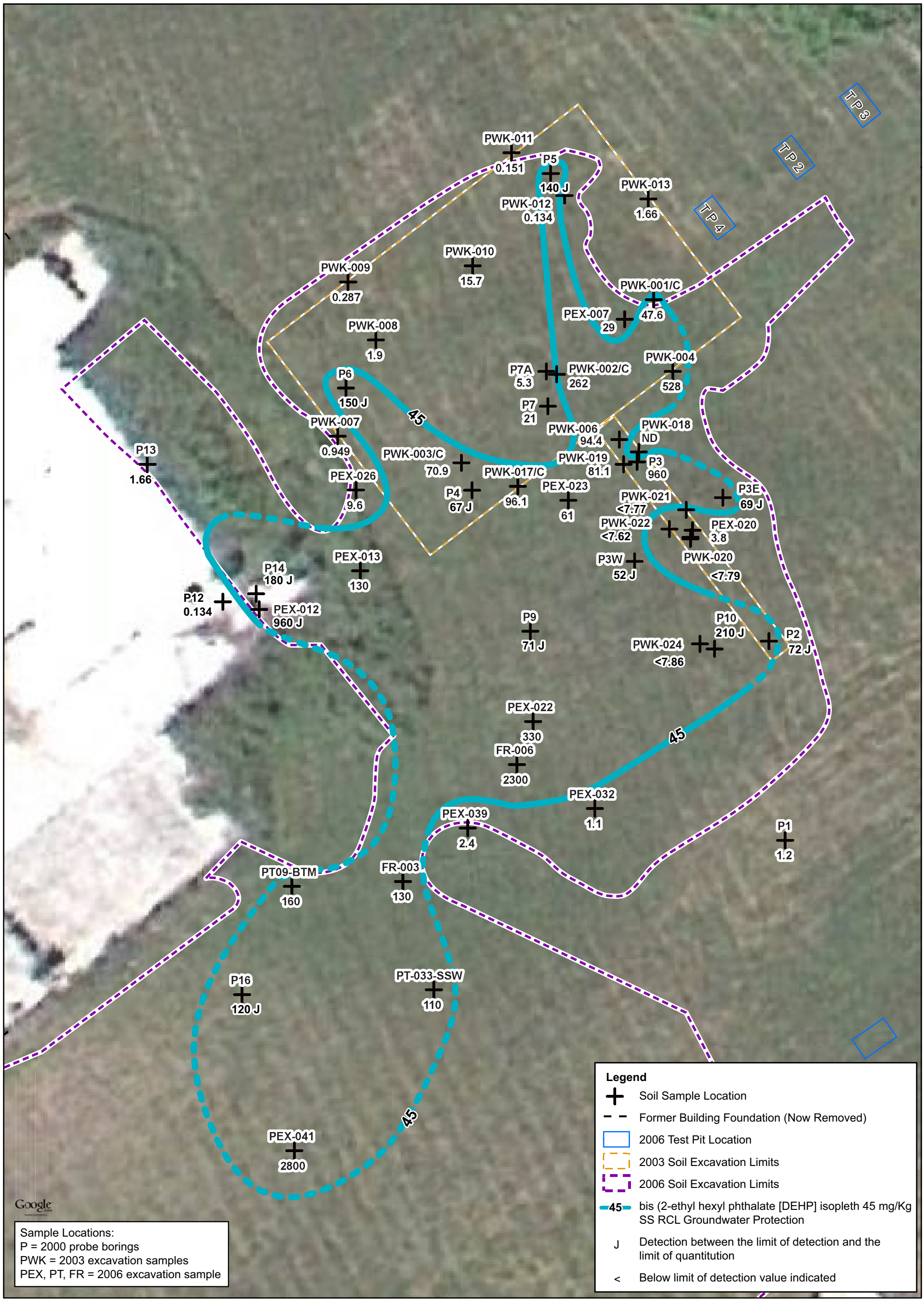
0 12 24
Feet

Note: Limit of detection (LOD) values that exceed the RCL are shown and treated as RCL exceedances

FIGURE B.2a.ii
Pre-remedial BP Soil Concentrations (mg/Kg)
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.2a.ii_Pre BP_v4 05.29.13 sls

