

# **Endpoint Solutions**

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Ms. Shanna Laube-Anderson  
Hydrogeologist  
Wisconsin Department of Natural Resources  
141 NW Barstow Street  
Waukesha, WI 53188

March 20, 2020

**Subject: Results of Additional Investigation**

Eva Manor, 2103-2133 91<sup>st</sup> Street, Pleasant Prairie, Wisconsin  
BRRTS #: 02-30-543562 / FID #: 230115930

Dear Shanna:

On December 5, 2019, the Wisconsin Department of Natural Resources (WDNR) reviewed a closure request prepared by Endpoint Solutions Corp. (Endpoint) for the case identified above (the "Site"). The location of the Site is depicted on **Figure B.1.a**. On January 3, 2020, the WDNR denied the case closure request, citing the investigation of the offsite migration of contaminated groundwater was not complete. As such, the WDNR specifically requested the following additional investigation and documentation be performed and provided in order to complete the case closure process.

- A. Additional Groundwater Sampling and Monitoring. In order to define the down-gradient extent of groundwater contamination off the Site, we recommend that two (2) additional Wisconsin Administrative Code (WAC) Chapter NR 141 compliant monitoring wells be installed in the area southeast and northeast of MW-8 on the property located at 2019 91<sup>st</sup> Street. All groundwater samples should be laboratory analyzed for chlorinated VOCs, including tetrachloroethene (PCE). Additional rounds of groundwater samples should be taken from remaining monitoring wells MW-2, MW-3, MW-8 and any new monitoring wells that are installed to demonstrate degree and extent of groundwater contamination and to verify that the groundwater plume is stable or receding.
- B. Conduct Vapor Assessment Offsite. Additional vapor assessment may be needed after additional groundwater sampling. A vapor investigation is recommended if any structures overlie groundwater contaminated with chlorinated concentrations above WAC Chapter NR 140 enforcement standards (ESs) at the water table or if the chlorinated groundwater contamination is above WAC Chapter NR 140 preventive action limits (PALs) and in contact with a structure.
- C. Identify Migration Pathways. After the offsite groundwater is complete, evaluate the potential or known impacts to receptors, including onsite and offsite subsurface utilities. This includes the new utilities to the buildings onsite and utility connection on the offsite properties in order to complete the vapor screening evaluation.
- D. WDNR Reporting Requirements. Sampling results must be reported to the affected property owners and the WDNR within ten (10) days of receiving the data.

- E. Continuing Obligations. Upon completion of the additional investigation, re-evaluate the continuing obligations that will be required for closure based on the residual contamination and any features required to be maintained. Provide any required notifications to affected property owners and update the closure documentation accordingly.

## RESULTS

- A. Additional Groundwater Sampling and Monitoring. On February 27, 2020, two (2) WAC Chapter NR 141 compliant monitoring wells identified as MW-9 and MW-10 were installed on the 2019 91<sup>st</sup> Street property. The proposed locations of the monitoring wells were reviewed and approved by the WDNR and were subsequently located in the field with survey-grade RTK-GPS equipment. The locations of the newly installed wells are depicted on **Figure B.1.b**.

On February 28, 2020, the two (2) newly installed monitoring wells were developed by surging and bailing. Neither of the monitoring wells could be purged dry. Approximately 20-gallons of water was removed from each monitoring well during the development process. Copies of the Monitoring Well Construction Forms and Monitoring Well Development Forms are attached in **Appendix A**.

Immediately following development of the newly installed monitoring wells, existing monitoring wells MW-3 and MW-8 were purged and samples were collected from all of the monitoring wells. While the WDNR requested that additional samples be collected from monitoring well MW-2, monitoring well MW-2 was abandoned as part of the redevelopment of the Site and an abandonment form for monitoring well MW-2 was included with the original case closure request submitted. Samples were collected from monitoring wells MW-3, MW-8, MW-9 and MW-10 on February 28, 2020 and March 9, 2020.

With the exception of PCE, no other VOC constituents were detected in the samples collected from existing monitoring wells MW-3 and MW-8 during the two (2) additional sampling events. The concentrations of PCE detected in existing monitoring wells MW-3 and MW-8 were within the general range of concentrations detected in these wells in samples collected since March 2018. The concentrations of PCE in both of these monitoring wells continue to exceed the WAC Chapter NR 140 ES of 5 micrograms per liter ( $\mu\text{g/L}$ ).

The samples collected from newly installed monitoring well MW-9 both contained detectable concentrations of PCE; however, the concentrations detected were less than the WAC Chapter NR 140 ES but greater than the WAC Chapter NR 140 PAL of 0.5  $\mu\text{g/L}$ . The samples collected from the newly installed monitoring well MW-10 did not contain detectable concentrations of any VOC constituents. Based on these results, it is our opinion the downgradient extent of the plume of contamination has been adequately delineated and ends on the 2019 91<sup>st</sup> Street property. The results of the recent sampling are summarized on the revised **Table A.1.a**, and copies of the analytical results and chain-of-custody forms are attached in **Appendix B**.

- B. Conduct Vapor Assessment Offsite. Depth to groundwater measurements were collected from all of the monitoring wells sampled prior to each sampling event. Utilizing the surveyed top of casing elevation, the depth to water measurements were converted to groundwater elevations. A record of the depth to groundwater measurements and calculated groundwater elevations are summarized on **Table A.6**.

Based on the groundwater elevations collected during the sampling events, the groundwater was determined to be flowing to the southeast from the Site across the two (2) adjoining properties to the east (2023 91<sup>st</sup> Street and 2019 91<sup>st</sup> Street). A depiction of the groundwater flow direction is provided on **Figure B.3.c**.

Overall, the plume of contamination in the groundwater is migrating to the southeast from the former source area at the southeast corner of the former strip mall structure. For reference, the extent of the plume of contamination is depicted on **Figure B.3.b**, with the approximate extents of ES and PAL exceedances shown. Based on the data collected, the plume of contaminants is migrating away from existing structures along 91<sup>st</sup> Street. With the exception of a detached slab-on-grade garage on the 2023 91<sup>st</sup> Street property where groundwater containing PCE at a concentration in excess of its PAL, the extent of groundwater containing PCE in excess of its ES does not underlie any structures. Therefore, it is our opinion that no further vapor assessment is necessary.

- C. Identify Migration Pathways. As previously discussed, groundwater elevation and analytical data supports the migration of the plume of contamination to the southeast from the southeast corner of the former strip mall structure on the Site. While the upgradient extent of the plume of contamination underlies newly constructed slab-on-grade garage structures on the Site, the garages do not contain any deep underground utilities associated with potable water or storm or sanitary sewers that could act as preferential migration pathways for groundwater or vapors. A copy of the Utility Plan for the redevelopment of the Site is attached as **Figure 1**.

Based on requested Digger's Hotline utility markings and a visual review of existing conditions, it has been determined that subsurface potable water and sanitary sewer laterals enter the structures on the Site and the adjoining properties to the east at 2023 91<sup>st</sup> Street and 2019 91<sup>st</sup> Street from the 91<sup>st</sup> Street right-of-way located to the north of the properties. There are no known underground utilities extending to the south from the structures along 91<sup>st</sup> Street on the 2019 and 2023 91<sup>st</sup> Street properties. Based on this information, it is our opinion there are no active migration pathways for subsurface vapors; therefore, the vapor screening evaluation is complete.

- D. WDNR Reporting Requirements. The results of the sampling were reported to Mr. Jason Jabs, owner of 2023 91<sup>st</sup> Street and Mr. Joseph Cardamone III, Kenosha County Corporation Counsel, representative of the owner of 2019 91<sup>st</sup> Street. Copies of the cover letters for the notifications are attached in **Appendix C**.

- E. Continuing Obligations. Based on the recent sampling, the continuing obligations identified for the adjoining property at 2023 91<sup>st</sup> Street in the Closure Request continue to be applicable. However, based on the recent sampling data, it appears as though groundwater with concentrations of PCE in excess of its ES also extends approximately ten (10) feet onto the adjoining property to the east of the property at 2023 91<sup>st</sup> Street. This affected property is identified as 2019 91<sup>st</sup> Street. A Notification of Residual Contamination and/or Continuing Obligations has been prepared and submitted to Kenosha County on March, 20, 2020. A copy of the Notification of Residual Contamination and/or Continuing Obligations is attached in **Appendix D**.

## **OTHER REVISIONS**


Based on the additional sampling performed, revisions to the Case Closure form (Form 4400-202) were necessary. Specifically, changes were made to Sections 3.C.i on page 4, Table 5 on page 7, Section E on page 10 and Attachment G on page 12. A complete copy of the revised Form 4400-202 is attached in **Appendix E**.

## **CLOSING**

We trust the information contained in this report is sufficient to address the issues identified in the January 3, 2020 letter, and that the WDNR can now proceed with closing the ERP case associated with the Eva Manor site. If you have any questions regarding the information provided, please feel free to contact me directly. Any of the attachments provided with this report can be provided to the WDNR individually to revise and update the Closure Request and GIS Registry packet previously submitted for review.

Sincerely,

**Endpoint Solutions**

  
Robert A. Cigale, P.G.  
Principal

cc: Dan Szczap – Bear Development

## **ATTACHMENTS**

Figures  
Tables  
Appendix A  
Appendix B  
Appendix C  
Appendix D  
Appendix E

**FIGURES**

FIGURE B.1.A – LOCATION MAP

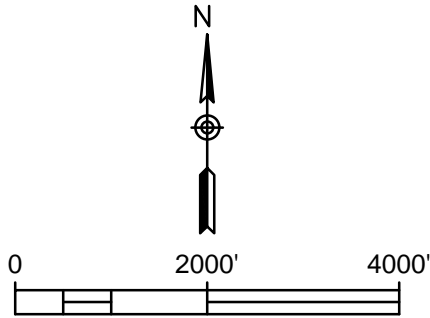
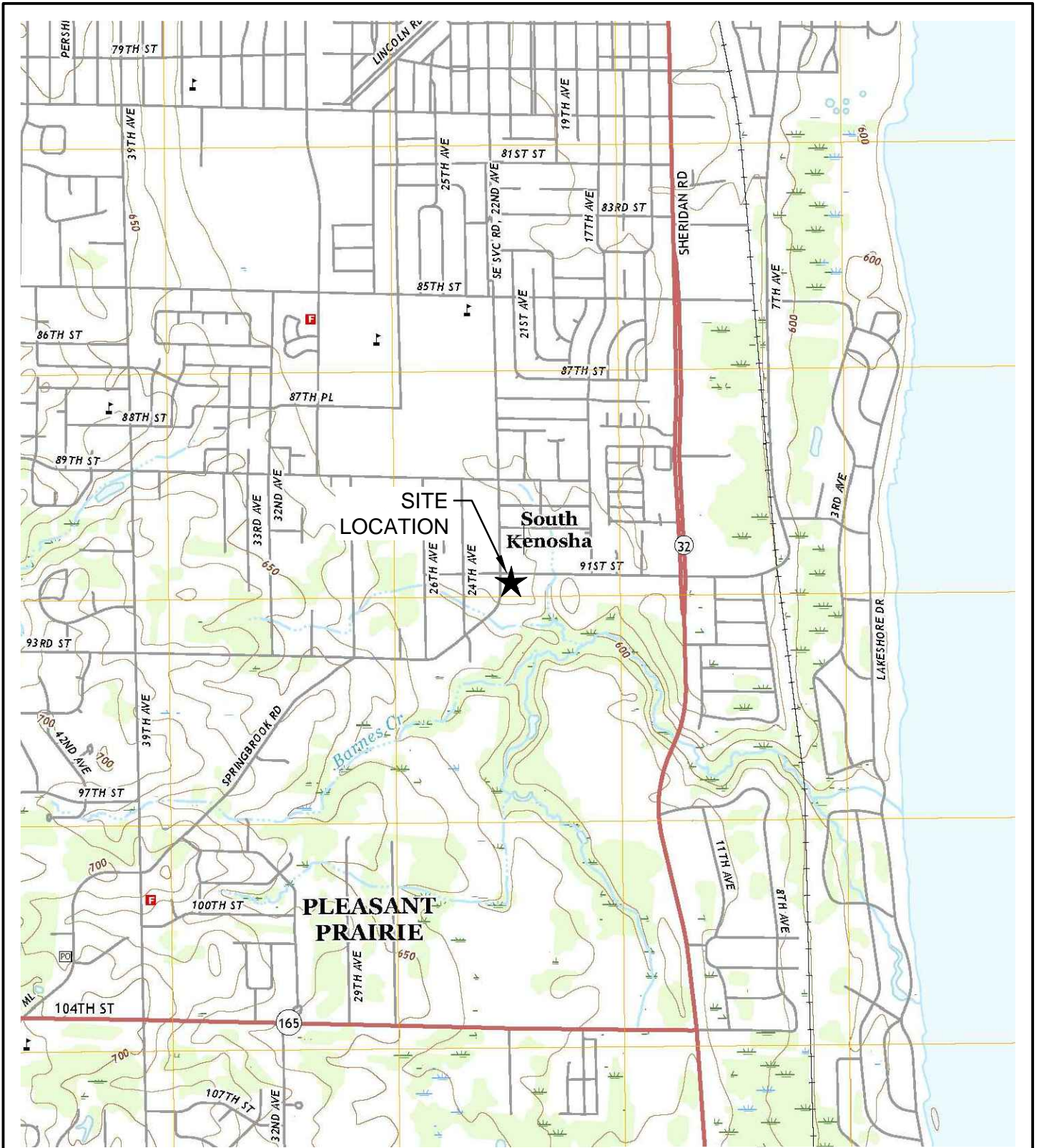
FIGURE B.1.B – DETAILED SITE MAP

FIGURE B.3.B – GROUNDWATER ISOCONCENTRATIONS – 03/09/2020

FIGURE B.3.C – GROUNDWATER FLOW MAY – 03/09/2020

FIGURE 1 – UTILITY MAP

P:\Bear Development - 360\006 - Eva Manor\CAD\006-008 Closure Figures\FIG B.1.a\_360-006-008 Location Map.dwg



### LOCATION MAP

EVA MANOR  
2103-2133 91ST STREET  
PLEASANT PRAIRIE, WISCONSIN

**Endpoint Solutions**

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Phone: (414) 427-1200

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DRAWN BY: NWD

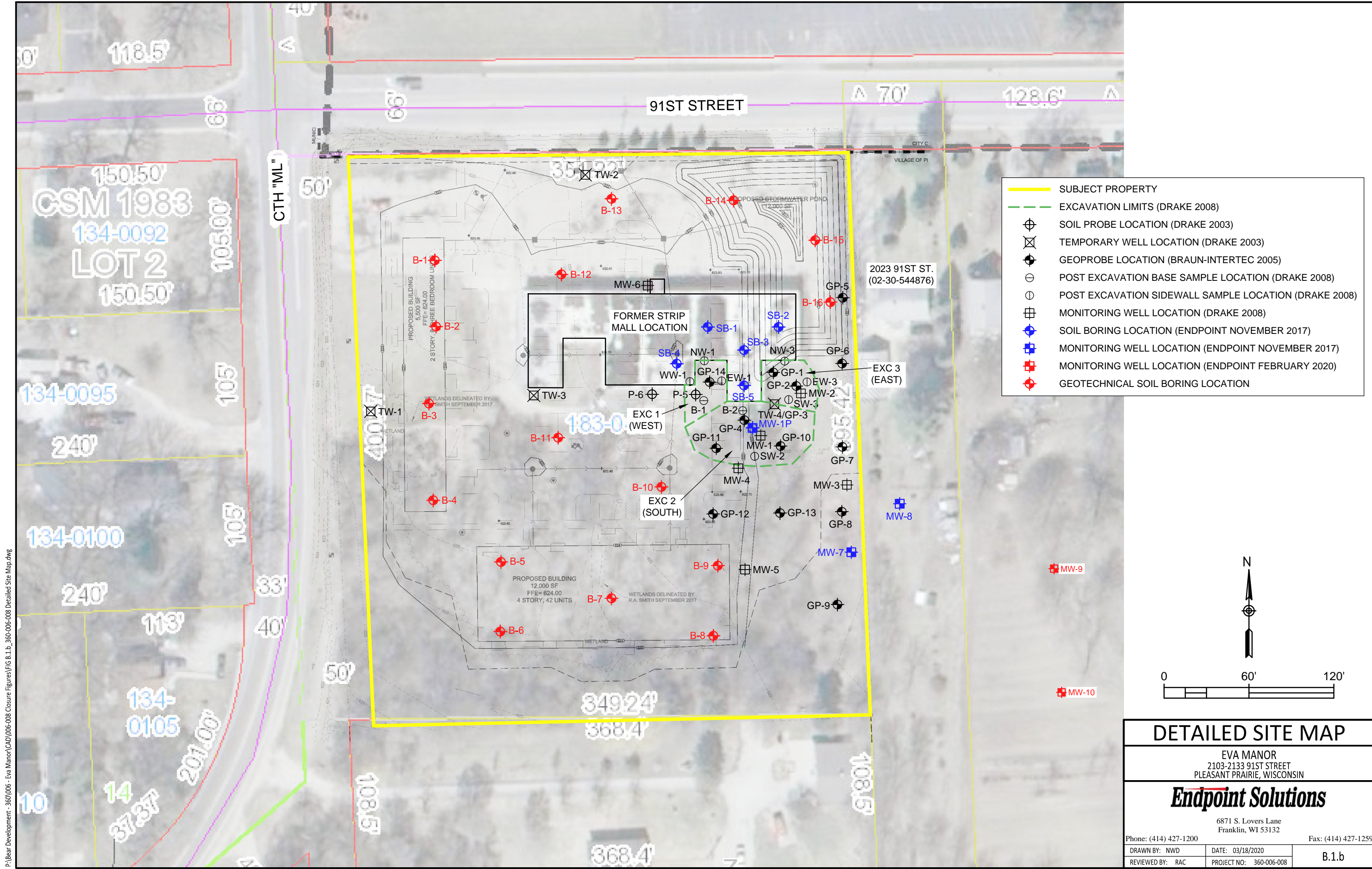
DATE: 10/07/19

REVIEWED BY: TCP

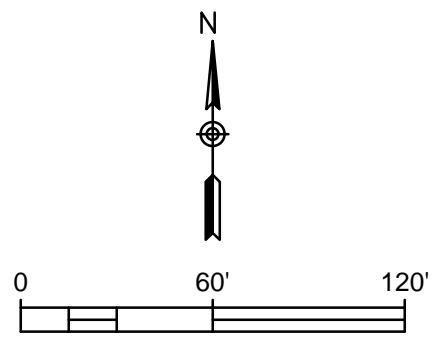
PROJECT NO: 360-006-008

B.1.a

SOURCE: USGS



- SUBJECT PROPERTY
- EXCAVATION LIMITS (DRAKE 2008)
- SOIL PROBE LOCATION (DRAKE 2003)
- TEMPORARY WELL LOCATION (DRAKE 2003)
- GEOPROBE LOCATION (BRAUN-INTERTEC 2005)
- POST EXCAVATION BASE SAMPLE LOCATION (DRAKE 2008)
- POST EXCAVATION SIDEWALL SAMPLE LOCATION (DRAKE 2008)
- MONITORING WELL LOCATION (DRAKE 2008)
- SOIL BORING LOCATION (ENDPOINT NOVEMBER 2017)
- MONITORING WELL LOCATION (ENDPOINT NOVEMBER 2017)
- MONITORING WELL LOCATION (ENDPOINT FEBRUARY 2020)
- GEOTECHNICAL SOIL BORING LOCATION