CH2MHILL



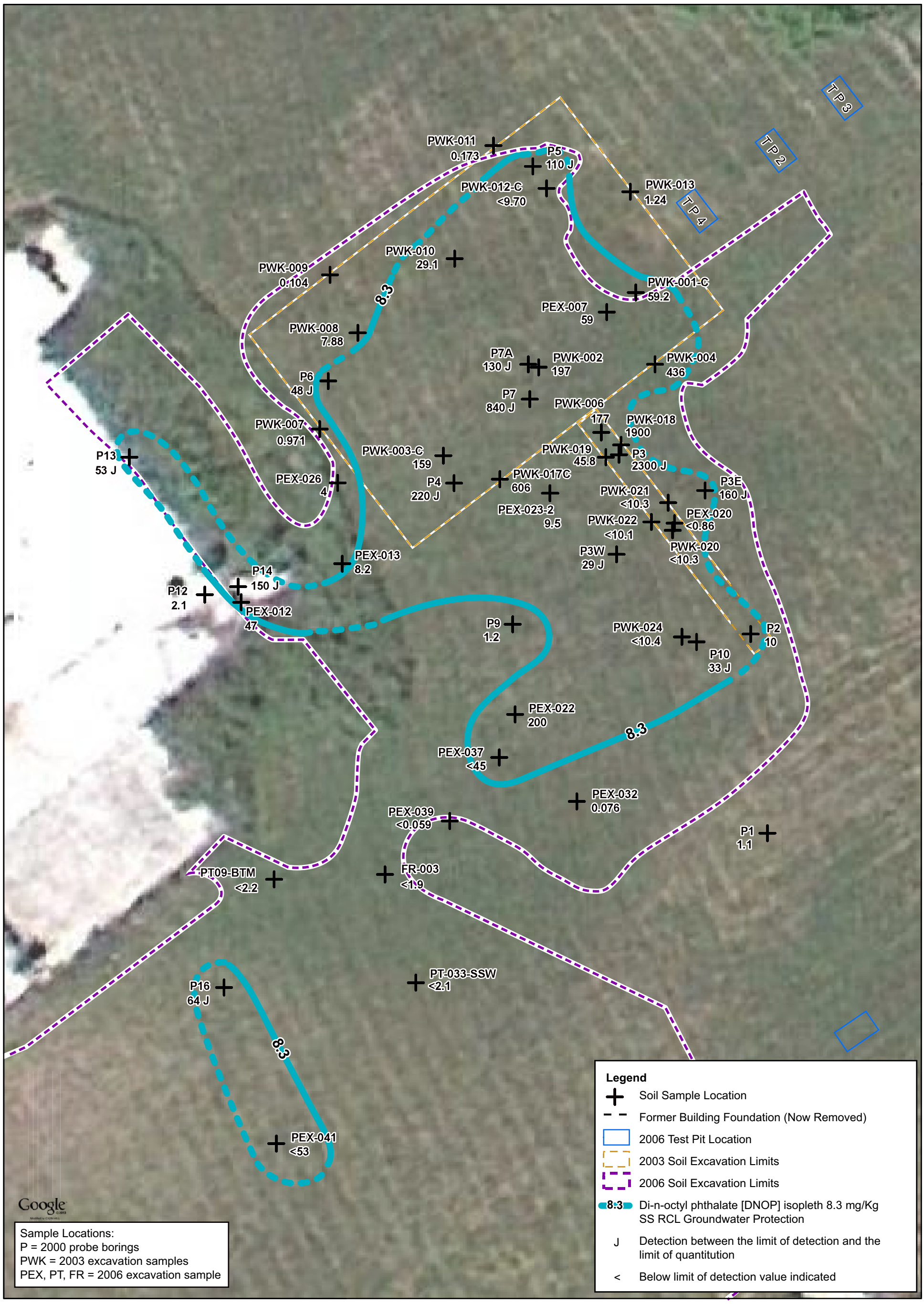
N

0 12 24
Feet

FIGURE B.2a.iii
Pre-remedial E P Soil Concentrations (mg/Kg)
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.2a.iii_Pre E P_v5 05.29.13 sls

CH2MHILL.



N

0 12 24
Feet

Note: Limit of detection (LOD) values that exceed the RCL are shown and treated as RCL exceedances

FIGURE B.2a.i
Pre-remedial OP Soil Concentrations (mg/Kg)
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.2a.iv_Pre OP_v4 05.29.13 sls

CH2MHILL.

N

0 12 24
Feet

Note: Limit of detection (LOD) values that exceed the RCL are shown and treated as RCL exceedances

FIGURE B.2a.
Pre-remedial O Soil Concentrations (mg/Kg)
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.2a.v_Pre O_v5 05.29.13 sls

CH2MHILL

Notes: Limit of detection (LOD) values that exceed the RCL are shown and treated as RCL exceedances

No phthalates exceeded RCL; only DRO results posted

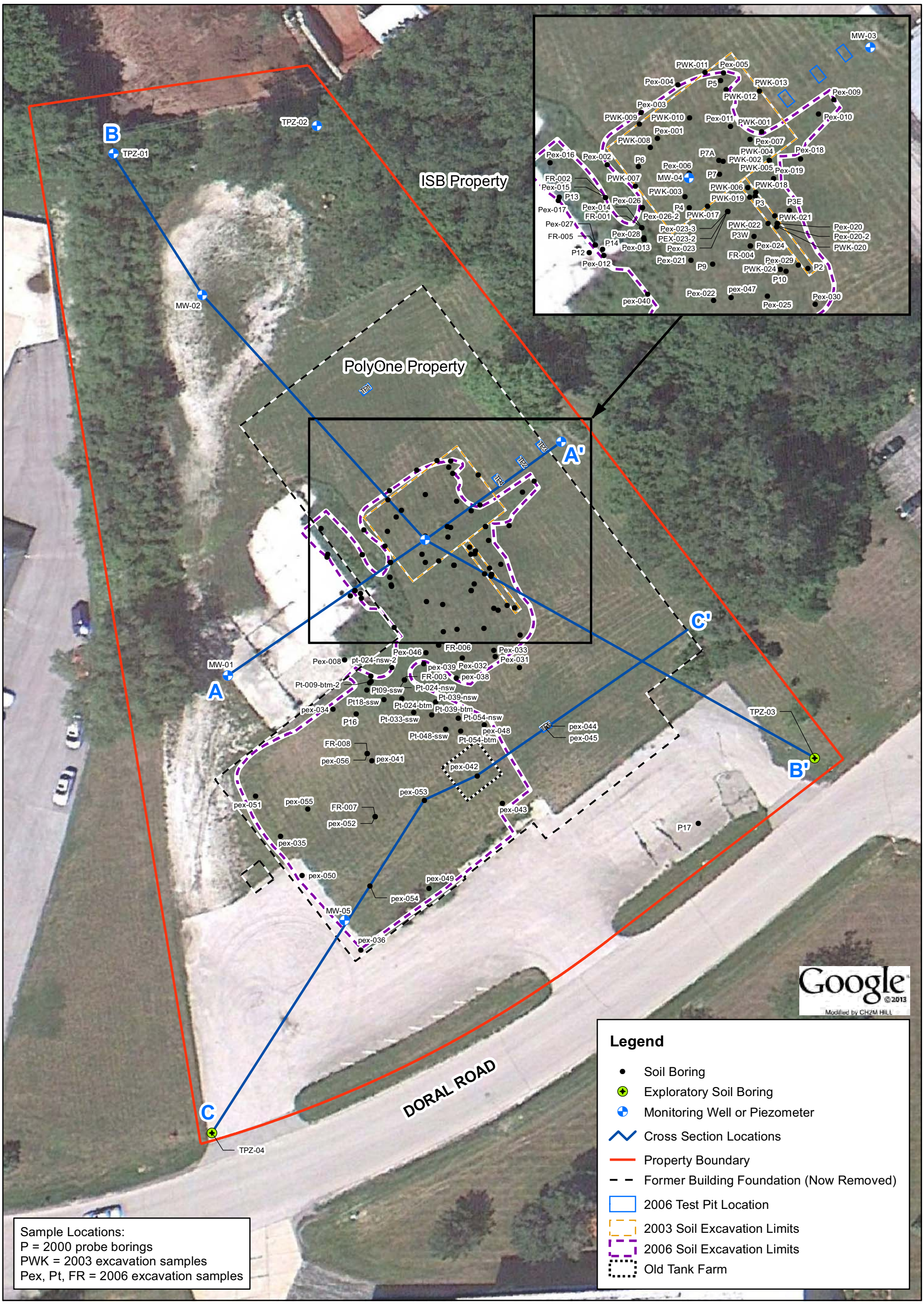
N

0 16 32
Feet

FIGURE B.2
Post emedial Soil Concentrations E ceeding C
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.2 _v3 05.29.13 sls

CH2MHILL



0 30 60
Feet
N

FIGURE B.3
Cross Section Location Map
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

E:\POLYONE_WAUKESHA\GIS\MAPDOCS\2013_POLYONEWAUKESHA_CLOSUREPACKAGE\DRAFT_FINAL\FIGUREB.3_CROSSSECTIONLOCATIONMAP.MXD MPETERSH 5/30/2013 7:53:08 AM

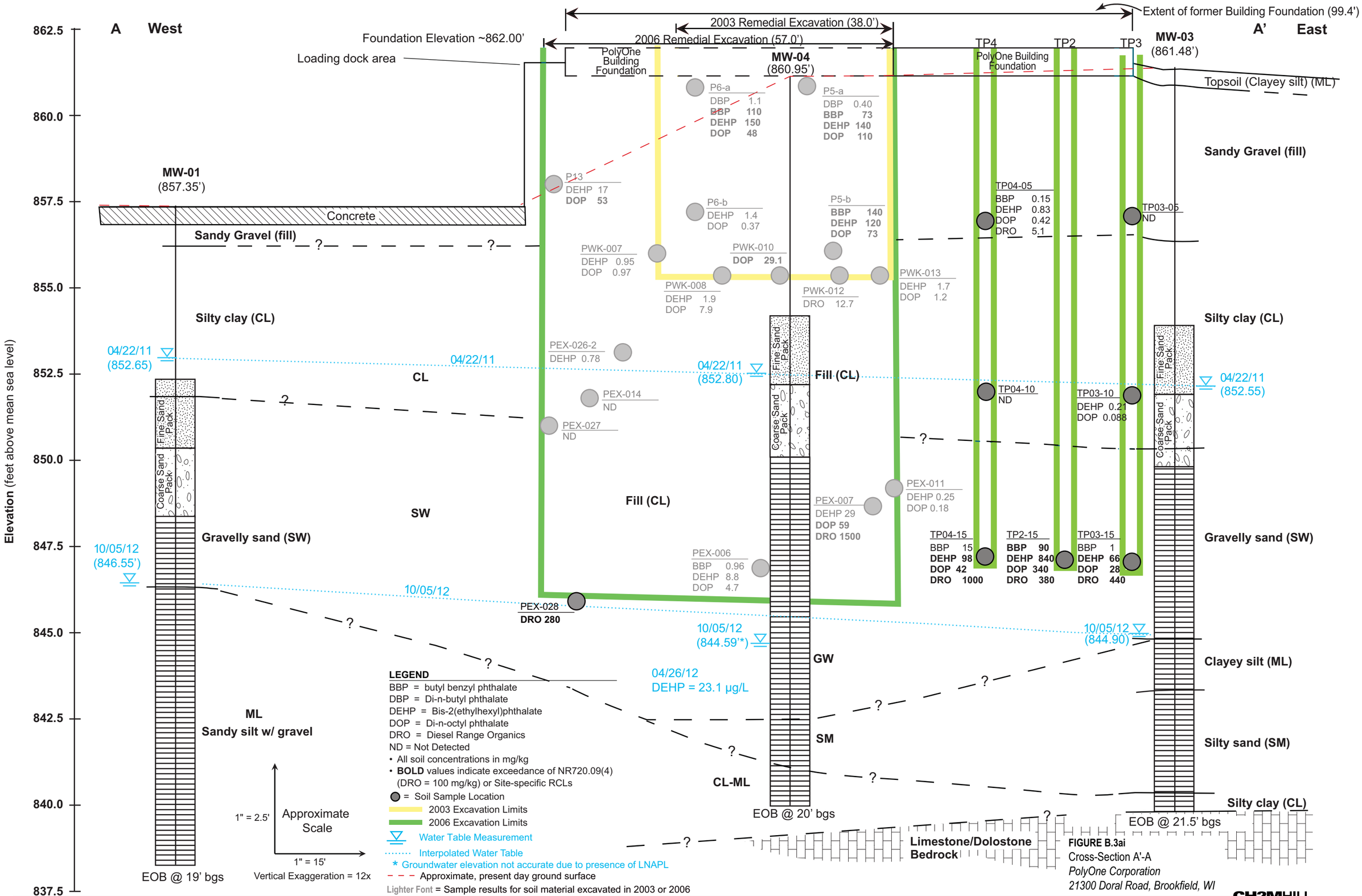


FIGURE B.3ai
Cross-Section A'-A
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.3ai_A'-A_v3 05.14.13 sls