**DETAILED SITE MAP**

EVA MANOR  
2103-2133 91ST STREET  
PLEASANT PRAIRIE, WISCONSIN

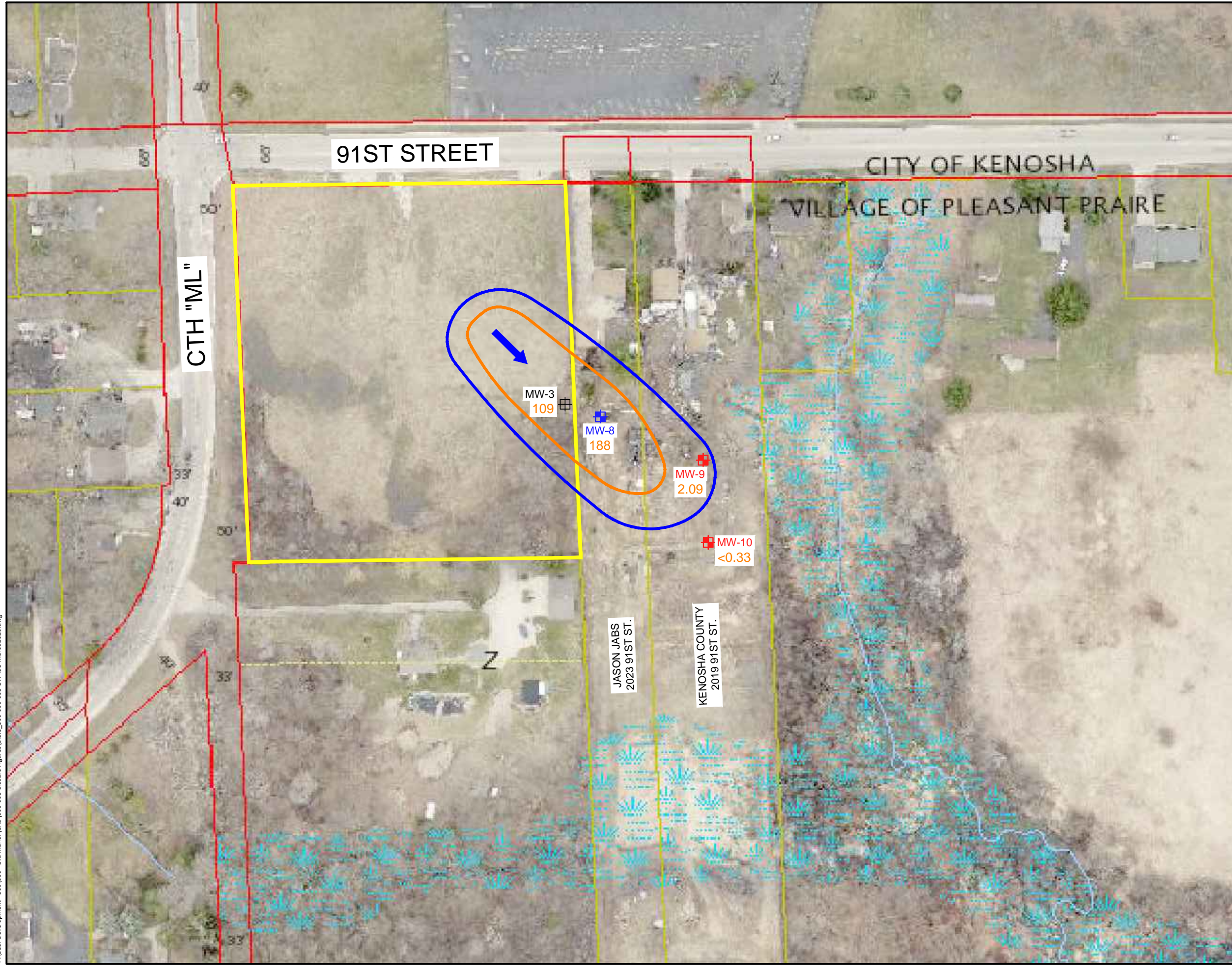
**Endpoint Solutions**

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Phone: (414) 427-1200      Fax: (414) 427-1259

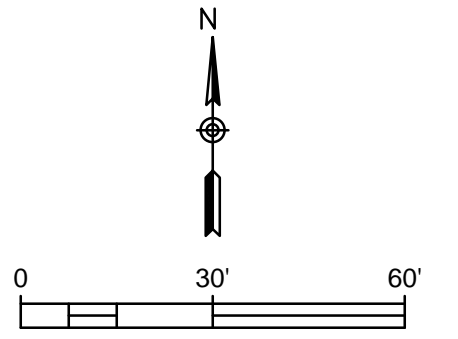
DRAWN BY: NWD	DATE: 03/18/2020	B.1.b
REVIEWED BY: RAC	PROJECT NO: 360-006-008	

P:\Bear Development - 360\006 - Eva Manor\CAD\006-008 Closure Figures\FIG B.1.b\_360-006-008 Detailed Site Map.dwg



- ▬ SUBJECT PROPERTY
- ⊕ MONITORING WELL LOCATION (DRAKE 2008)
- ⊕ MONITORING WELL LOCATION (ENDPOINT NOVEMBER 2017)
- ⊕ MONITORING WELL LOCATION (ENDPOINT FEBRUARY 2020)
- ← GROUNDWATER FLOW DIRECTION
- <0.33 PCE VALUE
- ▬ APPROXIMATE EXTENT OF ES EXCEEDANCE (5 ug/L)
- ▬ APPROXIMATE EXTENT OF PAL EXCEEDANCE (0.5 ug/L)

PAL - PREVENTIVE ACTION LIMIT  
 ES - ENFORCEMENT STANDARD  
 ALL RESULTS ARE IN MICROGRAMS PER LITER (ug/L)



**GROUNDWATER ISOCONCENTRATION - 3/09/2020**

EVA MANOR  
 2103-2133 91ST STREET  
 PLEASANT PRAIRIE, WISCONSIN

**Endpoint Solutions**  
 6871 S. Lovers Lane  
 Franklin, WI 53132

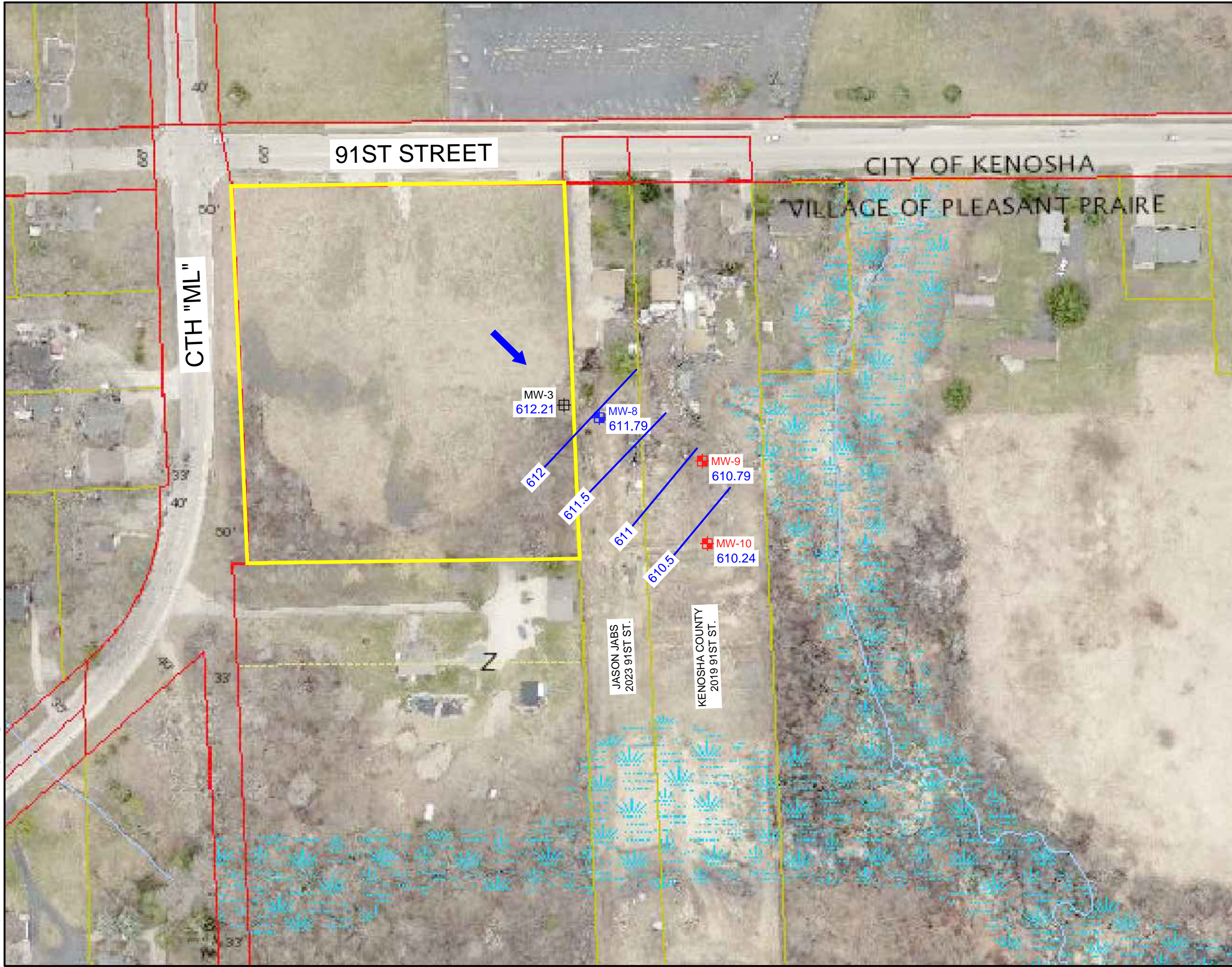
Phone: (414) 427-1200      Fax: (414) 427-1259

DRAWN BY: NWD	DATE: 03/18/2020	<b>B.3.b</b>
REVIEWED BY: RAC	PROJECT NO: 360-006-008	

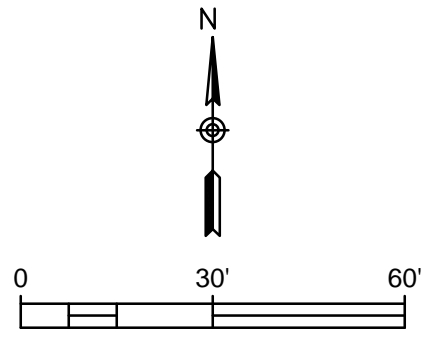
P:\Bear Development - 360\006 - Eva Manor\CAD\006-008 Closure Figures\B.3.b\_360-006-008 GW-ISO Mar092020.dwg

SOURCE: KENOSHA COUNTY GIS





- ▬ SUBJECT PROPERTY
- ⊕ MONITORING WELL LOCATION (DRAKE 2008)
- ⊕ MONITORING WELL LOCATION (ENDPOINT NOVEMBER 2017)
- ⊕ MONITORING WELL LOCATION (ENDPOINT FEBRUARY 2020)
- ← GROUNDWATER FLOW DIRECTION
- 610.43 GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR (INTERVAL 0.5 FEET)



**GROUNDWATER FLOW MAP - 3/09/2020**

EVA MANOR  
 2103-2133 91ST STREET  
 PLEASANT PRAIRIE, WISCONSIN

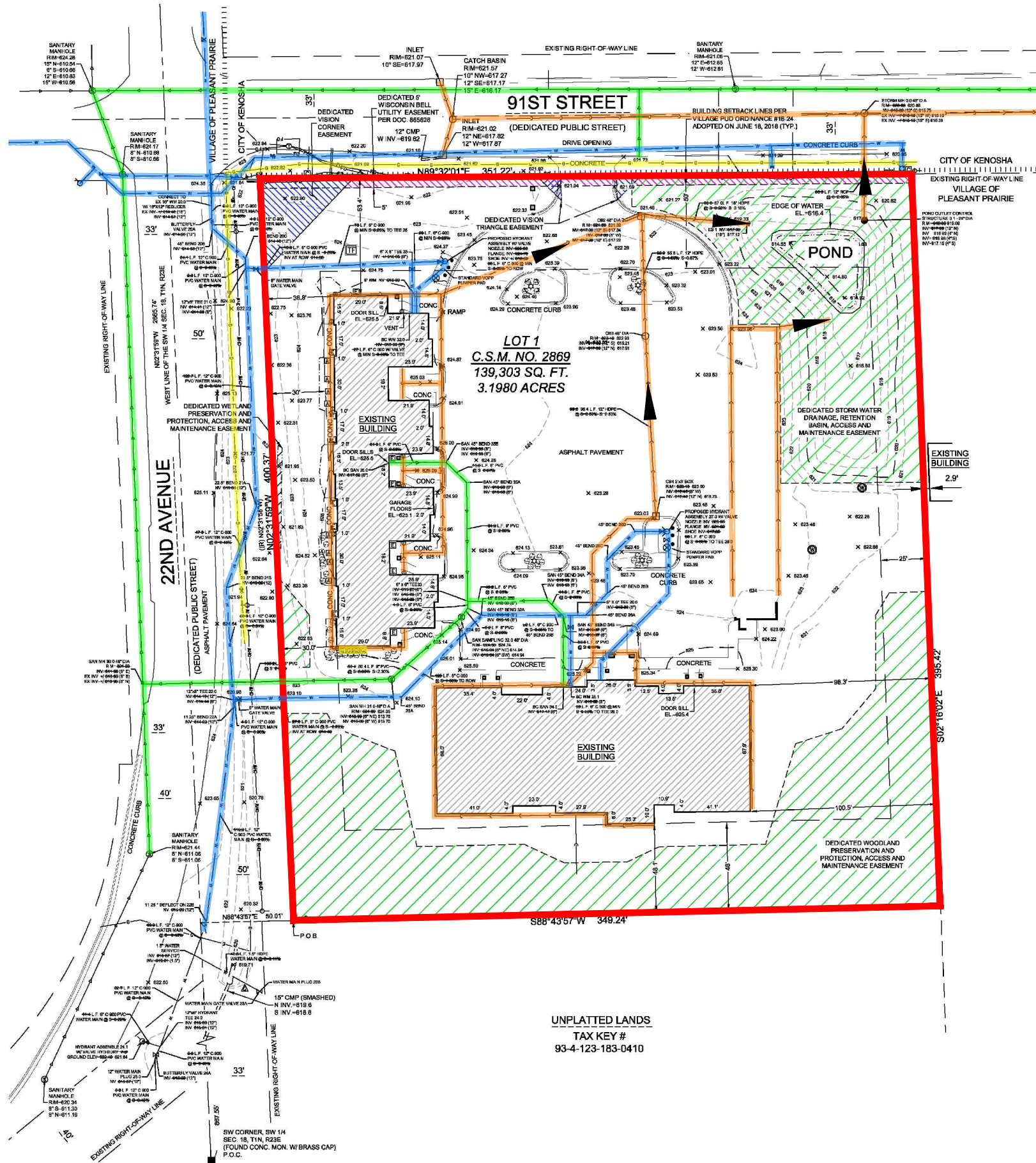
**Endpoint Solutions**  
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 Franklin, WI 53132

Phone: (414) 427-1200      Fax: (414) 427-1259

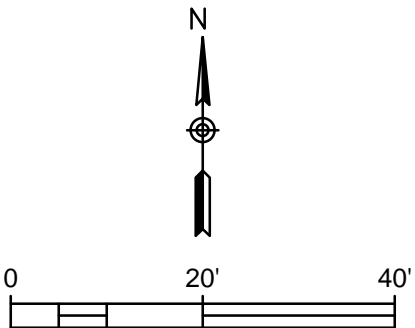
DRAWN BY: NWD	DATE: 03/18/2020	B.3.c
REVIEWED BY: RAC	PROJECT NO: 360-006-008	

P:\Bear Development - 360\006 - Eva Manor\CAD\006-008 Closure Figures\B.3.c\_360-006-008 GW Flow Map-Mar092020.dwg

SOURCE: KENOSHA COUNTY GIS



<span style="color: red;">—</span>	SUBJECT PROPERTY
<span style="color: yellow;">—</span>	GAS MAIN
<span style="color: green;">—</span>	SANITARY SEWER
<span style="color: orange;">—</span>	STORM SEWER
<span style="color: blue;">—</span>	WATER MAIN



UNPLATTED LANDS  
TAX KEY #  
93-4-123-183-0410

UTILITIES		
EVA MANOR 2103-2133 91ST STREET PLEASANT PRAIRIE, WISCONSIN		
<b>Endpoint Solutions</b>		
6871 S. Lovers Lane Franklin, WI 53132		
Phone: (414) 427-1200      Fax: (414) 427-1259		
DRAWN BY: NWD	DATE: 03/18/2020	Figure 1
REVIEWED BY: RAC	PROJECT NO: 360-006-008	

P:\Bear Development - 360\006 - Eva Manor\CAD\006-008 Closure Figures\FIG 01\_360-006-008 Utilities.dwg

**TABLES**

TABLE A.1.A – GROUNDWATER VOC RESULTS (2 PAGES)

TABLE A.6 – WATER ELEVATIONS





**Table A.6  
Water Elevations**

Eva Manor  
Pleasant Prairie, Wisconsin

Well	Date	Ground Surface Elevation	TOC Elevation	Depth to Water	Groundwater Elevation	Depth Below Ground Surface
MW-1	2/5/2008	622.20	624.87	13.28	611.59	10.61
	5/2/2008			12.88	611.99	10.21
	11/3/2017			13.23	611.64	10.56
	12/7/2017			13.36	611.51	10.69
	3/28/2018			13.17	611.70	10.50
	7/24/2018			13.21	611.66	10.54
	10/12/2018			***	-----	-----
	1/17/2019			***	-----	-----
	5/28/2019			Abandoned 5/28/2019		
MW-1P		621.51	624.05	Installed 11/13/17		
	12/7/2017			13.05	611.00	10.51
	3/28/2018			12.92	611.13	10.38
	7/24/2018			Abandoned 7/24/2018		
MW-2	2/5/2008	622.46	625.09	13.23	611.86	10.71
	5/2/2008			12.89	612.20	10.71
	11/3/2017			13.21	611.88	10.58
	12/7/2017			13.34	611.75	10.71
	3/28/2018			13.15	611.94	10.52
	7/24/2018			13.19	611.90	10.56
	10/12/2018			12.12	612.97	9.49
	1/17/2019			12.33	612.76	9.70
	5/28/2019			Abandoned 5/28/2019		
MW-3	2/5/2008	621.43	624.20	12.51	611.69	9.74
	5/2/2008			12.10	612.10	9.33
	11/3/2017			12.51	611.69	9.74
	12/7/2017			12.61	611.59	10.87
	3/28/2018			12.42	611.78	10.68
	7/24/2018			12.46	611.74	10.72
	10/12/2018			11.43	612.77	9.69
	1/17/2019			11.60	612.60	9.86
	2/28/2020			11.79	612.41	10.05
3/9/2020	11.99	612.21	10.25			
MW-4	2/5/2008	622.77	624.37	12.32	612.05	10.72
	5/2/2008			11.93	612.44	10.33
	11/3/2017			12.28	612.09	10.68
	12/7/2017			12.38	611.99	10.78
	3/28/2018			12.20	612.17	10.60
	7/24/2018			Abandoned 7/24/2018		
MW-5	2/2/2008			-----	-----	-----
	5/6/2008			-----	-----	-----
	11/3/2017			-----	-----	-----
	12/7/2017			Not Located		
	3/28/2018			Not Located		
	7/24/2018			Not Located		
MW-6	2/5/2008	622.19	624.16	11.68	612.48	9.71
	5/6/2008			11.38	612.78	9.41
	11/3/2017			11.62	612.54	9.65
	12/7/2017			11.79	612.37	9.82
	3/28/2018			11.58	612.58	9.61
	7/24/2018			Abandoned 7/24/2018		
MW-7		620.72	623.59	Installed 11/13/17		
	12/7/2017			11.97	611.62	9.10
	3/28/2018			11.80	611.79	8.93
	7/24/2018			Abandoned 7/24/2018		
MW-8		620.34	623.72	Installed 3/26/18		
	3/28/2018			12.36	611.36	8.98
	5/7/2018			11.34	612.38	7.96
	7/24/2018			11.34	612.38	7.96
	10/12/2018			11.42	612.30	8.04
	1/17/2019			11.64	612.08	8.26
MW-9	2/28/2020	620.29	623.04	12.20	610.84	9.50
	3/9/2020			12.25	610.79	9.55
MW-10	2/28/2020	619.61	622.51	12.08	610.43	9.91
	3/9/2020			12.27	610.24	10.10

**Notes:**

TOC = Top of casing

Elevations referenced to NADV 88

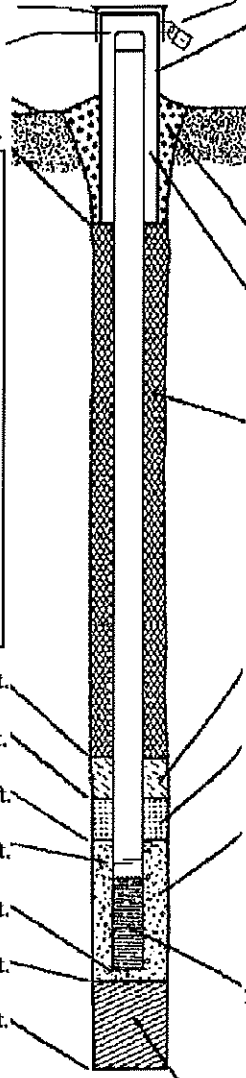
All units in feet

**APPENDIX A**

FIELD FORMS

Facility/Project Name Eva Manor	Local Grid Location of Well _____ ft. <input type="checkbox"/> N _____ ft. <input type="checkbox"/> E _____ ft. <input type="checkbox"/> S _____ ft. <input type="checkbox"/> W	Well Name <i>MW-9</i>
Facility License, Permit or Monitoring No. 02-03-543562	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/> Lat. _____ " Long. _____ "	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID 230115930	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed <i>02/27/2020</i> m m d d y y y y
Type of Well Well Code _____ / _____	Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. _____ T. _____ N, R. _____ <input type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: Name (first, last) and Firm <i>Mike Rhodes</i>
Distance from Waste/Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known
		Gov. Lot Number _____

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation <u>623.04</u> ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>4.0</u> in. b. Length: <u>5</u> ft. c. Material: Steel <input checked="" type="checkbox"/> 0.4 Other <input type="checkbox"/> d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>Expandable cap</u>
C. Land surface elevation <u>620.29</u> ft. MSL	3. Surface seal: Bentonite <input type="checkbox"/> 3.0 Concrete <input type="checkbox"/> 0.1 Other <input type="checkbox"/>
D. Surface seal, bottom _____ ft. MSL or _____ ft.	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 3.0 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 3.3 b. _____ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 3.5 c. _____ Lbs/gal mud weight... Bentonite slurry <input type="checkbox"/> 3.1 d. _____ % Bentonite... Bentonite-cement grout <input type="checkbox"/> 5.0 e. _____ Ft <sup>3</sup> volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 0.1 Tremie pumped <input type="checkbox"/> 0.2 Gravity <input type="checkbox"/> 0.8
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 3.3 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 3.2 c. _____ Other <input type="checkbox"/>
14. Drilling method used: Rotary <input type="checkbox"/> 5.0 Hollow Stem Auger <input checked="" type="checkbox"/> 4.1 Other <input type="checkbox"/>	7. Fine sand material: Manufacturer, product name & mesh size a. <u>#15 Red Flint</u> b. Volume added <u>1/2 Bags</u>
15. Drilling fluid used: Water <input type="checkbox"/> 0.2 Air <input type="checkbox"/> 0.1 Drilling Mud <input type="checkbox"/> 0.3 None <input checked="" type="checkbox"/> 9.9	8. Filter pack material: Manufacturer, product name & mesh size a. <u>#40 Red Flint</u> b. Volume added <u>5 Bags</u>
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2.3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2.4 Other <input type="checkbox"/>
17. Source of water (attach analysis, if required): _____	10. Screen material: <u>PVC</u> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or <u>1</u> ft.	b. Manufacturer <u>Johnson</u> c. Slot size: <u>0.10</u> in. d. Slotted length: <u>10</u> ft.
F. Fine sand, top _____ ft. MSL or <u>6</u> ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 1.4 Other <input type="checkbox"/>
G. Filter pack, top _____ ft. MSL or <u>8</u> ft.	
H. Screen joint, top _____ ft. MSL or <u>10</u> ft.	
I. Well bottom _____ ft. MSL or <u>20</u> ft.	
J. Filter pack, bottom _____ ft. MSL or <u>20</u> ft.	
K. Borehole, bottom _____ ft. MSL or <u>20</u> ft.	
L. Borehole, diameter <u>8.25</u> in.	
M. O.D. well casing <u>2.38</u> in.	
N. I.D. well casing <u>2.0</u> in.	



I hereby certify that the information on this form is true and correct to the best of my knowledge.  
Signature Mike Rhodes Firm Costa Engineering

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.



Route to: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name Eva Manor	County Name Kenosha	Well Name MW - 9
Facility License, Permit or Monitoring Number 02-30-543562	County Code 30	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry?  Yes  No

2. Well development method
- surged with bailer and bailed  41
  - surged with bailer and pumped  61
  - surged with block and bailed  42
  - surged with block and pumped  62
  - surged with block, bailed and pumped  70
  - compressed air  20
  - bailed only  10
  - pumped only  51
  - pumped slowly  50
  - Other \_\_\_\_\_  \_\_\_\_\_

3. Time spent developing well \_\_\_\_\_ 60 min.

4. Depth of well (from top of well casing) \_\_\_\_\_ 22.86 ft.

5. Inside diameter of well \_\_\_\_\_ 2.07 in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ 7.48 gal.

7. Volume of water removed from well \_\_\_\_\_ 20 gal.

8. Volume of water added (if any) \_\_\_\_\_ 0 gal.

9. Source of water added Not Applicable

10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. _____ 12.20 ft.	_____ 18.00 ft.
Date	b. <u>02</u> / <u>28</u> / <u>2020</u>	<u>02</u> / <u>28</u> / <u>2020</u>
	m m d d y y y y	m m d d y y y y
Time	c. <u>9</u> : <u>00</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>10</u> : <u>00</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.

12. Sediment in well bottom \_\_\_\_\_ N/A inches \_\_\_\_\_ N/A inches

13. Water clarity

Clear <input checked="" type="checkbox"/> 10	Clear <input type="checkbox"/> 20
Turbid <input type="checkbox"/> 15	Turbid <input type="checkbox"/> 25
(Describe)	(Describe)
_____	Tan, clearing up
_____	_____
_____	_____
_____	_____

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids \_\_\_\_\_ N/A mg/l \_\_\_\_\_ N/A mg/l

15. COD \_\_\_\_\_ N/A mg/l \_\_\_\_\_ N/A mg/l

16. Well developed by: Name (first, last) and Firm

First Name: Tim Last Name: Petrick

Firm: Endpoint Solutions Corp.

Name and Address of Facility Contact /Owner/Responsible Party

First Name: Dan Last Name: Szczap

Facility/Firm: Bear Development, LLC

Street: 4011 80th Street

City/State/Zip: Kenosha, WI 53142

I hereby certify that the above information is true and correct to the best of my knowledge.

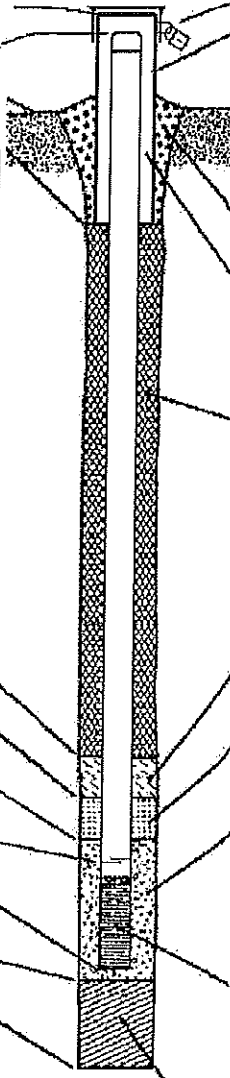
Signature: 

Print Name: Tim Petrick

Firm: Endpoint Solutions Corp.

Facility/Project Name Eva Manor		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. ft. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name <u>MW-10</u>	
Facility License, Permit or Monitoring No. 02-03-543562		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>		Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>	
Facility ID 230115930		St. Plane _____ ft. N. _____ ft. E. S/C/N		Date Well Installed <u>02/27/2020</u> m m d d y y y y	
Type of Well Well Code _____ / _____		Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. _____ T. _____ N. R. _____ <input type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm <u>Mike Rhodes</u>	
Distance from Waste/ Source _____ ft.		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known		Gov. Lot Number _____	
Enf. Stds. Apply <input type="checkbox"/>					

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation <u>622.51</u> ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>4.0</u> in. b. Length: <u>5</u> ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation <u>619.61</u> ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>Expandable cap</u>
D. Surface seal, bottom _____ ft. MSL or _____ ft.	3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 30 Other <input type="checkbox"/>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight . . . . Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite . . . . . Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft <sup>3</sup> volume added for any of the above
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Fine sand material: Manufacturer, product name & mesh size a. <u>#15 Red Flint</u> b. Volume added <u>1/2 BAG</u>
Describe _____	8. Filter pack material: Manufacturer, product name & mesh size a. <u>#40 Red Flint</u> b. Volume added <u>5 BAGS</u>
17. Source of water (attach analysis, if required): _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or <u>1</u> ft.	10. Screen material: <u>PVC</u> a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or <u>6</u> ft.	b. Manufacturer <u>Johnson</u> c. Slot size: <u>0.10</u> in. d. Slotted length: <u>10</u> ft.
G. Filter pack, top _____ ft. MSL or <u>8</u> ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 14 Other <input type="checkbox"/>
H. Screen joint, top _____ ft. MSL or <u>10</u> ft.	
I. Well bottom _____ ft. MSL or <u>20</u> ft.	
J. Filter pack, bottom _____ ft. MSL or <u>20</u> ft.	
K. Borehole, bottom _____ ft. MSL or <u>20</u> ft.	
L. Borehole, diameter <u>8.25</u> in.	
M. O.D. well casing <u>2.38</u> in.	
N. I.D. well casing <u>2.0</u> in.	



I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Mike Rhodes Firm Geotek Engineering

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Route to: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name Eva Manor	County Name Kenosha	Well Name MW - 10
Facility License, Permit or Monitoring Number 02-30-543562	County Code 30	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry?  Yes  No

2. Well development method

- surged with bailer and bailed  41
- surged with bailer and pumped  61
- surged with block and bailed  42
- surged with block and pumped  62
- surged with block, bailed and pumped  70
- compressed air  20
- bailed only  10
- pumped only  51
- pumped slowly  50
- Other \_\_\_\_\_  \_\_\_\_\_

3. Time spent developing well \_\_\_\_\_ 60 min.

4. Depth of well (from top of well casing) \_\_\_\_\_ 22.94 ft.

5. Inside diameter of well \_\_\_\_\_ 2.07 in.

6. Volume of water in filter pack and well casing \_\_\_\_\_ 7.53 gal.

7. Volume of water removed from well \_\_\_\_\_ 20 gal.

8. Volume of water added (if any) \_\_\_\_\_ 0 gal.

9. Source of water added Not Applicable

---

10. Analysis performed on water added?  Yes  No  
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. _____ 12.08 ft.	_____ 19.50 ft.
Date	b. <u>02</u> / <u>28</u> / <u>2020</u>	<u>02</u> / <u>28</u> / <u>2020</u>
Time	c. <u>7</u> : <u>45</u> <input checked="" type="checkbox"/> a.m.	<u>8</u> : <u>45</u> <input type="checkbox"/> a.m.
12. Sediment in well bottom	_____ N/A inches	_____ N/A inches
13. Water clarity	Clear <input checked="" type="checkbox"/> 10 Turbid <input type="checkbox"/> 15 (Describe) _____	Clear <input type="checkbox"/> 20 Turbid <input type="checkbox"/> 25 (Describe) <u>Tan, clearing up</u>
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____ N/A mg/l	_____ N/A mg/l
15. COD	_____ N/A mg/l	_____ N/A mg/l
16. Well developed by: Name (first, last) and Firm		
First Name:	Tim	Last Name: Petrick
Firm:	Endpoint Solutions Corp.	

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party


First Name: Dan Last Name: Szczap

Facility/Firm: Bear Development, LLC

Street: 4011 80th Street

City/State/Zip: Kenosha, WI 53142

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: 

Print Name: Tim Petrick

Firm: Endpoint Solutions Corp.

NOTE: See instructions for more information including a list of county codes and well type codes.