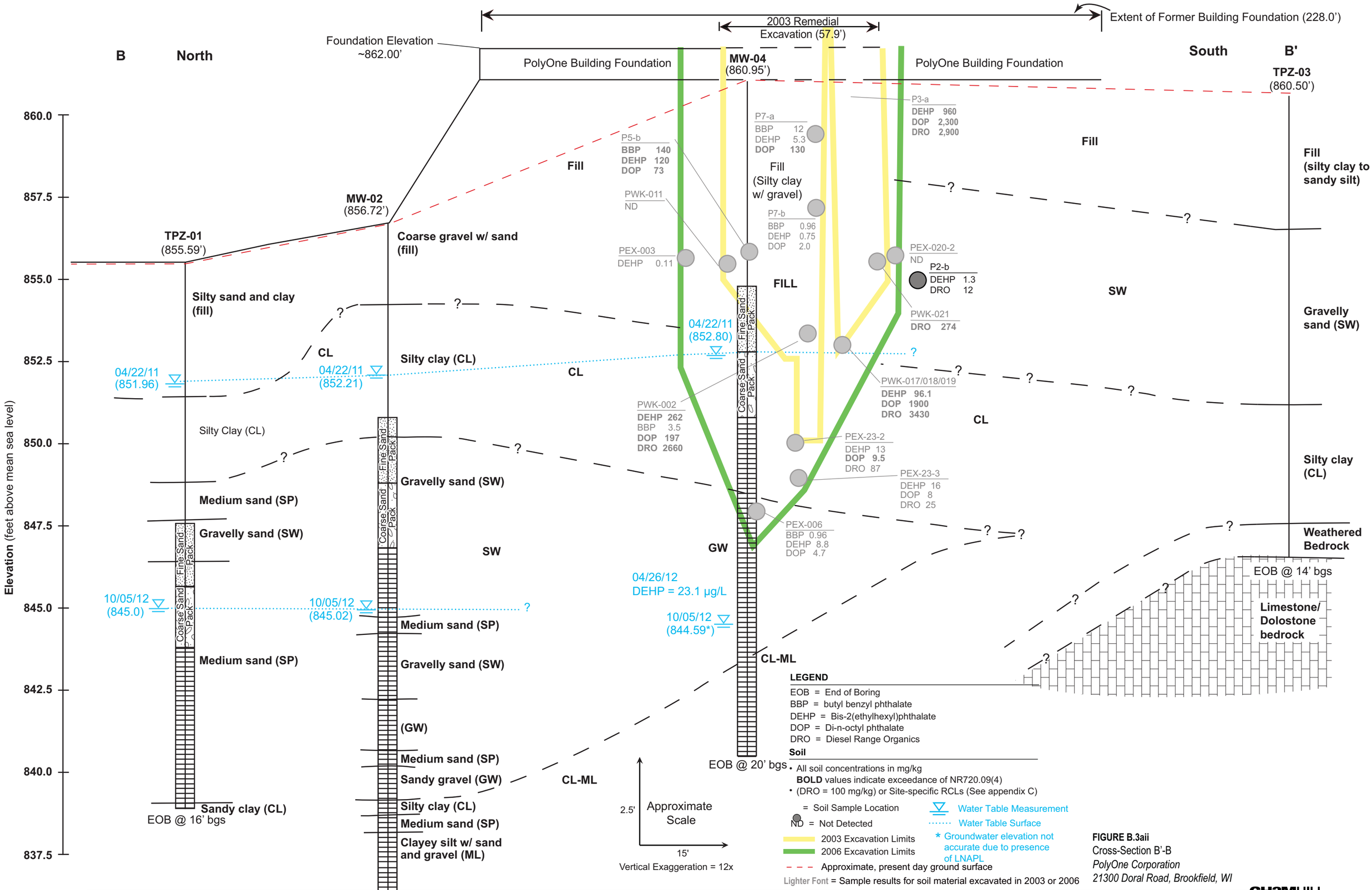


FIGURE B.3aii
Cross-Section B'-B
PolyOne Corporation
21300 Doral Road, Brookfield, WI

ES032613073336MKE PolyOne_FigureB.3aii_B'-B_v5 05.14.13 sls

CH2MHILL.

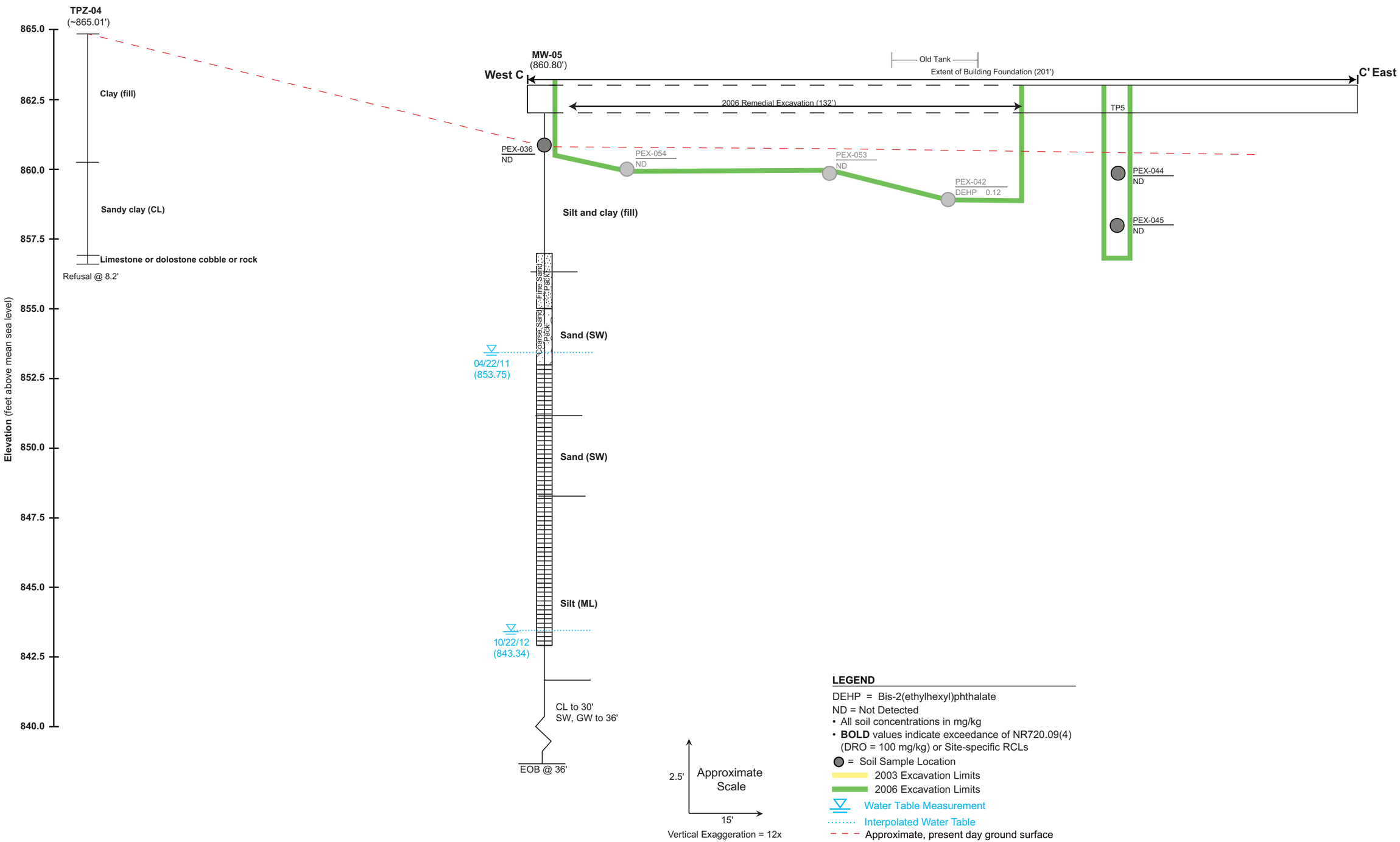


FIGURE B.3aiii
Cross-Section C'-C
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL.