**APPENDIX B**

ANALYTICAL DATA

CHAIN-OF-CUSTODIES

# Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

TIM PETRICK  
ENDPOINT SOLUTIONS  
6871 SOUTH LOVER'S LANE  
FRANKLIN, WI 53132

Report Date 04-Mar-20

Project Name EVA MANOR  
Project # 360-006-009  
Lab Code 5037568A  
Sample ID MW-3  
Sample Matrix Water  
Sample Date 2/28/2020

Invoice # E37568

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		3/3/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		3/3/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		3/3/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		3/3/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		3/3/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		3/3/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		3/3/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		3/3/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		3/3/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-006-009

**Invoice #** E37568

**Lab Code** 5037568A  
**Sample ID** MW-3  
**Sample Matrix** Water  
**Sample Date** 2/28/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		3/3/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		3/3/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		3/3/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		3/3/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/3/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		3/3/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/3/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/3/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		3/3/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	2.8	1	8260B		3/3/2020	CJR	1
Tetrachloroethene	103	ug/l	0.33	1	1	8260B		3/3/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/3/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		3/3/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		3/3/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		3/3/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/3/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/3/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		3/3/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
SUR - Toluene-d8	97	REC %			1	8260B		3/3/2020	CJR	1
SUR - Dibromofluoromethane	105	REC %			1	8260B		3/3/2020	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1	8260B		3/3/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	106	REC %			1	8260B		3/3/2020	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-006-009

**Invoice #** E37568

**Lab Code** 5037568B  
**Sample ID** MW-8  
**Sample Matrix** Water  
**Sample Date** 2/28/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		3/3/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		3/3/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		3/3/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		3/3/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		3/3/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		3/3/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		3/3/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		3/3/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		3/3/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		3/3/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		3/3/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		3/3/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		3/3/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		3/3/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/3/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		3/3/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	2.8	1	8260B		3/3/2020	CJR	1
Tetrachloroethene	163	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/3/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-006-009

**Invoice #** E37568

**Lab Code** 5037568B  
**Sample ID** MW-8  
**Sample Matrix** Water  
**Sample Date** 2/28/2020

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		3/3/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		3/3/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		3/3/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/3/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/3/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		3/3/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
SUR - Dibromofluoromethane	109	REC %			1	8260B		3/3/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		3/3/2020	CJR	1
SUR - 4-Bromofluorobenzene	92	REC %			1	8260B		3/3/2020	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		3/3/2020	CJR	1



Project Name EVA MANOR  
 Project # 360-006-009

Invoice # E37568

Lab Code 5037568C  
 Sample ID MW-9  
 Sample Matrix Water  
 Sample Date 2/28/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		3/3/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		3/3/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		3/3/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		3/3/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		3/3/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		3/3/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		3/3/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		3/3/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		3/3/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		3/3/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		3/3/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		3/3/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		3/3/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		3/3/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/3/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		3/3/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	2.8	1	8260B		3/3/2020	CJR	1
Tetrachloroethene	4.1	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/3/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-006-009

**Invoice #** E37568

**Lab Code** 5037568C  
**Sample ID** MW-9  
**Sample Matrix** Water  
**Sample Date** 2/28/2020

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		3/3/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		3/3/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		3/3/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/3/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/3/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		3/3/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		3/3/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		3/3/2020	CJR	1
SUR - 4-Bromofluorobenzene	96	REC %			1	8260B		3/3/2020	CJR	1
SUR - Dibromofluoromethane	106	REC %			1	8260B		3/3/2020	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-006-009

**Invoice #** E37568

**Lab Code** 5037568D  
**Sample ID** MW-10  
**Sample Matrix** Water  
**Sample Date** 2/28/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		3/3/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		3/3/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		3/3/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		3/3/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		3/3/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		3/3/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		3/3/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		3/3/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		3/3/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		3/3/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		3/3/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		3/3/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		3/3/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		3/3/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		3/3/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		3/3/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		3/3/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32		1	8260B		3/3/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/3/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		3/3/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		3/3/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		3/3/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	2.8	1	8260B		3/3/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33		1	8260B		3/3/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/3/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		3/3/2020	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-006-009

**Invoice #** E37568

**Lab Code** 5037568D  
**Sample ID** MW-10  
**Sample Matrix** Water  
**Sample Date** 2/28/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		3/3/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		3/3/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		3/3/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/3/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		3/3/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		3/3/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/3/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/3/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		3/3/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		3/3/2020	CJR	1
SUR - Toluene-d8	98	REC %				1 8260B		3/3/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	97	REC %				1 8260B		3/3/2020	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %				1 8260B		3/3/2020	CJR	1
SUR - Dibromofluoromethane	104	REC %				1 8260B		3/3/2020	CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

**Code**      **Comment**

1      Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

**Authorized Signature**

# CHAIN OF STUDY RECORD

# Synergy

## Environmental Lab, Inc.

www.synergy-lab.net  
 1990 Prospect Ct. • Appleton, WI 54914  
 920-830-2455 • mrsynergy@wi.twcbc.com

Chain # No 4171  
 Page 1 of 1

Sample Handling Request 3/4/20  
 Date Required: 3/4/20  
 (Rushes accepted only with prior authorization)  
 Normal Turn Around 3 days

Lab I.D. #  
 QUOTE # : 360-006-009  
 Project # : Tim Petrich  
 Sampler (signature):  
 Project (Name / Location): EVA MANOR - Pleasant Prairie  
 Reports To: Tim Petrich  
 Company: Endpoint Solutions  
 Address: 6871 S. Lovens Lane  
 City State Zip: Franklin, WI  
 Phone: 414 858 1210  
 Invoice To:  
 Company:  
 Address:  
 City State Zip:  
 Phone:  
 Email:

Analysis Requested		Other Analysis	
DRO (Mod DRO Sep 95)			
GRO (Mod GRO Sep 95)			
LEAD			
NITRATE/NITRITE			
OIL & GREASE			
PAH (EPA 8270)			
PCB			
PVOC (EPA 8021)			
PVOC + NAPHTHALENE			
SULFATE			
TOTAL SUSPENDED SOLIDS			
VOC DW (EPA 824.2)			
VOC (EPA 8260)	X		
VOC AIR (TO - 15)	X		
8-RCRA METALS	X		

Lab I.D.	Sample I.D.	Collection Date	Time	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
50375108A	MW-3	2/28/20	1045	2	3	GW	H2
B	MW-8	1015		2	3	GW	H2
C	MW-9	1000		2	3	GW	H2
D	MW-10	845		2	3	GW	H2

Comments/Special Instructions (\*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

Sample Integrity - To be completed by receiving lab.  
 Method of Shipment: CE  
 Temp. of Temp. Blank: \_\_\_\_\_ °C On Ice: X  
 Relinquished By: (sign) [Signature] Time 1300 Date 2/28/2010  
 Received By: (sign) \_\_\_\_\_ Time 10:00 Date: 2/23/20

# Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 \*P 920-830-2455 \* F 920-733-0631

TIM PETRICK  
ENDPOINT SOLUTIONS  
6871 SOUTH LOVER'S LANE  
FRANKLIN, WI 53132

Report Date 16-Mar-20

Project Name EVA MANOR-PLEASANT PRAIRIE  
Project # 360-006-009

Invoice # E37607

Lab Code 5037607A  
Sample ID MW-3  
Sample Matrix Water  
Sample Date 3/9/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33		1	8260B		3/12/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		3/12/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33		1	8260B		3/12/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		3/12/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		3/12/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32		1	8260B		3/12/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		3/12/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/12/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		3/12/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		3/12/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		3/12/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		3/12/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32		1	8260B		3/12/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		3/12/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		3/12/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		3/12/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		3/12/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		3/12/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32		1	8260B		3/12/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		3/12/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		3/12/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		3/12/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		3/12/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		3/12/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		3/12/2020	CJR	1

**Project Name** EVA MANOR-PLEASANT PRAIRIE  
**Project #** 360-006-009

**Invoice #** E37607

**Lab Code** 5037607A  
**Sample ID** MW-3  
**Sample Matrix** Water  
**Sample Date** 3/9/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		3/12/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		3/12/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		3/12/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		3/12/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		3/12/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		3/12/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/12/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		3/12/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/12/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		3/12/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/12/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/12/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		3/12/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		3/12/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		3/12/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	2.8	1	8260B		3/12/2020	CJR	1
Tetrachloroethane	109	ug/l	0.33	1	1	8260B		3/12/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/12/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		3/12/2020	CJR	1
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		3/12/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		3/12/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		3/12/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/12/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		3/12/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		3/12/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/12/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/12/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		3/12/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		3/12/2020	CJR	1
SUR - Toluene-d8	113	REC %			1	8260B		3/12/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	113	REC %			1	8260B		3/12/2020	CJR	1
SUR - 4-Bromofluorobenzene	104	REC %			1	8260B		3/12/2020	CJR	1
SUR - Dibromofluoromethane	96	REC %			1	8260B		3/12/2020	CJR	1

**Project Name** EVA MANOR-PLEASANT PRAIRIE  
**Project #** 360-006-009

**Invoice #** E37607

**Lab Code** 5037607B  
**Sample ID** MW-8  
**Sample Matrix** Water  
**Sample Date** 3/9/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.66	ug/l	0.66		2	2	8260B	3/12/2020	CJR	1
Bromobenzene	< 0.52	ug/l	0.52	1.68	2	2	8260B	3/12/2020	CJR	1
Bromodichloromethane	< 0.66	ug/l	0.66		2	2	8260B	3/12/2020	CJR	1
Bromoform	< 1.3	ug/l	1.3	4.2	2	2	8260B	3/12/2020	CJR	1
tert-Butylbenzene	< 1.22	ug/l	1.22	3.8	2	2	8260B	3/12/2020	CJR	1
sec-Butylbenzene	< 0.64	ug/l	0.64		2	2	8260B	3/12/2020	CJR	1
n-Butylbenzene	< 0.56	ug/l	0.56	1.78	2	2	8260B	3/12/2020	CJR	1
Carbon Tetrachloride	< 0.62	ug/l	0.62	1.96	2	2	8260B	3/12/2020	CJR	1
Chlorobenzene	< 0.78	ug/l	0.78	2.4	2	2	8260B	3/12/2020	CJR	1
Chloroethane	< 2.2	ug/l	2.2	7.2	2	2	8260B	3/12/2020	CJR	1
Chloroform	< 0.88	ug/l	0.88	2.8	2	2	8260B	3/12/2020	CJR	1
Chloromethane	< 1.6	ug/l	1.6	5	2	2	8260B	3/12/2020	CJR	1
2-Chlorotoluene	< 0.64	ug/l	0.64		2	2	8260B	3/12/2020	CJR	1
4-Chlorotoluene	< 0.6	ug/l	0.6	1.92	2	2	8260B	3/12/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 1.64	ug/l	1.64	5.2	2	2	8260B	3/12/2020	CJR	1
Dibromochloromethane	< 0.46	ug/l	0.46	1.48	2	2	8260B	3/12/2020	CJR	1
1,4-Dichlorobenzene	< 0.72	ug/l	0.72	2.2	2	2	8260B	3/12/2020	CJR	1
1,3-Dichlorobenzene	< 0.62	ug/l	0.62	1.96	2	2	8260B	3/12/2020	CJR	1
1,2-Dichlorobenzene	< 0.64	ug/l	0.64		2	2	8260B	3/12/2020	CJR	1
Dichlorodifluoromethane	< 0.9	ug/l	0.9	2.8	2	2	8260B	3/12/2020	CJR	1
1,2-Dichloroethane	< 0.78	ug/l	0.78	2.6	2	2	8260B	3/12/2020	CJR	1
1,1-Dichloroethane	< 0.92	ug/l	0.92	3	2	2	8260B	3/12/2020	CJR	1
1,1-Dichloroethene	< 1	ug/l	1	3.2	2	2	8260B	3/12/2020	CJR	1
cis-1,2-Dichloroethene	< 0.78	ug/l	0.78	2.4	2	2	8260B	3/12/2020	CJR	1
trans-1,2-Dichloroethene	< 0.74	ug/l	0.74	2.4	2	2	8260B	3/12/2020	CJR	1
1,2-Dichloropropane	< 0.76	ug/l	0.76	2.4	2	2	8260B	3/12/2020	CJR	1
1,3-Dichloropropane	< 0.7	ug/l	0.7	2.2	2	2	8260B	3/12/2020	CJR	1
trans-1,3-Dichloropropene	< 0.6	ug/l	0.6	1.88	2	2	8260B	3/12/2020	CJR	1
cis-1,3-Dichloropropene	< 0.72	ug/l	0.72	2.2	2	2	8260B	3/12/2020	CJR	1
Di-isopropyl ether	< 0.68	ug/l	0.68	2.2	2	2	8260B	3/12/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.48	ug/l	0.48	1.5	2	2	8260B	3/12/2020	CJR	1
Ethylbenzene	< 0.64	ug/l	0.64		2	2	8260B	3/12/2020	CJR	1
Hexachlorobutadiene	< 1.44	ug/l	1.44	4.6	2	2	8260B	3/12/2020	CJR	1
Isopropylbenzene	< 0.64	ug/l	0.64		2	2	8260B	3/12/2020	CJR	1
p-Isopropyltoluene	< 0.94	ug/l	0.94	3	2	2	8260B	3/12/2020	CJR	1
Methylene chloride	< 2.64	ug/l	2.64	8.42	2	2	8260B	3/12/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.94	ug/l	0.94	3	2	2	8260B	3/12/2020	CJR	1
Naphthalene	< 2.2	ug/l	2.2	7.2	2	2	8260B	3/12/2020	CJR	1
n-Propylbenzene	< 0.66	ug/l	0.66	2.2	2	2	8260B	3/12/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.74	ug/l	0.74	2.4	2	2	8260B	3/12/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 1.76	ug/l	1.76	5.6	2	2	8260B	3/12/2020	CJR	1
Tetrachloroethene	188	ug/l	0.66		2	2	8260B	3/12/2020	CJR	1
Toluene	< 0.52	ug/l	0.52	1.66	2	2	8260B	3/12/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.88	ug/l	0.88	2.8	2	2	8260B	3/12/2020	CJR	1



**Project Name** EVA MANOR-PLEASANT PRAIRIE  
**Project #** 360-006-009

**Invoice #** E37607

**Lab Code** 5037607B  
**Sample ID** MW-8  
**Sample Matrix** Water  
**Sample Date** 3/9/2020

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
1,2,3-Trichlorobenzene	< 2	ug/l	2	6.4	2	8260B		3/12/2020	CJR	1
1,1,1-Trichloroethane	< 0.6	ug/l	0.6	1.9	2	8260B		3/12/2020	CJR	1
1,1,2-Trichloroethane	< 0.72	ug/l	0.72	2.2	2	8260B		3/12/2020	CJR	1
Trichloroethene (TCE)	< 0.94	ug/l	0.94	3	2	8260B		3/12/2020	CJR	1
Trichlorofluoromethane	< 0.84	ug/l	0.84	2.6	2	8260B		3/12/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.6	ug/l	0.6	1.92	2	8260B		3/12/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.64	ug/l	0.64	2	2	8260B		3/12/2020	CJR	1
Vinyl Chloride	< 0.4	ug/l	0.4	1.3	2	8260B		3/12/2020	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.6	2	8260B		3/12/2020	CJR	1
o-Xylene	< 0.76	ug/l	0.76	2.4	2	8260B		3/12/2020	CJR	1
SUR - Dibromofluoromethane	103	REC %			2	8260B		3/12/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	126	REC %			2	8260B		3/12/2020	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			2	8260B		3/12/2020	CJR	1
SUR - Toluene-d8	110	REC %			2	8260B		3/12/2020	CJR	1

**Project Name** EVA MANOR-PLEASANT PRAIRIE  
**Project #** 360-006-009

**Invoice #** E37607

**Lab Code** 5037607C  
**Sample ID** MW-9  
**Sample Matrix** Water  
**Sample Date** 3/9/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33		1	8260B		3/13/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		3/13/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33		1	8260B		3/13/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		3/13/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		3/13/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		3/13/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/13/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		3/13/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		3/13/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		3/13/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		3/13/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		3/13/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		3/13/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		3/13/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		3/13/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		3/13/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		3/13/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		3/13/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		3/13/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		3/13/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		3/13/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		3/13/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		3/13/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		3/13/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		3/13/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		3/13/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		3/13/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		3/13/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		3/13/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		3/13/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/13/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/13/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		3/13/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		3/13/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		3/13/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	2.8	1	8260B		3/13/2020	CJR	1
Tetrachloroethene	2.09	ug/l	0.33		1	8260B		3/13/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/13/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		3/13/2020	CJR	1

**Project Name** EVA MANOR-PLEASANT PRAIRIE  
**Project #** 360-006-009

**Invoice #** E37607

**Lab Code** 5037607C  
**Sample ID** MW-9  
**Sample Matrix** Water  
**Sample Date** 3/9/2020

	<b>Result</b>	<b>Unit</b>	<b>LOD</b>	<b>LOQ</b>	<b>Dil</b>	<b>Method</b>	<b>Ext Date</b>	<b>Run Date</b>	<b>Analyst</b>	<b>Code</b>
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		3/13/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		3/13/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		3/13/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/13/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		3/13/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		3/13/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/13/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/13/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		3/13/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		3/13/2020	CJR	1
SUR - Toluene-d8	109	REC %			1	8260B		3/13/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	115	REC %			1	8260B		3/13/2020	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1	8260B		3/13/2020	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		3/13/2020	CJR	1