0 30 60
Feet

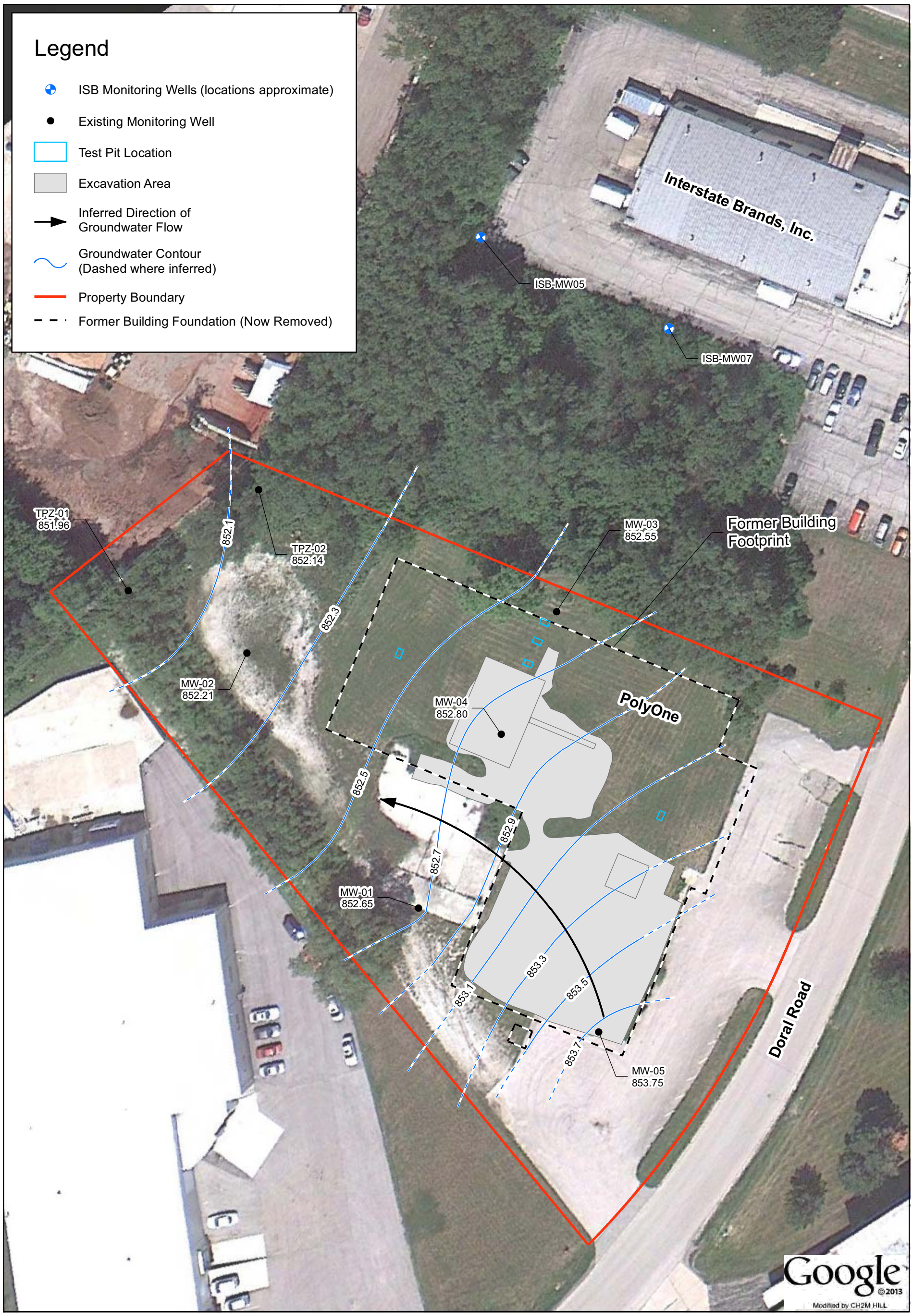
Note: This detection is the only 2012 groundwater concentration value that exceeds an NR140 PAL (DEHP=0.6 ug/L). The NR140 ES (DEHP =6.0 ug/L) is also exceeded.

The apparent groundwater flow direction in April 2012 was radially away from MW-01

Figure B.3b
Horizontal Extent of Groundwater Concentrations (April 2012) Exceeding WDNR ES
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

E:\POLYONE_WAUKESHA\GIS\MAPDOCS\2013_POLYONEWAUKESHA_CLOSUREPACKAGE\DRAFT_FINAL\FIGUREB.3B_GWCONCENTRATIONMAP.MXD MPETERSH 5/16/2013 1:16:30 PM



0 30 60
Feet

Figure B.3ci
Northerly Groundwater Flow Direction - April 2011
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

E:\POLYONE_WAUKESHA\GIS\MAPDOCS\2013_POLYONEWAUKESHA_CLOSUREPACKAGE\DRAFT_FINAL\FIGUREB.3CI_NORTHERLYGWFLOWDIRECTION_APRIL2011.MXD MPETERSH 5/16/2013 9:09:30 AM

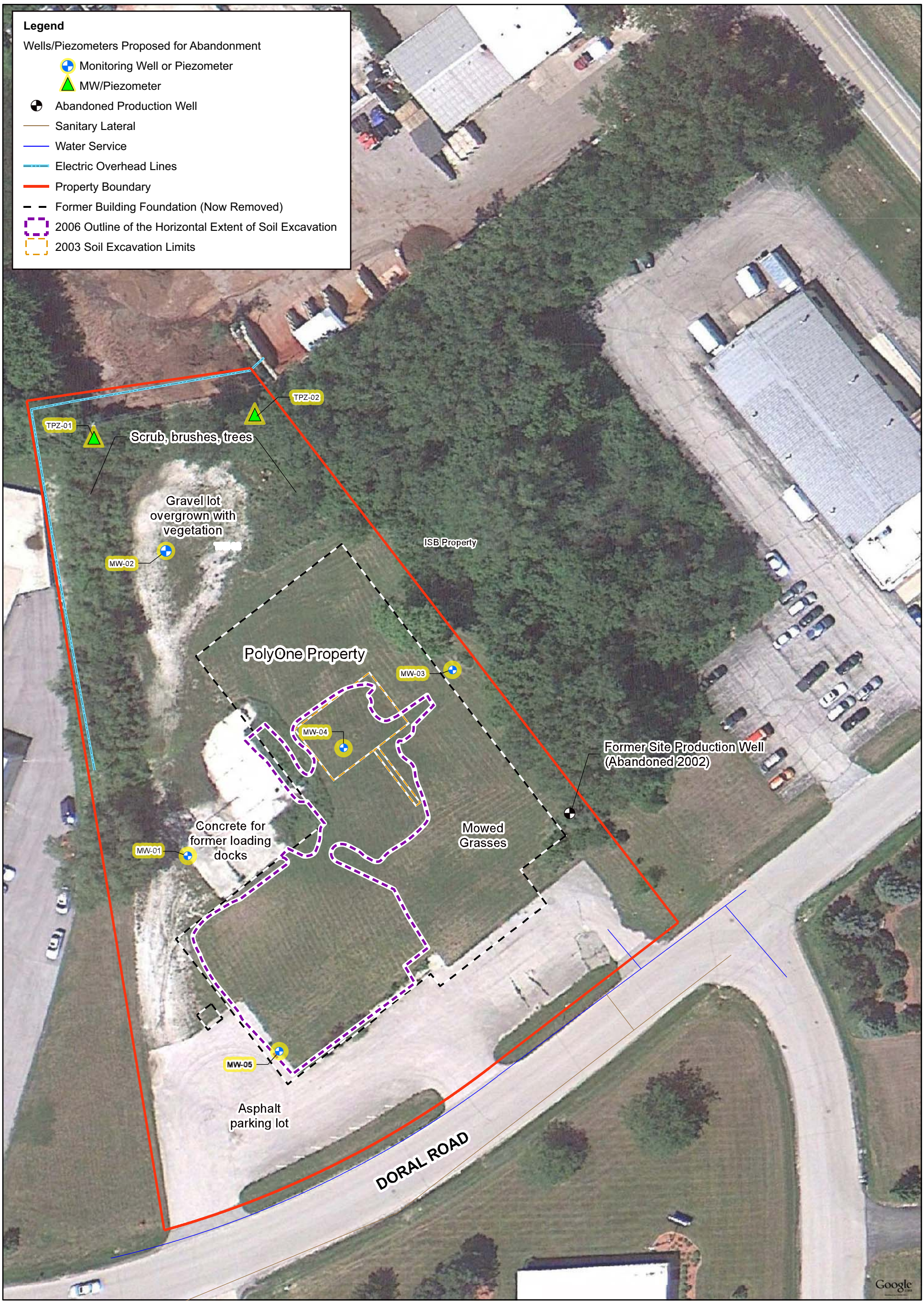
0 30 60
Feet

Note: ****LNAPL absorbant sock in place. Elevation may be affected.