**Project Name** EVA MANOR-PLEASANT PRAIRIE  
**Project #** 360-006-009

**Invoice #** E37607

**Lab Code** 5037607D  
**Sample ID** MW-10  
**Sample Matrix** Water  
**Sample Date** 3/9/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.33	ug/l	0.33		1	8260B		3/13/2020	CJR	1
Bromobenzene	< 0.26	ug/l	0.26	0.84	1	8260B		3/13/2020	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33		1	8260B		3/13/2020	CJR	1
Bromoform	< 0.65	ug/l	0.65	2.1	1	8260B		3/13/2020	CJR	1
tert-Butylbenzene	< 0.61	ug/l	0.61	1.9	1	8260B		3/13/2020	CJR	1
sec-Butylbenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
n-Butylbenzene	< 0.28	ug/l	0.28	0.89	1	8260B		3/13/2020	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		3/13/2020	CJR	1
Chlorobenzene	< 0.39	ug/l	0.39	1.2	1	8260B		3/13/2020	CJR	1
Chloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		3/13/2020	CJR	1
Chloroform	< 0.44	ug/l	0.44	1.4	1	8260B		3/13/2020	CJR	1
Chloromethane	< 0.8	ug/l	0.8	2.5	1	8260B		3/13/2020	CJR	1
2-Chlorotoluene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
4-Chlorotoluene	< 0.3	ug/l	0.3	0.96	1	8260B		3/13/2020	CJR	1
1,2-Dibromo-3-chloropropane	< 0.82	ug/l	0.82	2.6	1	8260B		3/13/2020	CJR	1
Dibromochloromethane	< 0.23	ug/l	0.23	0.74	1	8260B		3/13/2020	CJR	1
1,4-Dichlorobenzene	< 0.36	ug/l	0.36	1.1	1	8260B		3/13/2020	CJR	1
1,3-Dichlorobenzene	< 0.31	ug/l	0.31	0.98	1	8260B		3/13/2020	CJR	1
1,2-Dichlorobenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
Dichlorodifluoromethane	< 0.45	ug/l	0.45	1.4	1	8260B		3/13/2020	CJR	1
1,2-Dichloroethane	< 0.39	ug/l	0.39	1.3	1	8260B		3/13/2020	CJR	1
1,1-Dichloroethane	< 0.46	ug/l	0.46	1.5	1	8260B		3/13/2020	CJR	1
1,1-Dichloroethene	< 0.5	ug/l	0.5	1.6	1	8260B		3/13/2020	CJR	1
cis-1,2-Dichloroethene	< 0.39	ug/l	0.39	1.2	1	8260B		3/13/2020	CJR	1
trans-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.2	1	8260B		3/13/2020	CJR	1
1,2-Dichloropropane	< 0.38	ug/l	0.38	1.2	1	8260B		3/13/2020	CJR	1
1,3-Dichloropropane	< 0.35	ug/l	0.35	1.1	1	8260B		3/13/2020	CJR	1
trans-1,3-Dichloropropene	< 0.3	ug/l	0.3	0.94	1	8260B		3/13/2020	CJR	1
cis-1,3-Dichloropropene	< 0.36	ug/l	0.36	1.1	1	8260B		3/13/2020	CJR	1
Di-isopropyl ether	< 0.34	ug/l	0.34	1.1	1	8260B		3/13/2020	CJR	1
EDB (1,2-Dibromoethane)	< 0.24	ug/l	0.24	0.75	1	8260B		3/13/2020	CJR	1
Ethylbenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
Hexachlorobutadiene	< 0.72	ug/l	0.72	2.3	1	8260B		3/13/2020	CJR	1
Isopropylbenzene	< 0.32	ug/l	0.32		1	8260B		3/13/2020	CJR	1
p-Isopropyltoluene	< 0.47	ug/l	0.47	1.5	1	8260B		3/13/2020	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		3/13/2020	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/13/2020	CJR	1
Naphthalene	< 1.1	ug/l	1.1	3.6	1	8260B		3/13/2020	CJR	1
n-Propylbenzene	< 0.33	ug/l	0.33	1.1	1	8260B		3/13/2020	CJR	1
1,1,2,2-Tetrachloroethane	< 0.37	ug/l	0.37	1.2	1	8260B		3/13/2020	CJR	1
1,1,1,2-Tetrachloroethane	< 0.88	ug/l	0.88	2.8	1	8260B		3/13/2020	CJR	1
Tetrachloroethene	< 0.33	ug/l	0.33		1	8260B		3/13/2020	CJR	1
Toluene	< 0.26	ug/l	0.26	0.83	1	8260B		3/13/2020	CJR	1
1,2,4-Trichlorobenzene	< 0.44	ug/l	0.44	1.4	1	8260B		3/13/2020	CJR	1

**Project Name** EVA MANOR-PLEASANT PRAIRIE  
**Project #** 360-006-009

**Invoice #** E37607

**Lab Code** 5037607D  
**Sample ID** MW-10  
**Sample Matrix** Water  
**Sample Date** 3/9/2020

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,3-Trichlorobenzene	< 1	ug/l	1	3.2	1	8260B		3/13/2020	CJR	1
1,1,1-Trichloroethane	< 0.3	ug/l	0.3	0.95	1	8260B		3/13/2020	CJR	1
1,1,2-Trichloroethane	< 0.36	ug/l	0.36	1.1	1	8260B		3/13/2020	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		3/13/2020	CJR	1
Trichlorofluoromethane	< 0.42	ug/l	0.42	1.3	1	8260B		3/13/2020	CJR	1
1,2,4-Trimethylbenzene	< 0.3	ug/l	0.3	0.96	1	8260B		3/13/2020	CJR	1
1,3,5-Trimethylbenzene	< 0.32	ug/l	0.32	1	1	8260B		3/13/2020	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		3/13/2020	CJR	1
m&p-Xylene	< 1.1	ug/l	1.1	3.3	1	8260B		3/13/2020	CJR	1
o-Xylene	< 0.38	ug/l	0.38	1.2	1	8260B		3/13/2020	CJR	1
SUR - Toluene-d8	109	REC %				8260B		3/13/2020	CJR	1
SUR - 1,2-Dichloroethane-d4	122	REC %				8260B		3/13/2020	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %				8260B		3/13/2020	CJR	1
SUR - Dibromofluoromethane	99	REC %				8260B		3/13/2020	CJR	1

"J" Flag: Analyte detected between LOD and LOQ

LOD Limit of Detection

LOQ Limit of Quantitation

**Code**      **Comment**

1      Laboratory QC within limits.

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

**Authorized Signature**

## Environmental Lab, Inc.

www.synergy-lab.net  
 1990 Prospect Ct. • Appleton, WI 54914  
 920-830-2455 • mrsynergy@wi.twcbc.com

**Sample Handling Request** 3/13

Rush Analysis Date Required: 3/13  
 (Rushes accepted only with prior authorization)  
 Normal Turn Around 3 days

Lab I.D. #

QUOTE # :

Project #: 360-006-009

Sampler: (signature) *Tim Petrich*

Project (Name / Location): Eya Manor - Pleasant Prairie

Reports To: *Tim Petrich* Invoice To:

Company: *Endpoint Solutions* Company:

Address: *6871 S. Lovers Lane* Address: *Same*

City State Zip: *Franklin WI* City State Zip:

Phone: *414 858 1210* Phone:

Email: Email:

**Analysis Requested**

**Other Analysis**

Lab I.D.	Sample I.D.	Collection		Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 524.2)	VOC (EPA 8260)	VOC AIR (TO - 15)	8-RCRA METALS	PID/FID	
		Date	Time																					
5037607A	MW-3	3/9/20	230	N	3	GW	<i>HCl</i>																	
B	MW-8		210	N	3	GW	<i>HCl</i>													X				
C	MW-9		150	N	3	GW	<i>HCl</i>													X				
D	MW-10		130	N	3	GW	<i>HCl</i>													X				

Comments/Special Instructions (\*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge, etc.)

Sample Integrity - To be completed by receiving lab.

Method of Shipment: *GC*

Temp. of Temp. Blank: \_\_\_\_\_ °C On Ice:

Cooler seal intact upon receipt:  Yes  No

Retrieved By: (sign)

*Tim Petrich*

Time: *1300* Date: *3/10/20*

Received By: (sign)

*Ch...*

Time: *8:00*

Date: *3/11/20*

**APPENDIX C**

TRANSMITTAL OF GROUNDWATER MONITORING DATA COVER LETTERS

# **Endpoint Solutions**

6871 South Lovers Lane  
Franklin, WI 53132  
Telephone: (414) 427-1200  
Fax: (414) 427-1259  
[www.endpointcorporation.com](http://www.endpointcorporation.com)

Mr. Jason Jabs  
2023 91<sup>st</sup> Street  
Pleasant Prairie, WI 53158

March 17, 2020

**Subject: Transmittal of Groundwater Monitoring Data**  
Eva Manor  
2103-2133 91<sup>st</sup> Street, Pleasant Prairie, Wisconsin

Dear Jason:

The Wisconsin Department of Natural Resources (WDNR) recently requested additional samples be collected from the groundwater monitoring well (MW-8) installed on your property prior to approving the closure of the environmental repair program (ERP) case on the adjoining Eva Manor site to the west of your property. The results from the recent sampling events are consistent with results from previous samples collected from the monitoring well.

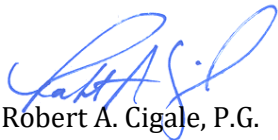
A summary of the results and a figure showing the locations of the wells is attached for your reference. If the WDNR agrees with our closure request, the monitoring well will be abandoned, removing the aboveground portions of the well.

## **CLOSING**

Thank you for your continued cooperation. If you have any questions regarding the information contained in this letter or how the process will proceed, please feel free to contact me via telephone at 414-858-1202 or via email at [bob@endpointcorporation.com](mailto:bob@endpointcorporation.com).

Sincerely,

# **Endpoint Solutions**



Robert A. Cigale, P.G.  
Principal Consultant

Attachments: Table A.1.a  
Figure 2  
Analytical Data  
Chain-of-Custody Forms



# **Endpoint Solutions**

6871 South Lovers Lane  
Franklin, WI 53132  
Telephone: (414) 427-1200  
Fax: (414) 427-1259  
[www.endpointcorporation.com](http://www.endpointcorporation.com)

Mr. Joseph M. Cardamone III  
Kenosha County Corporation Counsel  
912 – 56<sup>th</sup> Street, LL13  
Kenosha, WI 53140-3747

March 17, 2020

**Subject: Transmittal of Groundwater Monitoring Data**  
Eva Manor  
2103-2133 91<sup>st</sup> Street, Pleasant Prairie, Wisconsin

Dear Mr. Cardamone:

The Wisconsin Department of Natural Resources (WDNR) recently requested monitoring wells be installed on the property located at 2019 91<sup>st</sup> Street, owned by Kenosha County, prior to approving the closure of the environmental repair program (ERP) case on the adjoining Eva Manor site to the west of your property. On February 14, 2020, Kenosha County provided Bear Development LLC permission to access the property to install and sample two (2) groundwater monitoring wells (MW-9 and MW-10). The results from two (2) recent sampling events indicate low-level concentrations of tetrachloroethene (PCE) in the samples collected from monitoring well MW-9, but no volatile organic compounds (VOCs) were detected in the samples collected from monitoring well MW-10. Please note, while the concentrations of PCE detected in monitoring well MW-9 exceeded the preventive action limit (PAL) of 0.5 micrograms per liter ( $\mu\text{g/L}$ ), the concentrations were less than the enforcement standard of 5  $\mu\text{g/L}$ .


A summary of the results and a figure showing the locations of the wells is attached for your reference. If the WDNR agrees with our closure request, the monitoring wells will be abandoned, removing the aboveground portions of the wells.

## **CLOSING**

Thank you for your continued cooperation. If you have any questions regarding the information contained in this letter or how the process will proceed, please feel free to contact me via telephone at 414-858-1202 or via email at [bob@endpointcorporation.com](mailto:bob@endpointcorporation.com).

Sincerely,

# **Endpoint Solutions**



Robert A. Cigale, P.G.  
Principal Consultant

Attachments: Table A.1.a  
Figure 2  
Analytical Data  
Chain-of-Custody Forms

**APPENDIX D**

NOTIFICATIONS OF RESIDUAL CONTAMINATION AND/OR CONTINUING OBLIGATIONS

# **Endpoint Solutions**

6871 South Lovers Lane  
Franklin, WI 53132  
Telephone: (414) 427-1200  
Fax: (414) 427-1259  
[www.endpointcorporation.com](http://www.endpointcorporation.com)

Mr. Joseph M. Cardamone III  
Kenosha County Corporation Counsel  
912 - 56<sup>th</sup> Street, LL13  
Kenosha, WI, 53140-3747

March 20, 2020

**Subject: Notification of Residual Contamination and/or Continuing Obligations  
2019 91<sup>st</sup> Street  
Pleasant Prairie, Wisconsin**

Dear Mr. Cardamone:

We are providing this letter to inform Kenosha County of the location and extent of contamination remaining on property owned by Kenosha County, and of certain long-term responsibilities (continuing obligations) for which the County may become responsible. We have investigated a release of: volatile organic compounds (VOCs) to the groundwater on 2103 - 2133 91st Street, Pleasant Prairie, WI, 53158 that has shown that contamination has migrated onto County property at 2019 91<sup>st</sup> Street.

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

You have 30 days to comment on the attached legal description of your property and on the proposed closure request:

2348-D-2 PT SW 1/4 SW 1/4 SEC 18 T 1 R 23 BEG 401.4 FT E OF SW COR 1/4 E 198.6 FT N'LY 1315.2 FT TO PT IN HY 600 FT E OF W LN 1/4 W'LY 198.6 FT S 1316.8 FT TO BEG EX W 70 FT DOC#1523099 DOC #1533042 DOC#1744144 DOC#1744145/1745819 CORR DOC#1744146 DOC#1744147/1745821 CORR DOC#1848918

Please review the enclosed legal description of your property, and notify Robert Cigale with Endpoint Solutions Corp. at 6871 S. Lovers Lane, Franklin, WI, 53132 within the next 30 days if the legal description is incorrect.

The DNR will not review the closure request for at least 30 days after the date of receipt of this letter. As an affected property owner, the County has a right to contact the DNR to provide any technical information that the County may have that indicates that closure should not be granted for this site. If the County would like to submit any information that is relevant to this closure request, or if the County wants to waive the 30-day comment period, the County should mail that information to the Ms. Shanna Laube-Anderson with the WDNR at 141 NW Barstow Street, Room 180, Waukesha, WI, 53188, or via email at [Shanna.LaubeAnderson@wisconsin.gov](mailto:Shanna.LaubeAnderson@wisconsin.gov).

## **YOUR LONG-TERM RESPONSIBILITIES AS A PROPERTY OWNER AND OCCUPANT**

The responses include not installing a shallow groundwater well. The continuing obligations being proposed that affect County property are listed below, under the heading Continuing Obligations. Under s. 292.12 (5), Wis. Stats., current and future owners and occupants of this property are responsible for complying with continuing obligations imposed as part of an approved closure.

The fact sheet "*Continuing Obligations for Environmental Protection*" (DNR publication RR 819) has been included with this letter, to help explain the responsibilities you may have for maintenance of a certain continuing obligation, the limits of any liability for investigation and cleanup of contamination, and how these differ. If the fact sheet is lost, you may obtain copies at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

## **CONTRACT FOR RESPONSIBILITY FOR CONTINUING OBLIGATION**

Before we request closure, we have informed the DNR that Bear Development, LLC is responsible for the continuing obligations on the County property. Under s. 292.12, Wis. Stats., the responsibility for maintaining all necessary continuing obligations for your property will fall on the County or any subsequent property owner, unless another person has a legally enforceable responsibility to comply with the requirements of the final closure letter. If the County needs more time to finalize an agreement on the responsibility for the continuing obligations on the Property, the County may request additional time from the DNR contact identified in **Contact Information**.

(Note: Future property owners would need to negotiate a new agreement.)

## **REMAINING CONTAMINATION**

Groundwater Contamination: Groundwater contamination originated at the property located at: 2103 - 2133 91st Street, Pleasant Prairie, WI, 53158. Contaminated groundwater has migrated onto County property at: 2019 91st Street, Pleasant Prairie, WI. The levels of tetrachloroethene (PCE) contamination (2.09 micrograms per liter [ $\mu\text{g/L}$ ]) in the groundwater on the property are above the state groundwater preventive action limit (PAL) found in ch. NR 140, Wis. Adm. Code.

However, according to the investigative data, this groundwater contaminant plume is stable or receding and will naturally degrade over time. We believe that allowing natural attenuation, or the breakdown of contaminants in groundwater due to naturally occurring processes, to complete the cleanup at this site will meet the case closure requirements of ch. NR 726, Wis. Adm. Code. As part of my request for case closure, we are requesting that the DNR accept natural attenuation as the final remedy for this site.

The following DNR fact sheet (RR 671, "*What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater*") has been included with this notification, to help explain the use of natural attenuation as a remedy. If the fact sheet is lost, you may obtain a copy at <http://dnr.wi.gov/files/PDF/pubs/rr/RR671.pdf>.

## **WELL CONSTRUCTION REQUIREMENTS**

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

DNR approval prior to well construction or reconstruction is required in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. Special well construction standards may be necessary to protect the well from the remaining contamination. The property owner needs to first obtain approval from a regional water supply specialist in DNR's Drinking

Water and Groundwater Program. A well driller can help complete this form. The well construction application, form 3300-254, is on the internet at <https://dnr.wi.gov/files/PDF/forms/3300/3300-254.pdf>.

## **SITE CLOSURE**

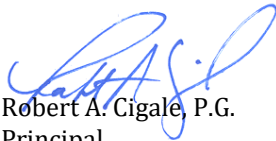
If the DNR grants closure, the County will receive a letter which defines the specific continuing obligations on the property. The status of the site (open or closed) may also be checked by searching BRRTS on the Web. You may view or download a copy of the closure letter (sent to the responsible party) from BRRTS on the Web. You may also request a copy of the closure letter from the responsible party or by contacting the DNR contact. The final closure letter will contain a description of the continuing obligation, any prohibitions on activities and will include any applicable maintenance plan.

## **CLOSING**

If you have any questions regarding this notification, please feel free to contact me directly via telephone at 414-858-1202 or via email at bob@endpointcorporation.com.

Sincerely,

**Endpoint Solutions**



Robert A. Cigale, P.G.  
Principal

cc: Dan Szczap – Bear Development, LLC

## **ATTACHMENTS**

Contact Information

Deed

Draft Maintenance Plan

RR819 – Continuing Obligations for Environmental Protection

RR671 – What Landowners Should Know: Information About Using Natural Attenuation to Clean Up Contaminated Groundwater

**CONTACT INFORMATION**

## Notification of Continuing Obligations and Residual Contamination

**The affected property is:**

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

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

### Contact Information

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

Responsible Party Name Bear Development LLC

Contact Person Last Name Szczap	First Dan	MI	Phone Number (include area code) (262) 842-0556
Address 4011 80th Street	City Kenosha	State WI	ZIP Code 53142
E-mail dan@beardevelopment.com			

**Name of Party Receiving Notification:**

Business Name, if applicable: Kenosha County

Title Mr.	Last Name Cardamone III	First Joseph	MI M	Phone Number (include area code)
Address 912 - 56th Street, LL13		City Kenosha	State WI	ZIP Code 53140-3747

**Site Name and Source Property Information:**

Site (Activity) Name Eva Manor

Address 2103 - 2133 91st Street	City Pleasant Prairie	State WI	ZIP Code 53158
DNR ID # (BRRTS#) 02-30-543562	(DATCP) ID #		

**Contacts for Questions:**

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

**Environmental Consultant:** Endpoint Solutions Corp.

Contact Person Last Name Cigale	First Robert	MI A	Phone Number (include area code) (414) 858-1202
Address 6871 S. Lovers Lane	City Franklin	State WI	ZIP Code 53132
E-mail bob@endpointcorporation.com			

**Department Contact:**

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

**Department of:** Natural Resources (DNR)      **Office:**      Waukesha

Address 141 NW Barstow Street, Room 180	City Waukesha	State WI	ZIP Code 53188
Contact Person Last Name Laube	First Shanna	MI	Phone Number (include area code) (262) 574-2142
E-mail (Firstname.Lastname@wisconsin.gov) Shanna.LaubeAnderson@wisconsin.gov			

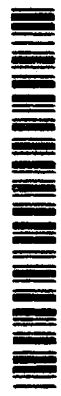




COUNTY TAX DEED

Return to: Kenosha Co. Clerk,  
1010 56th St., Kenosha WI 53140

Tax Parcel Number # 93-4-123-183-0440



DOCUMENT  
1848918

RECORDED  
At Kenosha County, Kenosha WI 53140  
JoEllyn H. Storz, Register of Deeds  
August 26, 2019 3:25 PM  
\$30.00  
14  
Pages 1

TO ALL TO WHOM THESE PRESENTS  
SHALL COME, GREETING:

WHEREAS KENOSHA COUNTY, STATE OF WISCONSIN, has deposited in the office of the County Clerk of the COUNTY OF KENOSHA, in the State of Wisconsin, One (1) Certificate of Teri A. Jacobson, the then County Treasurer of said County, whereby it appears, as the fact is, that the following described piece or parcel of land lying and being situated in the County of Kenosha, State of Wisconsin, to-wit:

Exempt #14 (Foreclosure) (Joshua T. Jabs)

FEE EXEMPT

This document is exempt from fee per sec. 77.25(14) Stats.

# 14

Part of the Southwest Quarter of the Southwest Quarter of Section 18, Town 1 North, Range 23 East of the Fourth Principal Meridian, and being more particularly described as follows: Beginning at a point on the South line of said Southwest Quarter of Section 18, which point is 401.4 feet East from the Southwest corner of said Quarter Section and running thence East along and upon the South line of said Quarter Section 198.6 feet; thence northerly 1315.2 feet and to the point in the highway which is 600 feet East of the West line of said Quarter Section thence Westerly along and upon the centerline of said highway, 198.6 feet; thence South and parallel with the West line of said Quarter Section 1316.8 feet and to the point of beginning and containing 6 acres, more or less; and lying and being in the Village of Pleasant Prairie, in the County of Kenosha and State of Wisconsin, EXCEPTING therefrom the West 70 feet thereof.

Was, for non-payment of taxes, sold by the said Treasurer of said County, at public auction at the County Treasurer's office, in the County of Kenosha, on the 1<sup>st</sup> day of September, in the year of our Lord, Two Thousand Sixteen, to the said Kenosha County for the sum of Four Thousand Four Hundred Seven dollars and 58 cents in the whole, which sum was the amount of taxes assessed and due, and unpaid on said tract of land, together with the costs and charges of such sale, due therewith at the time of making such sale, the whole of which sum of money has been paid by the aforesaid purchaser;

AND WHEREAS it further appears, as the fact is, that the owners or claimants of said lands have not redeemed from said sale the lands which were sold as aforesaid, and said lands are now unredeemed from such sale, whereby said described lands have become forfeited and the said purchaser, its successors or assigns, is entitled to a conveyance thereof:

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS, that the County of Kenosha in said State, and the State of Wisconsin, in consideration of the said money aforesaid, and the premises, and in conformity to law, has given and hereby do give, grant and convey the tract of land above described, together with the hereditament and appurtenances, to the said Kenosha County, and to its successors and assigns, to their sole use and benefit FOREVER.

IN TESTIMONY WHEREOF, I, Mary T. Kubicki, the County Clerk of the County of Kenosha, have executed this Deed, pursuant to and in virtue of the authority in me vested by the statutes of the State of Wisconsin, and for and on behalf of said State, and the County of Kenosha aforesaid, and have hereunto subscribed my name officially, and affixed the seal of the said County, at Kenosha, in said County of Kenosha this 26 day of August, in the year of our Lord, Two Thousand Nineteen.

Mary T. Kubicki  
Mary T. Kubicki, County Clerk, Kenosha County, WI

ACKNOWLEDGMENT

STATE OF WISCONSIN)

SS. Kenosha County)

Personally came before me this 26 day of August, 2019  
Mary T. Kubicki, to me known to be the person(s) who  
executed the foregoing instrument and acknowledge the same.

This instrument was drafted by:  
Mary T. Kubicki

\* Regina Bachochin  
Regina Bachochin  
Notary Public Kenosha County, WI  
Comm. Exp. date: 12/06/2020



## D.1 - COVER / BARRIER MAINTENANCE PLAN

March 20, 2020

Subject Property Name: Eva Manor

Subject Property Address: 2103 – 2133 91<sup>st</sup> Street, Pleasant Prairie, Wisconsin

BRRTS #02-30-543562

### Legal Description:

Commencing at the southwest corner of the Southwest 1/4 of said Section 18;  
Thence North 02°31'59" West along the west line of said Southwest 1/4, 867.55 feet;  
Thence North 88°43'57" E, 50.01 feet to the east right of way line of 22nd Avenue and the Point of Beginning;

Thence North 02°31'59" West along said east right of way line, 400.37 feet to the south right of way line of 91st Street;  
Thence North 89°32'01" East along said south right of way line, 351.22 feet to the east line of Lot 1 of Certified Survey Map No. 2616;  
Thence South 02°16'02" East along said east line, 395.42 feet to the south line of said Lot 1;  
Thence South 88°43'57" West along said south line, 349.24 feet to the Point of Beginning.

Containing 139,303 square feet (3.1980 acres) of land more or less.

Parcel ID # 93-4-123-183-0480

### Introduction

This document is the Maintenance Plan for a cover / barrier at the above-referenced subject property in accordance with the requirements of s. NR 724.13 (2), Wis. Adm. Code. The maintenance activities relate to the existing cover / barrier which addresses or occupies the area over the contaminated soil and groundwater.

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

- The case file in the (Wisconsin Department of Natural Resources (WDNR) Southeast office;
- [BRRTS on the Web](#) (WDNR's internet-based database of contaminated sites) for the link to a PDF for subject property-specific information at the time of closure and on continuing obligations;
- [RR Sites Map/GIS Registry layer](#) for a map view of the subject property; and,
- The DNR project manager for this location within Milwaukee County (currently Andy Alles).

### **D.1. Descriptions:**

#### Background

The subject property consists of one (1) parcels (Tax Key 93-4-123-183-0480) totaling approximately 3.19 acres. The Site has been redeveloped with the following buildings: a 12,000 square foot, 4 story, 42-unit apartment building; a 5,500 square foot, 2 story, 8-unit apartment building; and a slab on-grade garage structure. Historically, the Site contained a slab on-grade strip mall structure which was razed in 2007. Prior to redevelopment in 2018, the site was a vacant vegetated area. Access to the site is from 91<sup>st</sup> Street.

## **Description of Contamination**

The source of the impacts on the subject property is known to be related to the operation of a former dry-cleaning operation. Saturated soil contaminated by volatile organic compounds (VOCs) is located between approximately two (2) to twelve (12)-feet below ground surface near the former dry-cleaner location generally located in the east central portion of the Site. Groundwater contaminated by VOCs is also located between approximately nine (9) to eleven (11)-feet bgs. In general, soil and groundwater contamination on the subject property is primarily located in the area of the former dry cleaner.

The extent of contamination is shown on the attached figure D.2 – Barrier Location Map.

## **Description of the Cover/Barrier to be Maintained**

On the Site, beyond the footprint of the buildings, the cover consists of approximately four (4) to six (6) inches of concrete/asphalt plus underlying stone as shown on the attached **Figure D.2**. Note – minimal areas along the property boundaries are landscaped areas with a soil and vegetative cover. However, these areas are extremely limited and are not assumed to cause significant amounts of infiltration that would lead to further contaminant migration.

The site garage structure and asphalt paved area abutting the garage cover over the contamination that will act as a partial infiltration barrier to minimize future soil-to-groundwater contaminant migration that would violate the groundwater standards in WAC Chapter NR 140. Based on the current residential zoning use of the subject property, the barrier should function as intended unless disturbed. The types of cover at the Site are depicted on the attached **Figure D.2**.

The elevation of the green space to the east of the garages within the delineated area of residually contaminated soils is unchanged. As a large portion of this area included approximately one-half of 2007 Remedial Excavation #2 and all of 2007 Remedial Excavation #3, this area contains residual contamination at four (4) ft bgs within the bounds of 2007 Remedial Excavation #3 and 12 ft bgs within the bounds of 2007 Remedial Excavation #2. Therefore, no additional barrier soils were placed in this area.

The extreme southern extent of the footprint of the storm water detention pond encroaches into the area delineated as containing residually contaminated soils. The storm water pond was over-excavated two (2) feet to allow for the installation of a compacted clay impermeable liner. While the two (2) feet of clean clay was installed throughout the stormwater pond, only the extreme southern extent of the pond required a barrier.

## **Annual Inspection**

The integrity of the building, as well as concrete / asphalt paved surface cover will be inspected once a year, normally in the spring after all snow and ice is gone, for deterioration, cracks and other potential problems that can cause additional infiltration and/or exposure to underlying soils. The inspections will be performed by the property owner or the designated representative. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where soils have become or are likely to become exposed will be documented.

A log of the inspections and any repairs will be maintained by the property owner and is included as D.4, Form 4400-305, Continuing Obligations Inspection and Maintenance Log. The log will include recommendations for necessary repair of any areas where underlying soils are exposed and where infiltration from the surface will not be effectively minimized. Once repairs are completed, they will be documented in the inspection log. A

copy of the maintenance plan and inspection log will be kept at the site; or, if there is no acceptable place (for example, no building is present) to keep it at the Site, at the address of the property owner and available for submittal or inspection by Wisconsin Department of Natural Resources (WDNR) representatives upon their requests.

### **Maintenance Activities**

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs can include patching and filling or larger resurfacing or construction operations of interior or exterior surfaces. In the event that necessary maintenance activities expose the underlying soil, the owner must inform maintenance workers of the potential exposure hazard and provide them with appropriate personal protection equipment (PPE). The owner must also sample any soil that is excavated from the subject property prior to disposal to ascertain if contamination remains. The soil must be treated, stored and disposed of by the owner in accordance with applicable local, state and federal law.

In the event the building or cover overlying the impacted media are removed or replaced, the replacement cover must be equally impervious. Any replacement cover will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the WDNR or its successor.

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

### **Prohibition of Activities and Notification of WDNR Prior to Actions Affecting a Cover**

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

Note, if subject property uses or facility layouts change or are altered as described herein, or if removal, replacement or other changes to a cover, or a building which is acting as a cover, are considered, the subject property owner will contact WDNR at least 45 days before taking such an action, to determine whether further action may be necessary to protect human health, safety, or welfare or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

### **Amendment or Withdrawal of Maintenance Plan**

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

Contact Information

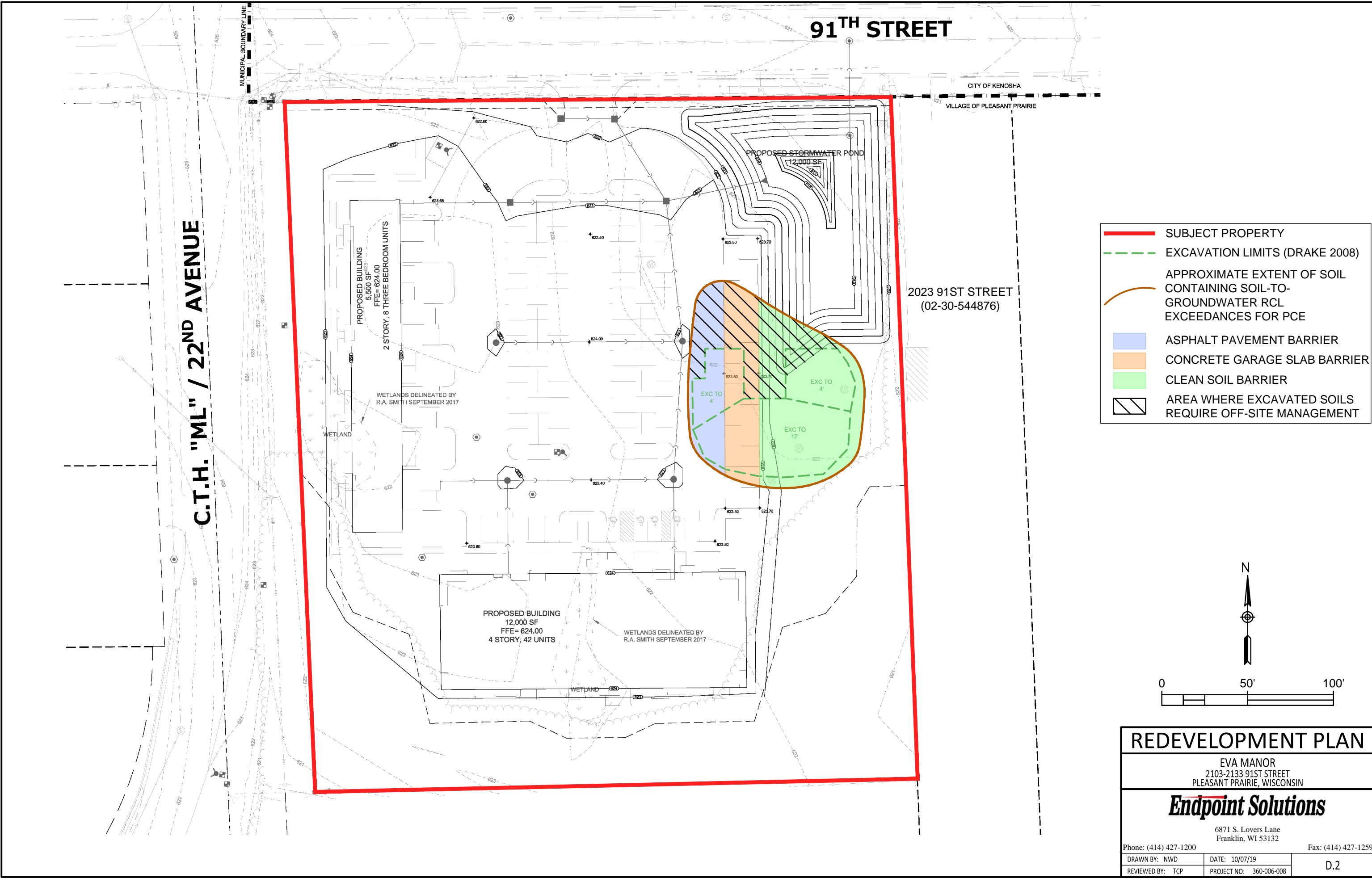
Subject Property Owner: Bear Development LLC  
Mr. Adam Templer  
4011 80<sup>th</sup> Street  
Kenosha, WI 53142  
Phone: (608) 230-6206  
adam@bearreg.com

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

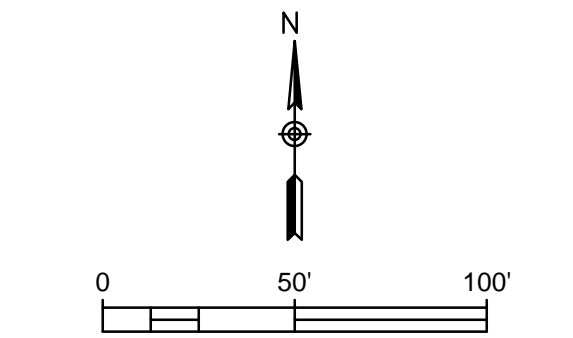
Consultant: Mr. Robert Cigale  
Endpoint Solutions Corp  
6871 S. Lovers Lane  
Franklin, WI 53132  
414-858-1202  
bob@endpointcorporation.com

WDNR: Ms. Shanna Laube-Anderson  
Wisconsin Department of Natural Resources  
141 NW Barstow Street  
Waukesha, WI 53188  
262-574-2142  
Shanna.LaubeAnderson@wisconsin.gov

P:\Bear Development - 360\006 - Eva Manor\CAD\006-008 Closure Figures\Fig D.2\_360-006-008 Redevelopment Plan.dwg



- SUBJECT PROPERTY
- EXCAVATION LIMITS (DRAKE 2008)
- APPROXIMATE EXTENT OF SOIL CONTAINING SOIL-TO-GROUNDWATER RCL EXCEEDANCES FOR PCE
- ASPHALT PAVEMENT BARRIER
- CONCRETE GARAGE SLAB BARRIER
- CLEAN SOIL BARRIER
- AREA WHERE EXCAVATED SOILS REQUIRE OFF-SITE MANAGEMENT



<b>REDEVELOPMENT PLAN</b>		
EVA MANOR 2103-2133 91ST STREET PLEASANT PRAIRIE, WISCONSIN		
<b>Endpoint Solutions</b>		
6871 S. Lovers Lane Franklin, WI 53132		
Phone: (414) 427-1200      Fax: (414) 427-1259		
DRAWN BY: NWD	DATE: 10/07/19	D.2
REVIEWED BY: TCP	PROJECT NO: 360-006-008	



1. View southeasterly of site from entrance along 91<sup>st</sup> Street.

2. View southeasterly of paved parking area and garage structure over the area of residual soil



3. View southerly along garage structure and entrances.

<b>D.3 - SITE PHOTOGRAPHS</b>	
2122 56 <sup>TH</sup> STREET	
KENOSHA, WI	
PROJECT NO: 360-010-018	<b>Endpoint</b>





4. View of garage interiors and concrete floors.

5. View northerly along eastern side of garage structure and stormwater pond.



6. View northerly across the stormwater pond.

<b>D.3 - SITE PHOTOGRAPHS</b>	
2122 56 <sup>TH</sup> STREET	
KENOSHA, WI	
PROJECT NO: 360-010-018	<b>Endpoint</b>

**Directions:** In accordance with s. NR 727.05 (1) (b) 3., Wis. Adm. Code, use of this form for documenting the inspections and maintenance of certain continuing obligations is required. 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.]. When using this form, identify the condition that is being inspected. See the closure approval letter for this site for requirements regarding the submittal of this form to the Department of Natural Resources. A copy of this inspection log is required to be maintained either on the property, or at a location specified in the closure approval letter. Do NOT delete previous inspection results. This form was developed to provide a continuous history of site inspection results. The Department of Natural Resources project manager is identified in the closure letter. The project manager may also be identified from the database, BRRTS on the Web, at <http://dnr.wi.gov/botw/SetUpBasicSearchForm.do>, by searching for the site using the BRRTS ID number, and then looking in the "Who" section.