Figure B.3cii
Southerly Groundwater Flow Direction - February 2013
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL

E:\POLYONE_WAUKESHA\GIS\MAPDOCS\2013_POLYONEWAUKESHA_CLOSUREPACKAGE\DRAFT_FINAL\FIGUREB.3CII_SOUTHERLYGWFLOWDIRECTION_FEB2013.MXD MPETERSH 5/16/2013 10:47:28 AM



N

0 30 60
Feet

FIGURE B.
Pro osed Monitoring Well andonment
PolyOne-Waukesha Closure Package
PolyOne Corporation
21300 Doral Road, Brookfield, WI

CH2MHILL.

FIGURE B.4
Vapor Maps or Other Media
PolyOne Waukesha Closure Package
21300 Doral Road, Waukesha Wisconsin

Vapor Maps are not applicable to this project site. Site constituents are phthalates and DRO, neither of which are sufficiently volatile for vapor to be an issue at this site.

Figures for samples from other media such as surface water or sediment are also not applicable to this project site. There are no surface water bodies adjacent to this project site.

Documentation of Remedial Action (Attachment C)

DISCLAIMER

Documents contained in Attachment C of the Case Closure – GIS Registry (Form 4400-202) are not included in the electronic version (GIS Registry Packet) available on RR Sites Map to limit file size.

For information on how to obtain a copy or to review the file, please contact the Remediation & Redevelopment (RR) Environmental Program Associate (EPA) at dnr.wi.gov/topic/Brownfields/Contact.html

WISCONSIN
DEPT. OF NATURAL RESOURCES

D Maintenance Plans
PolyOne Waukesha Closure Package
21300 Doral Road, Brookfield Wisconsin

A Maintenance Plan is not required for this project site.

E Monitoring Well Information
PolyOne Waukesha Closure Package
21300 Doral Road, Brookfield Wisconsin

(Attach monitoring well construction and development forms for all wells that will remain in-use, be transferred to another party or that could not be located).

All the monitoring wells at this property have known locations and are proposed for abandonment upon approval of closure. (Construction documentation for these wells has been previously provided in the *Excavation Completion Report and Groundwater Monitoring Plan* (November 2006) and *Quarterly Letter Report – Groundwater Monitoring* (March 2007).

F Notifications to Owners of Impacted Properties
PolyOne Waukesha Closure Package
21300 Doral Road, Brookfield Wisconsin

There is no attachment applicable to this section of the closure documentation because the impacted source property is owned by the same entity who performed cleanup, there is no impacted right-of-way parcel, and there is no impacted off-site property owner.

G.1 Source Property Deed
PolyOne Waukesha Closure Package
21300 Doral Road, Brookfield Wisconsin

The most recent property deed for 21300 Doral Road with the legal description clearly labeled is included following this cover sheet

Pay Options | Tax Bill | Tax Listing | Search

Tax Key: BKFT1126011

Tax Year: 2012

6/3/2013 4:45:43 PM
WAUKESHA COUNTY
TOWN OF BROOKFIELD

OWNER NAME AND MAILING ADDRESS

PLAST-O-MERIC INC
C/O POLYONE CORP
33587 WALKER RD
AVON LAKE, OH 44012

PROPERTY ADDRESS

21300 DORAL RD

GIS VIEW PARCEL

LEGAL DESCRIPTION

PT LOT 5 BLK B LILLIE INDUSTRIAL PARK PT NW1/4 SEC 30 T7N R20E COM NE COR LOT 5 S36°45'E 381.78 FT S53°16'W 129.26 FT SWLY ALG CURVE 199.71 FT N8°32'W 458.46 FT N82°30'E 123.06 FT TO BGN 2.12 AC R2674/991

ASSESSED VALUES

Tax Year:	2012	Exempt:	NO
Assessment Type:	FULL	Use Value Assessment:	NO
Assessment Ratio:	102.72%	Prior Taxes Due To:	

Values	Assessed	Est. Fair Market
Land	$237,300.00	$231,000.00
Improvement	$0.00	$0.00
Total	$237,300.00	$231,000.00

LINE ITEMS

Line Item Description	Tax Amount	Tax Rate Per $1000 of Assessed Value
TOWN OF BROOKFIELD	$846.60	3.5676208
COUNTY OF WAUKESHA	$546.49	2.3029412
STATE OF WISCONSIN	$39.06	0.1646134
WAUKESHA TECH COLLEGE	$299.37	1.2615870
WAUKESHA SCHOOL 6174	$2,210.96	9.3171697
GROSS GENERAL TAXES	$3,942.48	16.6139321
SCHOOL TAX CREDIT	($364.89)	-1.5376528
NET GENERAL TAXES	$3,577.59	15.0762793
TOTAL TAX BILL	**$3,577.59**	

2012 TAX BILL PAYMENT OPTIONS

Installments	Amount Due	Due By	Pay to Agency
Full Amount Due	$3,577.59	1/31/2013	COUNTY
First Installment	$1,789.59	1/31/2013	COUNTY
Second Installment	$1,788.00	7/31/2013	COUNTY

2012 TAX YEAR TRANSACTIONS

Transaction	Effective	Paid To	Description	Tax	Interest	Penalty	Other Charges	Over Payment	Total
2/4/2013	1/31/2013	LOCAL	PAYMENT	($1,789.59)	$0.00	$0.00	$0.00	$0.00	($1,789.59)

ALL OUTSTANDING BALANCES DUE THROUGH June 2013 RECALCULATE

Year	Tax Due	Interest	Penalty	Other Charges	Balance Due	Pay to Agency	
2012	$1,788.00	$0.00	$0.00	$0.00	$1,788.00	COUNTY	PAY ONLINE
Totals:	$1,788.00	$0.00	$0.00	$0.00	$1,788.00		

PAYMENT OPTIONS

This program accesses data from databases maintained by several County Departments and Local Municipalities. There may be inconsistence in data depending on the date the information was gathered or the purpose for which it is maintained. Due to variances in sources and update cycles, there is no guarantee as to the accuracy of the data. For questions regarding Tax Listing or Tax Bill information, please contact the Real Property Tax Listing Division at (262)548 -7597 or **taxlisting@waukeshacounty.gov**. For questions regarding Outstanding Taxes and Tax Payment records,

contact the County Treasurer's office at (262)548-7029.