Activity (Site) Name <b>Eva Manor</b>	BRRTS No. <b>02-30-543562</b>
--	----------------------------------

Inspections are required to be conducted (see closure approval letter):

annually  
 semi-annually  
 other – specify \_\_\_\_\_

When submittal of this form is required, submit the form electronically to the DNR project manager. An electronic version of this filled out form, or a scanned version may be sent to the following email address (see closure approval letter):

Inspection Date	Inspector Name	Item	Describe the condition of the item that is being inspected	Recommendations for repair or maintenance	Previous recommendations implemented?	Photographs taken and attached?
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N
		<input type="checkbox"/> monitoring well <input type="checkbox"/> cover/barrier <input type="checkbox"/> vapor mitigation system <input type="checkbox"/> other:			<input type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N

{Click to Add/Edit Image}

Date added: 08/19/2019



Title: view southeasterly across the site.

{Click to Add/Edit Image}

Date added: 08/19/2019



Title: View southerly across pavement near the garage structure.

{Click to Add/Edit Image}

Date added: 08/19/2019



Title: View northerly across the pavement near the garage structure.

{Click to Add/Edit Image}

Date added: 08/19/2019



Title: View northerly across grass area and stormwater pond.





## Remediation and Redevelopment Program

June 2017

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

### Purpose

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

### Introduction

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

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

## What Are Continuing Obligations?

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

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

## Background

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

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

## Types of Continuing Obligations

### 1. Manage Contaminated Soil that is Excavated

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

## 2. Manage Construction of Water Supply Wells

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

### Other Types of Continuing Obligations

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

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

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

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

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

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

### Changing a Continuing Obligation

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

### Public Information

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

continuing obligations.

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

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

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

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

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

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

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

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

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

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

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

## Required Notifications to Off-Site Property Owners

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

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

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

## More Information

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

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

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

This publication is available in alternative format (large print, Braille, etc.) upon request. Please call for more information. Note: If you need technical assistance or more information, call the Accessibility Coordinator at 608-267-7490 / TTY Access via relay - 711







# Using Natural Attenuation to Clean Up Contaminated Groundwater: What Landowners Should Know

RR-671

December 2016

## What Is Natural Attenuation?

Natural attenuation makes use of natural processes in soil and groundwater to contain the spread of contamination and to reduce the amount of contamination from chemical releases.

Natural attenuation is an *in-situ* treatment method. This means that contaminants are left in place while natural attenuation works on them. Natural attenuation is relied upon to clean up contamination that remains after the source of the contamination is removed. An example of a source of contamination would be a leaking underground petroleum tank.

## How Does Natural Attenuation Work?

Natural attenuation processes work at many sites, but the rate and degree of effectiveness varies from property to property, depending upon the type of contaminants present and the physical, chemical and biological characteristics of the soil and groundwater.

Natural attenuation processes can be divided into two broad categories – destructive and non-destructive. Destructive processes destroy contaminants. The most common destructive process is **biodegradation**.

Non-destructive processes do not destroy the contaminant, but reduce contaminant concentrations in groundwater through **dilution, dispersion or adsorption**.

## Biodegradation

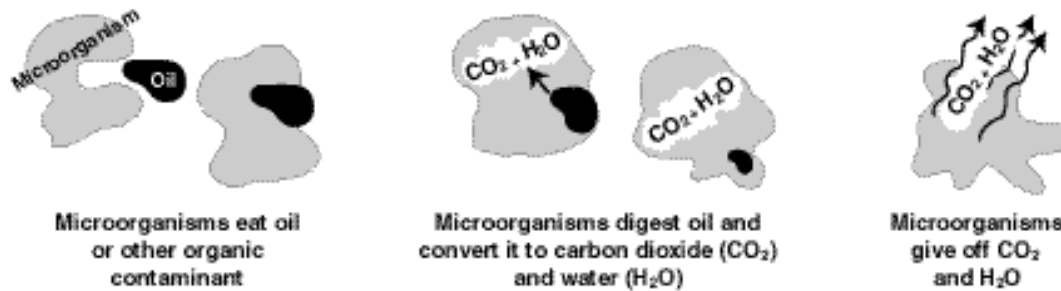
Biodegradation is a process in which micro-organisms that naturally occur in soil and groundwater (e.g. yeast, fungi, or bacteria), break down, or degrade hazardous substances to less toxic or non-toxic substances. Microorganisms, like humans, eat and digest organic compounds for nutrition and energy (organic compounds contain carbon and hydrogen atoms).

Some types of microorganisms can digest organic substances such as fuels or solvents that are hazardous to humans. Microorganisms break down the organic contaminants into harmless products – mainly carbon dioxide and water. Once the contaminants are degraded, the microorganism populations decline because they have used their food sources. These small populations of microorganisms pose no contaminant or health risk.

Many organic contaminants, like petroleum, can be biodegraded by microorganisms in the underground environment. For example, biodegradation processes can effectively cleanse soil and groundwater of hydrocarbon fuels such as gasoline and benzene, toluene, ethylbenzene, and xylene – known as the BTEX compounds, under certain conditions.

Biodegradation can also breakdown other contaminants in groundwater such as trichloroethylene (TCE), a chlorinated solvent used in metal cleaning. However, the processes involved are harder to predict and are less effective at contaminant removal compared to petroleum-contaminated sites.





**Figure 1. Schematic Diagram of Aerobic Biodegradation in Soil**

### **Dilution and Dispersion**

The effects of dilution and dispersion reduce contaminant concentrations but do not destroy contaminants. Clean water from the surface seeps underground to mix with and dilute contaminated groundwater.

Other processes that lead to reduced concentrations of contaminants include clean groundwater flowing into contaminated areas, and the dispersion of pollutants as they spread out and away from the main path of the contaminated plume.

### **Adsorption**

Adsorption occurs when contaminants attach or “sorb” to underground particles. Most oily substances (like petroleum compounds) repel water and escape from the groundwater by attaching to organic matter and clay minerals in the subsurface.

This process holds back or retards contaminant movement and reduces the concentration of contaminants in the groundwater. However, like dilution and dispersion, adsorption does not destroy contaminants.

### **Why Consider Natural Attenuation To Clean Up Soil And Groundwater?**

In certain situations, natural attenuation is an effective, inexpensive cleanup option and the most appropriate way to remediate some contamination problems. Natural attenuation focuses on confirming and monitoring natural remediation processes rather than relying on engineered or “active” technologies (such as pumping groundwater, treating it above ground, then disposing of the treated water).

Contaminants from petroleum are good candidates for natural attenuation because they are among the most easily destroyed by biodegradation. Natural attenuation is non-invasive, which allows treatment to go on below ground, while the surface can continue to be used.

Natural attenuation can also be less costly than active engineered treatment options, and requires no special equipment, energy source, or disposal of treated soil or groundwater.

### **Will Natural Attenuation Work At My Property?**

Whether natural attenuation will work at a particular location is determined by investigating the soil and groundwater. These investigations determine the type of contaminants present, the levels of contamination, and the physical and chemical conditions that lead to biodegradation of the contaminants.

In order to rely on natural attenuation, responsible parties are required to confirm that natural attenuation processes are working by monitoring the soil and groundwater over a period of time to show that the contaminant concentrations are decreasing and that the contamination is no longer spreading.

Those conducting the cleanup need to know whether natural attenuation, or any proposed remedy, will reduce the contaminant concentrations in the soil and groundwater to legally acceptable limits within a reasonable period of time.

Natural attenuation may be an acceptable option for sites where active remediation has occurred and has reduced the concentration of contaminants (for instance, removing leaking underground tanks and contaminated soil).

However, natural attenuation is not an appropriate option at all sites. If the contamination has affected a drinking water well, or has entered a stream or lake, active cleanup options may be necessary to make sure people and the environment are protected from direct contact with the contamination.

The speed or rate of natural attenuation processes is typically slow. Monitoring is necessary to show that concentrations decrease at a sufficient rate to ensure that contaminants will not become a health threat in the future.

### **Closure Of Contaminated Sites Using Natural Attenuation As A Final Remedy**

When contamination is discovered at a property (such as a gas station with leaking underground tanks), the person who is responsible for causing the contamination, and persons having possession or control of hazardous substances that have been discharged, have the responsibility to remove the source of contamination and investigate and clean up the contamination that has escaped into the soil and groundwater.

The contaminant release must be reported to the Wisconsin Department of Natural Resources (DNR) and the site investigation and cleanup are overseen by a state agency. Depending on the type of contaminant, the oversight agency could be the Department of Agriculture, Trade and Consumer Protection or Department of Natural Resources.

When the cleanup has complied with state standards, the person responsible for the contamination will ask the state agency for closure of the case. If natural attenuation is relied upon to finish cleaning up a contaminated property after closure, the responsible person will need to show that contaminant concentrations are not spreading, that contaminant concentrations are stable or decreasing, and that the concentrations will decrease in the future until state groundwater standards are met.

Because natural attenuation processes are slow, it may take many years before the properties with contamination are clean. State rules require that all owners of properties where groundwater contamination has spread must be informed of the contamination below their property.

In addition, the properties with groundwater contamination exceeding state groundwater enforcement standards must be listed on a database to notify future owners and developers of the presence of contamination. If future monitoring occurs and shows that natural attenuation processes have removed the contaminants to state-required cleanup levels, then the properties can be removed from the database.

The state agency will grant closure if the site investigation and monitoring shows that natural attenuation will clean up groundwater to state standards within a reasonable period of time. All state rules for cleanup must be met and the person who is responsible for the contamination must comply with all conditions of the state's closure approval.

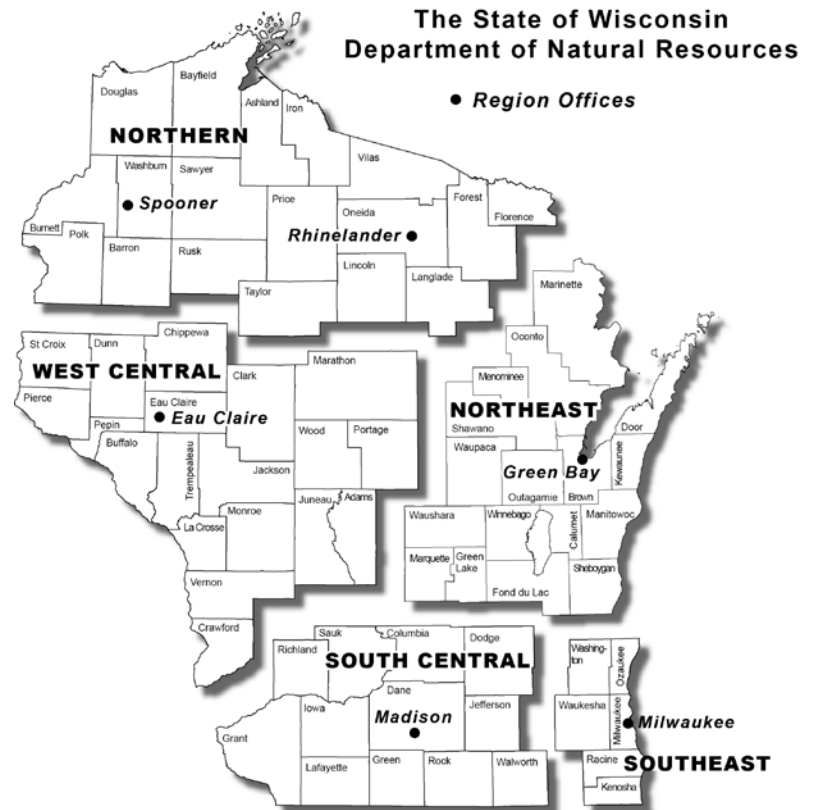
## Publications

The following publications provide additional information on natural attenuation. Websites where these can be downloaded free of charge are also listed.

- *A Citizen's Guide to Bioremediation*, September 2012, EPA 542-F-12-003; [https://www.epa.gov/sites/production/files/2015-04/documents/a\\_citizens\\_guide\\_to\\_bioremediation.pdf](https://www.epa.gov/sites/production/files/2015-04/documents/a_citizens_guide_to_bioremediation.pdf)
- *Commonly Asked Questions Regarding the Use of Natural Attenuation for Petroleum-Contaminated Sites at Federal Facilities*, [www.clu-in.org/download/techfocus/na/na-petrol.pdf](http://www.clu-in.org/download/techfocus/na/na-petrol.pdf)
- *Monitored Natural Attenuation of Petroleum Hydrocarbons: U.S. EPA Remedial Technology Fact Sheet*, May 1999, EPA 600-F-98-021; [www.clu-in.org/download/remed/pet-hyd.pdf](http://www.clu-in.org/download/remed/pet-hyd.pdf)
- *Monitored Natural Attenuation of Chlorinated Solvents*, May 1999, EPA 600-F-98-0022; [www.clu-in.org/download/remed/chl-solv.pdf](http://www.clu-in.org/download/remed/chl-solv.pdf)
- *Guidance on Natural Attenuation for Petroleum Releases, WI DNR, Bureau for Remediation and Redevelopment*, March 2003, PUB-RR-614; [dnr.wi.gov/files/PDF/pubs/rr/RR614.pdf](http://dnr.wi.gov/files/PDF/pubs/rr/RR614.pdf)

## Contact Information

If you have questions about natural attenuation contact a [DNR Environmental Program Associate \(EPA\)](#) in your local DNR regional office. The EPA can direct you to a project manager.



Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.

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

**APPENDIX E**

REVISED FORM 4400-249

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

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

Site Information			
BRRTS No.	VPLE No.		
02-30-543562			
Parcel ID No.			
93-4-123-183-0480			
FID No.	WTM Coordinates		
	X	697898	Y 232006
BRRTS Activity (Site) Name	WTM Coordinates Represent:		
Eva Manor	<input type="checkbox"/> Source Area <input checked="" type="checkbox"/> Parcel Center		
Site Address	City	State	ZIP Code
	2103 - 2133 91st Street	Pleasant Paairie	WI 53158
Acres Ready For Use	3.19		

Responsible Party (RP) Name			
Adam Templer			
Company Name			
Bear Development LLC			
Mailing Address	City	State	ZIP Code
4011 80th Street	Kenosha	WI	53142
Phone Number	Email		
(608) 230-6206	adam@bearreg.com		
<input checked="" type="checkbox"/> Check here if the RP is the owner of the source property.			