PAY ONLINE

For all GIS related issues, please contact Waukesha County Land Information Systems at landinformation@waukeshacounty.gov.
6/3/2013 4:45:43 PM

Legal Notices | Privacy Notices | Acceptable Use Policy | Contact

2327653

DOCUMENT NO.

STATE BAR OF WISCONSIN FORM 3 – 1982
QUIT CLAIM DEED

2327653

REGISTER'S OFFICE
WAUKESHA COUNTY, WIS. } SS

98 JUN 10 PM 1:00
REEL 2674 IMAGE 0991

REGISTER OF DEEDS

DORAL ENTERPRISES OF WISCONSIN, INC., a Wisconsin corporation

quit-claims to PLAST-O-MERIC, INC., a Wisconsin corporation

the following described real estate in Waukesha County, State of Wisconsin:

THIS SPACE RESERVED FOR RECORDING DATA

NAME AND RETURN ADDRESS
Michael J. Widmann
2100 N. Mayfair Road
Suite 102
Milwaukee, WI 53226

1126-0011
PARCEL IDENTIFICATION NUMBER

All that part of Lot 5, Block B in Lillie Industrial Park, a recorded plat in the Northwest 1/4 of Section 30, Town 7 North, Range 20 East, Town of Brookfield, Waukesha County, Wisconsin, described as follows: Beginning at the Northeast corner of said Lot 5; thence South 36° 45' East, 381.78 feet to a point on the North line of Doral Road; thence South 53° 16' West along said North line, 129.26 Feet to a point of curve; thence continuing along an arc on the North side of said road, 199.71 feet, whose radius is 520.11 feet, the center of which lies in a Northerly direction and whose chord bears South 64° 16' West, 198.48 feet; thence North 8° 32' 16" West, 458.46 feet; thence North 82° 30' East, 123.06 feet to the point of beginning and containing 2.12 Acres of land, more or less.

This Deed is given to correct the previous Deed between the parties recorded as Document No. 1725071, Reel 1462, Image 0753.

FEE
77.25 (3)
EXEMPT

This is not homestead property.
(Is) (Is not)

Dated this 31ST day of May, 19 98.

DORAL ENTERPRISES OF WISCONSIN, INC.

By: (SEAL)
Dale E. Krause

By: (SEAL)
Thomas D. Burkhart

(SEAL)

(SEAL)

AUTHENTICATION

Signature(s) Dale K. Krause
Thomas D. Burkhart
authenticated this 31 day of May, 19 98

Michael J. Widmann
TITLE: MEMBER STATE BAR OF WISCONSIN
(If not, authorized by §706.06, Wis. Stats.)

THIS INSTRUMENT WAS DRAFTED BY
Michael J. Widmann

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

ACKNOWLEDGMENT

State of Wisconsin, } ss.
County.

Personally came before me this day of, 19, the above named

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

Notary Public, County, Wis.
My commission is permanent. (If not, state expiration date: , 19.)

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

G.2 Certified Survey Map
PolyOne Waukesha Closure Package
21300 Doral Road, Brookfield Wisconsin

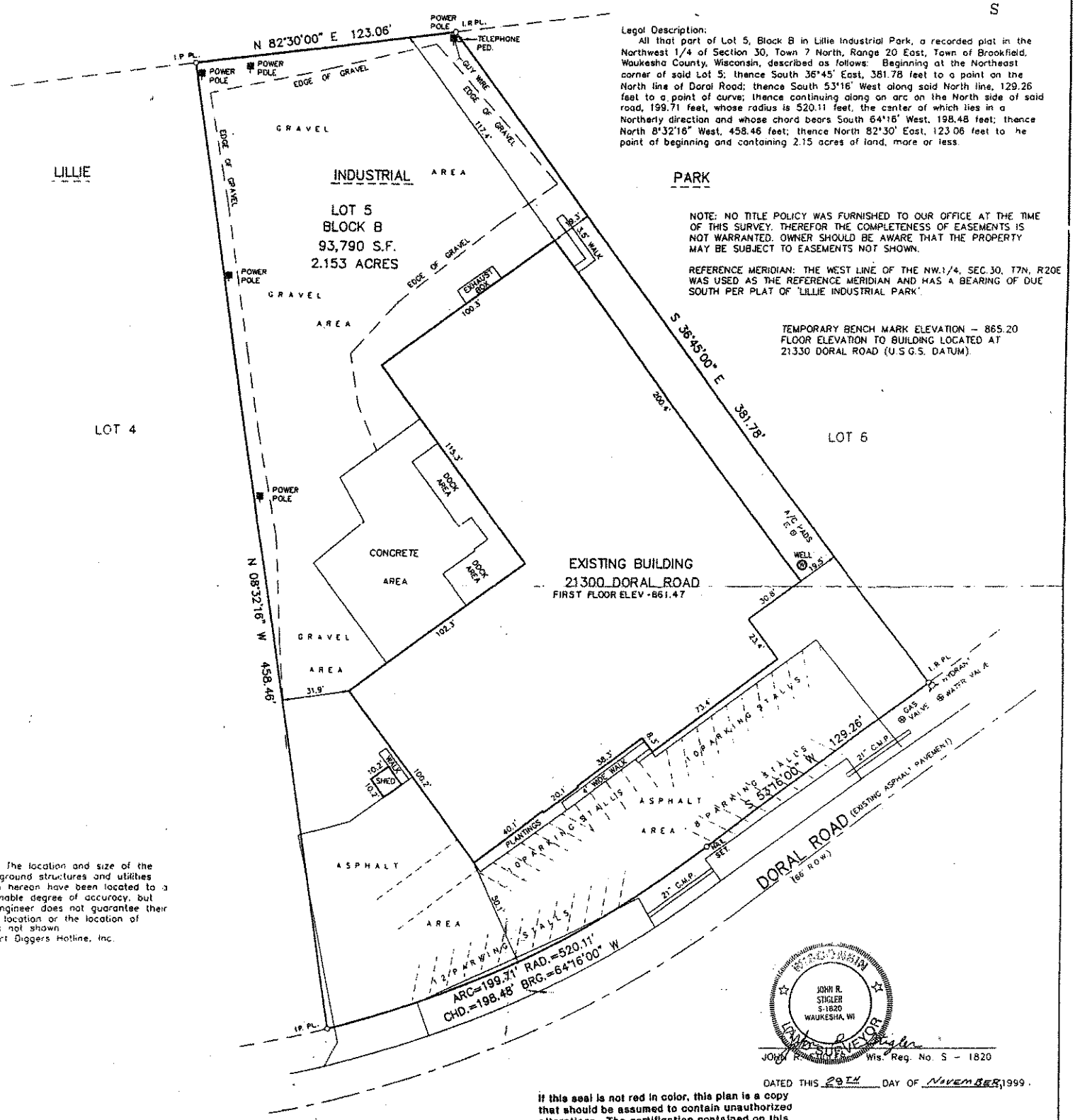
A copy of the certified survey map or the relevant section of the recorded plat map where the legal description in the most recent deed refers to a certified survey map or a recorded plat map is included after this cover page.

Legal Description:
All that part of Lot 5, Block B in Lillie Industrial Park, a recorded plat in the Northwest 1/4 of Section 30, Town 7 North, Range 20 East, Town of Brookfield, Waukesha County, Wisconsin, described as follows: Beginning at the Northeast corner of said Lot 5; thence South 36°45' East, 381.78 feet to a point on the North line of Doral Road; thence South 53°16' West along said North line, 129.26 feet to a point of curve; thence continuing along an arc on the North side of said road, 199.71 feet, whose radius is 520.11 feet, the center of which lies in a Northerly direction and whose chord bears South 64°16' West, 198.48 feet; thence North 8°32'16" West, 458.46 feet; thence North 82°30' East, 123.06 feet to he point of beginning and containing 2.15 acres of land, more or less.

NOTE: NO TITLE POLICY WAS FURNISHED TO OUR OFFICE AT THE TIME OF THIS SURVEY. THEREFOR THE COMPLETENESS OF EASEMENTS IS NOT WARRANTED. OWNER SHOULD BE AWARE THAT THE PROPERTY MAY BE SUBJECT TO EASEMENTS NOT SHOWN.

REFERENCE MERIDIAN: THE WEST LINE OF THE NW.1/4, SEC.30, T7N, R20E WAS USED AS THE REFERENCE MERIDIAN AND HAS A BEARING OF DUE SOUTH PER PLAT OF 'LILLIE INDUSTRIAL PARK'.

TEMPORARY BENCH MARK ELEVATION – 865.20
FLOOR ELEVATION TO BUILDING LOCATED AT 21330 DORAL ROAD (U.S.G.S. DATUM).



NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer does not guarantee their exact location or the location of others not shown.
Contact Diggers Hotline, Inc.

JOHN R. STIGLER S-1820 WAUKESHA, WI — LAND SURVEYOR

John R. Stigler Wis. Reg. No. S – 1820

DATED THIS 29TH DAY OF NOVEMBER, 1999.

If this seal is not red in color, this plan is a copy that should be assumed to contain unauthorized alterations. The certification contained on this document shall not apply to any copies

STATE OF WISCONSIN } ss
COUNTY OF WAUKESHA }

WE, JAHNKE & JAHNKE ASSOCIATES INC. DO HEREBY CERTIFY THAT WE HAVE MADE THIS SURVEY AND THAT THE INFORMATION AS SHOWN ON THE ABOVE PLAT OF SURVEY IS TRUE AND CORRECT REPRESENTATION THEREOF.

EXHIBIT A

PLAT OF SURVEY
FOR: PLASTOMERIC
RE: PART OF LOT 5, LILLIE INDUSTRIAL PARK
PART OF NW.1/4 SECTION 30, T7N, R20E
TOWN OF BROOKFIELD, WAUKESHA CO. WI.

JAHNKE & JAHNKE ASSOCIATES INC.
PLANNERS & PROFESSIONAL ENGINEERS
711 W. MORELAND BLVD.–WAUKESHA,WI.53188
TEL.No.(414) 542–5797 FAX (414) 542–7698

SCALE: 1" = 30'	DATE: 11/24/1999
DRAWN BY: W.W. CHECKED BY: J.R.S.	FILE NO.: BROOKFIELD 285
BOOK NO.: BROOKFIELD 45 JOB: S–5474	SHEET 1 OF 1

FILE NAME: \BILL\JRS\S5474.DWG

G.3 Verification of Zoning
PolyOne Waukesha Closure Package
21300 Doral Road, Brookfield Wisconsin

The PolyOne site is in an industrial area designated as an M-1 per Town of Brookfield zoning map provided on the next page of this section (Attachment G.3) of the closure package. A "live" map can be found at:

http://lis.waukeshacounty.gov/SilverlightViewer_1_3/Viewer.html?Viewer=GIS_External&showAdvancedTools=True&showDataFrame=False&extent=2481498.12555334,382555.099048251,2492539.79222001,386798.154603807&showOverviewMap=False&layers=0,0,0,23,1,0,3,0,0,16,0,0

Per Town of Brookfield Chapter 17 Zoning Code (Chapter 17.04 (14)).

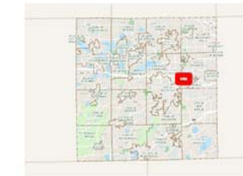
The M-1 Limited Manufacturing District "is intended to provide for manufacturing, industrial and related uses of a limited nature and size, which on the basis of actual physical and operational characteristics would not be detrimental to the surrounding area or to the Town as a whole by reason of smoke, noise, dust, odor, traffic, physical appearance or other similar factors."

Adjacent to/north of the PolyOne site is a C-1 zoned area (17.04(19)) which is described as being "intended to preserve, protect and enhance the ponds, streams and wetland areas of the Town."

Across Doral Road to the south-southeast is a single parcel zoned B-3 (17.04 (13)). The B-3 Office and Professional Business District is intended for individual or small groups of buildings limited to office, professional and special service uses where the office use would be compatible with other neighborhood uses and not exhibit the intense activity of other business districts.

LAND INFORMATION SYSTEMS DIVISION

Waukesha County GIS Map



Legend

Sorry: Legends currently not functional. We hope to have this working again soon. Waukesha County LIS

PolyOne Site Boundary

0 768.21 Feet

The information and depictions herein are for informational purposes and Waukesha County specifically disclaims accuracy in this reproduction and specifically admonishes and advises that if specific and precise accuracy is required, the same should be determined by procurement of certified maps, surveys, plats, Flood Insurance Studies, or orther official means. Waukesha County will not be responsible for any damages which result from third party use of the information and depictions herein, or for use which ignores this warning.

Notes

21300 Doral Rd

G.4 Responsible Party Signed Statement
PolyOne Waukesha Closure Package
21300 Doral Road, Brookfield Wisconsin

I believe, to the best of my knowledge, that accurate legal descriptions have been enclosed in this Wisconsin Department of Natural Resources (WDNR) Case Closure Package for the property that is within the contaminated site boundary.

These legal descriptions are included in the copies of the property deeds included as Attachment G.1 and G.2 of this Case Closure Package.

Ernie Schaub _____ 06 June 2013.06.07
Date

Ernie Schaub / PolyOne Corporation
Printed Name