Environmental Consultant Name			
Robert Cigale			
Consulting Firm			
Endpoint Solutions Corp.			
Mailing Address	City	State	ZIP Code
6871 S. Lovers Lane	Franklin	WI	53132
Phone Number	Email		
(414) 858-1202	bob@endpointcorporation.com		

**Fees and Mailing of Closure Request**

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

<input checked="" type="checkbox"/> \$1,050 Closure Fee	<input checked="" type="checkbox"/> \$300 Database Fee for Soil
<input checked="" type="checkbox"/> \$350 Database Fee for Groundwater or Monitoring Wells (Not Abandoned)	Total Amount of Payment \$ <u>\$1,700.00</u>
	<input type="checkbox"/> Resubmittal, Fees Previously Paid
- Send one paper copy and one e-copy on compact disk of the entire closure package** to the Regional Project Manager assigned to your site. Submit as *unbound, separate documents* in the order and with the titles prescribed by this form. For electronic document submittal requirements, see <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

**Site Summary**

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

**1. General Site Information and Site History**

- A. Site Location: Describe the physical location of the site, both generally and specific to its immediate surroundings.  
The Site is located in the southeast quadrant of the intersection of 91st Street and County Highway ML (22nd Avenue) in the Village of Pleasant Prairie, Kenosha County, Wisconsin. Additionally, identified as being located in the SW 1/4 of the SW 1/4 of Section 18, Township 01 N and Range 23 E. East, west and south of the site are residential properties, while north of the site is Saint Therese Catholic Church.
- B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use.  
The subject property consists of a single parcel (Tax Key #: 93-4-123-183-0480) totaling approximately 3.19 acres. The former strip mall, which was razed in 2007, was occupied by various business including the Kenosha Computer Center, Academy of Baton & Dance and a dry cleaner facility. Since 2007, the Site was vacant.
- C. Current zoning (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).  
Current zoning from the Village of Pleasant Prairie is R-11 Multi-Family Residential District. The adjoining properties are zoned as Residential
- D. Describe how and when site contamination was discovered.  
In January 2003, Drake Environmental, Inc. (Drake) performed a Phase I Environmental Site Assessment (ESA) on the subject property. At the time of the ESA, commercial strip mall structure was present on the subject property. The ESA Report indicated the strip mall was constructed on the subject property in the 1960s. A review of Village of Pleasant Prairie Building Inspection Department files indicated the presence of a permit from 1971 for the installation of a boiler for use in a dry-cleaning process. Drake identified the potential of a dry-cleaning facility operating at the subject property as a recognized environmental condition (REC).

Based on the results of the Phase I ESA, specifically, the identification of a REC, Drake performed a Phase II ESA on the subject property in February 2003. The scope of the Phase II EA consisted of the advancement of six (6) direct-push soil borings and the installation of four (4) temporary groundwater monitoring wells. Soil samples were submitted for laboratory analysis for diesel range organics (DRO), gasoline range organics (GRO) and volatile organic compounds (VOCs). Groundwater samples were submitted for laboratory analysis for VOCs.

No detectable concentrations of GRO were reported in any of the soil samples submitted for analysis. Low-level concentrations of DRO (less than 17 milligrams per kilogram [mg/kg]) were detected in three (3) of the soil samples submitted. Tetrachloroethene (PCE) was detected in two (2) soil samples collected from the TW-4 location. At this location, PCE was detected at 1.04 mg/kg in the sample submitted from the two (2) to four (4) feet below the ground surface (ft bgs) interval and 1.27 mg/kg in the sample submitted from the 12 to 14 ft bgs interval. Both of these concentrations exceeded the current soil-to-groundwater pathway residual contaminant level (RCL) for PCE. However, none of the detected concentrations exceeded the non-industrial direct contact RCL for PCE. No other VOC constituents were detected in the soil samples submitted for analysis.

Additionally, the groundwater sample collected from the TW-4 location contained a PCE concentration of 48.7 micrograms per liter (µg/L), which exceeds its enforcement standard (ES) of five (5) µg/L as codified in Wisconsin Administrative Code (WAC) Chapter NR 140.

Based on these results, Drake recommended a report of a release be made to the Wisconsin Department of Natural Resources (WDNR).

- E. Describe the type(s) and source(s) or suspected source(s) of contamination.  
PCE soil and groundwater contamination are present at the site as a result of the former dry cleaner.
- F. Other relevant site description information (or enter Not Applicable).  
Not Applicable - no other relevant site information.
- G. List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases.  
- Eva Manor 02-30-543562 - Open ERP
- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property.  
- Jabs, Walter; 02-30-544876; Open ERP; 2023 91st Street; east adjacent to the Site



## 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 soils at the subject property are mapped as Morley silt loam. This soil classification has a low infiltration rate with moderately fine to fine textures. The soil column is assumed to be greater than 50 feet thick at the site.
- ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.  
Fill areas were noted to be associated with the remedial excavations which extend up to 12-feet below the ground surface. No specific waste deposits were identified at the site.
- iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation.  
According to the USGS, bedrock beneath the subject property consists of Paleozoic Silurian dolomite and is assumed to be 150 to 200 feet below ground surface (bgs).
- 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).  
At the time of Endpoint's investigation the site was vacant and grass-covered

### B. Groundwater

- i. Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.  
Depth to groundwater on the subject property has been documented between approximately nine (9) to eleven (11) feet bgs.
- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.  
The nearest surface water body is the Barnes Creek located approximately 1,025 feet south-southeast of the subject property. Based on the measured depth to groundwater on the site, the direction of shallow groundwater flow beneath the subject property is to the southeast towards Barnes Creek.
- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.  
The horizontal hydraulic gradient between MW-6 to MW-3 is 0.0035 ft/ft towards the south-southeast, per the December 2017 depth to groundwater measurements. No other groundwater flow characteristic data was collected during this Site investigation.
- iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).  
Six (6) potable wells were identified within 1,200 feet of the site. In general the geology is noted as "hard pan" and present between 14-feet and 105-feet below the ground surface and then limestone to depth of the bore holes. The six (6) wells range in depth between 100-feet and 244-feet and are steel pipe cased between 80-feet and 125-feet, then open bore holes to depth. Endpoint was not able to confirm that these six (6) potable wells are still active and in use.

## 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.
  - January 2003, Phase I Environmental Site Assessment, Drake Environmental, Inc.
  - February 2003, Phase II Environmental Assessment, Drake Environmental Inc.
  - November 2005, Site Investigation, Braun Intertec
  - December 2007, Site Investigation and Remedial Action Options Report, Drake Environmental, Inc.
  - January 2018, Comprehensive Site Investigation Report, Endpoint Solutions Corp.
  - February 2018, Phase I Environmental Site Assessment, Endpoint Solution Corp.

Since the January 2018 Comprehensive Site Investigation Report no additional investigation activities or report have been completed. However, the site has been redeveloped into slab-on-grade buildings including a 4-Story 42 unit building, a 2-Story 8-unit building and a garage structure. Only the garage structure was constructed over the area of residual contamination.

- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.  
Groundwater contamination extends beyond the source property to the adjoining property to the east (2023 91st Street), which is an open EPR site (02-30-544876) and onto the adjoining property to the east of this at 2019 91st Street which is also an open ERP site (02-30-583151). Endpoint Solutions installed three (3) offsite groundwater monitoring wells (MW-8 on 2023 91st Street and MW-9 and MW-10 on 2019 91st Street). PCE was detected at concentrations in excess of its ES in MW-8, in excess of its PAL in MW-9 and was not detected in MW-10.

- 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.

No structural impediments were encountered at the site during this investigation as the previous slab-on grade structure was razed in 2007.

**B. Soil**

- i. Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.  
The identified soil contamination is associated with the historic operation of a dry-cleaning facility located at the eastern end of the former strip mall at the site. The identified soil contamination is PCE and extended horizontally approximately 45-feet south, approximately 30-feet west and approximately 40-feet east. While vertically ranging from 2 to 14-feet below the ground surface.

- ii. Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column.  
The concentrations of PCE identified in the upper four feet of the soil column were up 11 mg/kg which exceeds its respective Soil-to-Groundwater pathway RCLs. However, these concentration do not exceed its respective industrial or non-industrial direct contact RCLs.

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

RCLs included within the WDNR default spreadsheets were utilized. No site-specific RCLs were developed.

**C. Groundwater**

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

Groundwater samples have been collected during all phase of the site investigation with several VOCs being detected above their respective method detection limits (MDLs) including chloroform, cis-1,2-dichloroethene, methylene chloride, naphthalene, toluene and trichloroethene. These have ranged from below their MDLs to above their respective preventative action limits (PALs), however they have fluctuated with time.

The site constituent of concern is PCE which has been detected above its ES onto the adjoining property to the east at 2023 91st Street; however, the extent of ES exceedances in the groundwater appears to extend less than ten (10) feet onto the property at 2019 91st Street. In general the site groundwater flow direction is southeasterly and current aerial photos indicate sparse development in this direction. A potable well record has been identified southeasterly of the site approximately 650-feet away, however it is unknown if the well is still active and in use.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Identify the depth and location of the smear zone.

Not applicable, no free product has been observed at the site.

**D. Vapor**

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

Not applicable, the slab-on-grade site building was razed in 2007.

- 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, no vapor samples were collected, therefore no action levels were exceeded.

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.

Not applicable, no surface water or sediments were present on site and therefore not sampled.

- 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.

Not applicable, no surface water or sediment samples collected, therefore no action levels were exceeded.

**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.

The Remedial Action Options Report (RAOR) was submitted to the WDNR on December 6, 2007 and on December 17, 2007 the WDNR provided concurrence with a "contained-out" determination of the sites contaminated soils.

The remedial action activities at the site were completed in late December 2007 after the site structure was razed. A total of 1,436.75 tons of contaminated soil was excavated from three (3) distinct excavations locations located south of the former building. These excavations ranged in depth from 4-feet below the ground surface in the east and west excavations to 12-feet below the ground surface in the central-south excavation.

No remedial action report was prepared or submitted for these activities; as such copies of the disposal manifests for these soils were not available for inclusion in this request. A narrative of these activities along with results are included in Endpoint's Comprehensive Site Investigation Report dated January 15, 2018 which was submitted to the WDNR in May 2018.

During redevelopment of the Site, an additional 392.51 tons of contaminated soil was excavated and transported for disposal at a local, licensed landfill facility.

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.

No immediate or interim actions were taken at the site.

- C. Describe the *active* remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.

The active remedial action taken at the site was the excavation and proper off-site disposal of 1,436.75 tons of contaminated soil at a licensed disposal facility. Upon completion of the remedial excavation, sidewall and base samples were collected and submitted for laboratory analysis. A total of nine (9) samples were collected with six (6) being from the sidewalls and three (3) from the base. Three (3) of the samples did not contain and detections above MDLs, while the remaining six (6) samples contained an elevated concentration of PCE which was noted to be above its soil to groundwater RCL, however all of these detections were well below their direct contact RCLs. During redevelopment of the Site, an additional 392.51 tons of contaminated soil was excavated and transported for disposal at a local, licensed landfill facility.

- D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.

The alternatives considered for the site included monitored natural attenuation, electrical resistance heating (ERH), installation of soil vapor extraction system, steam enhanced remediation, injection technologies, excavation of all accessible contaminated soils, hot-spot excavation of contaminated soils and the installation of cover systems over the contaminated area. Therefore, based on the evaluation of technical feasibility, economic feasibility and site development plans, Drake determined that hot-spot (limited) excavation followed by natural attenuation monitoring was believed to be the most cost-effective strategy for the site.

- E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case closure.

The residual contamination at the site is PCE and is focused in the area of the southeast corner of the former building which includes the area of the remedial excavation. The residual PCE soil contamination does not exceed either its industrial or non-industrial direct contact RCLs, however it does exceed its soil-to-groundwater RCL of 0.0045 mg/kg, ranging from 0.049 mg/kg to 7.2 mg/kg in the horizontal direction and 1.3 mg/kg to 7.5 mg/kg in the vertical direction. This residual soil contamination encompasses an area of approximately 10,000 square feet and ranges in depth from 3-4 feet to 11-12 feet below the ground surface. This soil contamination does not extend off the source property.

- F. Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact.

The residual PCE soil contamination within the upper four feet of the ground surface is isolated to the northwestern portion of the overall residual soil contamination extent. The residual soil contamination does not exceed its industrial or non-

industrial RCLs, however it does exceed its soil-to-groundwater RCL ranging from an estimated concentration of 0.064 mg/kg to 1.3 mg/kg.

- G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.

The observed low water table at the site ranges between 12.38 feet bgs in native soils to 13.36 feet bgs in the area of the remedial excavation. The residual PCE soil contamination that attains or exceeds its soil-to-groundwater RCL and is above the low water table ranges from an estimated 0.064 mg/kg to 7.5 mg/kg. The residual PCE soil contamination from the 12-foot deep excavation includes a base sample (EX-2 Base) collected at 11-12 feet bgs at 7.5 mg/kg and a sidewall sample (EX-2 South) collected at 11-12 feet bgs at 7.2 mg/kg.

- H. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.

The overlying asphalt pavement, clean soil placed in the sidewalls of the stormwater detention structure and garage structure will act as engineered barriers for the residual soil contamination. The engineered barriers previously described will prevent infiltration which will encourage natural attenuation of the shallow groundwater.

The source of the groundwater contamination has been removed via the excavation and disposal of approximately 1,800 tons of soil from the Site.

- I. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration (e.g., stable or receding groundwater plume).

The residual groundwater contamination will be addressed using natural attenuation and the above described engineering controls preventing the infiltration of rain water and snow melt from contacting the residual soil contamination and potentially transferring to the sites groundwater.

- J. Identify how all exposure pathways (soil, groundwater, vapor) were removed and/or adequately addressed by immediate, interim and/or remedial action(s).

The soil exposure pathways have been addressed by engineering controls including asphalt pavement, concrete slab and clean soil barrier which will also aid in the groundwater exposure pathway prevent infiltration of rain water and snow melt from reaching the residual soil contamination. The vapor exposure pathway has been addressed by having no residential structures over the area of residual soil and groundwater contamination, while a garage area will be over a portion of the residual contamination the concrete slab and open air construction will prevent vapor intrusion concerns.

- K. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.  
Not applicable, no system hardware installed, therefore none will be left in place.

- L. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.

The concentrations of PCE at MW-1, MW-2, MW-3 and MW-8 were detected above their respective ESs during the most recent sampling event, respectively. Therefore, an ES exemption for PCE at MW-1, MW-2, MW-3 and MW-8 will be required to achieve regulatory closure.

- M. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.

Not applicable, no vapor samples collected and no action levels were exceeded.

- N. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.

Not applicable, no surface water or sediments were present on site, therefore no samples collected and no action levels exceeded.

**5. Continuing Obligations: Includes all affected properties and rights-of-way (ROWs). In certain situations, maintenance plans are also required, and must be included in Attachment D.**

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

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

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

**6. Underground Storage Tanks**

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

## General Instructions

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

## Data Tables (Attachment A)

### Directions for Data Tables:

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

### A. Data Tables

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

## Maps, Figures and Photos (Attachment B)

### Directions for Maps, Figures and Photos:

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

### B.1. Location Maps

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

**B.2. Soil Figures**

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

**B.3. Groundwater Figures**

- B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
- Source location(s) and vertical extent of residual soil contamination exceeding an RCL. Distinguish between direct contact and the groundwater pathway RCLs.
  - Source location(s) and lateral and vertical extent if groundwater contamination exceeds ch. NR 140 ES.
  - Surface features, including buildings and basements, and show surface elevation changes.
  - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
  - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1.b.)
- B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, PAL and/or an ES. Indicate the date and direction of groundwater flow based on the most recent sampling data.
- B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been abandoned.

**B.4. Vapor Maps and Other Media**

- B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway in relation to residual soil and groundwater contamination, including sub-slab, indoor air, soil vapor, soil gas, ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.
- B.4.b. **Other media of concern (e.g., sediment or surface water):** Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.
- B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank).

- B.5. Structural Impediment Photos:** One or more photographs documenting the structural impediment feature(s) which precluded a complete site investigation or remediation at the time of the closure request. The photographs should document the area that could not be investigated or remediated due to a structural impediment. The structural impediment should be indicated on Figures B.2.a and B.2.b.

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

**Directions for Documentation of Remedial Action:**

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

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

**Directions for Maintenance Plans and Photographs:**

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

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

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

**Monitoring Well Information (Attachment E)**

**Directions for Monitoring Well Information:**

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

**Select One:**

- No monitoring wells were installed as part of this response action.
- All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site
- Select One or More:**
  - Not all monitoring wells can be located, despite good faith efforts. Attachment E must include a description of efforts made to locate the wells.
  - One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason (s) the well(s) will remain in use. When one or more monitoring wells will remain in use this is considered a continuing obligation and a maintenance plan will be required and must be included in Attachment D.
  - One or more monitoring wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s). Provide documentation from the party accepting future responsibility for monitoring well(s).

**Source Legal Documents (Attachment F)**

**Directions for Source Legal Documents:**

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

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



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

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

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

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

Include a copy of each notification sent and accompanying proof of delivery, i.e., return receipt or signature confirmation.

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

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



**Signatures and Findings for Closure Determination**

*This page has been updated as of February 2019 to comply with the requirements of Wis. Admin. Code ch. NR 712.*

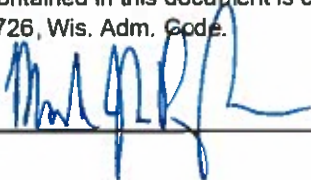
Check the correct box for this case closure request and complete the corresponding certification statement(s) listed below to demonstrate that the requirements of Wis. Admin. Code ch. NR 712 have been met. The responsibility for signing the certification may not be delegated per Wis. Admin. Code § NR 712.09 (1). Per Wis. Admin. Code § 712.05 (1), the work must be conducted or supervised by the person certifying.

- The investigation and/or response action(s) for this site evaluated and/or addressed groundwater (including natural attenuation remedies). Both a professional engineer and a hydrogeologist must sign this document per Wis. Admin. Code ch. NR 712.
- The investigation and the response action(s) for this site did not evaluate or address groundwater. A professional engineer must sign this document per Wis. Admin. Code ch. NR 712.

**Engineering Certification**

I, Mark J.K. Penzkover, 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 document 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 document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature



Title Principal Consultant

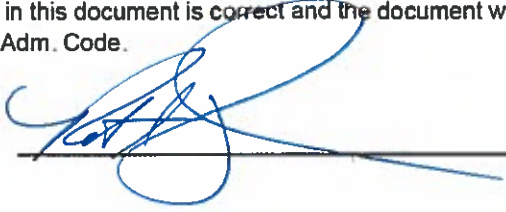


- 34455

**Hydrogeologist Certification**

I, Robert A. Cigale, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature



Title Principal Consultant

Date

March 19, 2020