

# Endpoint Solutions

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Ms. Shanna Laube-Anderson  
Wisconsin Department of Natural Resources  
141 NW Barstow Street, Room 180  
Waukesha, WI 53187

May 15, 2018

**Subject: Site Investigation Addendum and Remedial Action Plan**  
Eva Manor  
2103-2133 91<sup>st</sup> Street  
Pleasant Prairie, Wisconsin  
BRRTS: 02-30-543562

Dear Shanna:

This Remedial Action Plan (RAP) is being submitted for the Eva Manor development site located at 2103-2133 91<sup>st</sup> Street in the Village of Pleasant Prairie, Kenosha County, Wisconsin (the "Site"). The location of the Site is depicted on **Figure B.1.a**. Bear Development, LLC (Bear) is actively proceeding with redevelopment of the Site with 42 apartments in a four (4) story building, eight (8) two (2) story townhouses and 12 detached garages. The Site redevelopment will include grading and paving of the exterior areas of the Site for tenant parking and the construction of a storm water detention pond in the northeast corner of the Site.

## BACKGROUND

Numerous iterations of assessments and investigations have been performed to-date at the Site. Specifically, the following assessments and investigations have been completed at the Site:

- Phase I Environmental Site Assessment (ESA) – January 2003 (Drake);
- Phase II Environmental Assessment (EA) – February 2003 (Drake); and,
- Site Investigation (SI) / Remedial Action Plan (RAP) – 2005 (Braun Intertec).

In 2007, Drake submitted a *Site Investigation and Remedial Action Options Report* to the Wisconsin Department of Natural Resources (WDNR). The Remedial Action Options Report recommended the excavation and off-Site disposal of soils contaminated with tetrachloroethene (PCE). A total of 1,436.75 tons of soil were excavated and transported for disposal. Confirmation samples were collected from the excavation sidewalls and bases for analysis for volatile organic compounds (VOCs). Confirmation samples collected from the base, north sidewall and east sidewall of the west excavation, the base and south sidewall of the south excavation and the east sidewall from the east excavation all contained elevated concentrations of PCE.

In January 2008, six (6) permanent groundwater monitoring wells, identified as MW-1 through MW-6, were installed at the Site. Groundwater samples were collected from each of the monitoring wells and analyzed for VOCs on February 8, 2008, May 6, 2008 and January 17, 2011. The

groundwater sampling indicated elevated concentrations of PCE in monitoring wells MW-1, MW-2, MW-3 and MW-4.

In September 2017, the WDNR provided feedback regarding steps necessary to achieve closure. As a result of this conversation, Endpoint Solutions Corp. (Endpoint) performed additional Site investigation activities consisting of the advancement of five (5) soil borings within the former building footprint, an additional soil boring was advanced through the excavation #2 location, a piezometer was constructed in this deeper boring and an additional groundwater monitoring well was installed to the south of the existing MW-3 location.

On January 15, 2018, a *Comprehensive Site Investigation Report* was submitted to the WDNR for review. Based on the results of the recent Site investigation activities, the horizontal and vertical extent of the soil contamination has been adequately delineated. The extent of the residual soil-to-groundwater residual contaminant level (RCL) exceedances is contained completely on the Site. Furthermore, none of the detected concentrations within four (4) feet bgs exceed either non-industrial contact RCLs; therefore, direct contact is not considered a complete exposure pathway.

The plume of groundwater contamination extends south-southwesterly from the apparent source of impacts at the southeast corner of the former structure towards the adjoining property to the east. As the adjoining property owner has previously refused access to his property to investigate the downgradient extent of the contamination, the horizontal extent of the groundwater plume has been adequately delineated to the north, south and west. With the exception of potential migration onto the adjoining property to the east, the groundwater plume is located on the Site. Furthermore, based on the soil and groundwater results from the MW-1P location, it is our opinion the vertical extent of the soil and groundwater contamination has also been adequately delineated and is limited to the upper approximate 11 to 12 feet of the soil profile.

## WDNR REVIEW AND RESPONSES

On February 21, 2018, the WDNR responded to the *Comprehensive Site Investigation Report*. WDNR provided the following four (4) comments:

1. The downgradient extent of the groundwater plume needs further definition beyond monitoring well MW-3. In the past, the previous owner for the adjacent property had refused access to complete definition of the groundwater plume. Now a new owner is listed for that property so an attempt should be made to gain access to install at least one (1) additional monitoring well to determine the extent of the PCE in groundwater. Please document your attempts to gain access and if necessary the WDNR can assist you.

*We have obtained an access agreement with the adjoining property owner to the east.*

2. The residual contaminated soil area should be expanded to be more conservative. The residual contaminated soils figure for PCE with the excavation areas identified, please clarify if the excavation to the West, Excavation #1 went to four (4) or 14 feet. Per the text and the confirmation samples it appears soils were only removed to four (4) feet; however, the figure indicates 14 feet was the depth of the excavation. Remove all the contour lines,

new utility placement, new construction locations and the shadows from this figure.

*Figure B.2.b has been revised as requested: the approximate extent of residual contaminated soil was expanded, the notation for Excavation #1 has been corrected to reflect the excavation to four (4) ft bgs and the proposed development and aerial photograph have been removed from the figure.*

3. Additional quarterly groundwater samples will need to be collected from the groundwater monitoring wells to establish a stable or decreasing plume for the PCE in groundwater. The wells that should be sampled on a quarterly basis are MW-1, MW-2, MW-3, MW-4, MW-1P and any new monitoring wells that are installed.

*Following installation and development of the monitoring well (MW-8) on the adjoining property to the east of the Site, monitoring wells MW-1, MW-1P, MW-2, MW-3, MW-4 and MW-8 will be properly purged and samples for VOCs will be collected on a quarterly basis with only PCE reported for the samples submitted from MW-8.*

4. Submit a remedial action plan for review. This should include where any residual contaminated soils will be removed during redevelopment, estimate volume of soil that will be disposed of at a landfill and discuss what the plan will be for soils that have been identified as not contaminated that may be disturbed as well as which buildings and paved areas will be considered as the cap. The DNR agrees with your consultant that at this time there is not a concern that vapor migration will be an issue in the areas designated for construction of livable space.

*Please refer to the subsequent section.*

## RESULTS OF ADDITIONAL INVESTIGATIVE WORK

On request, the adjoining property owner to the east of the Site agreed to allow access for the installation of one (1) monitoring well (MW-8) on his property. The monitoring well was installed on March 26, 2018 at the location shown on **Figure B.1.b**. The monitoring well was constructed with a ten (10) foot section of No. 010 factory-cut slotted screen set between five (5) and 15 ft bgs. The monitoring well was completed with a locked aboveground protector pipe. The top of the casing at the MW-8 location was surveyed using survey-grade global positioning system (GPS) equipment. Copies of the Soil Boring Log, Monitoring Well Construction Detail and the Monitoring Well Development form are attached in **Appendix A**.

On March 28, 2018, monitoring well MW-8 was developed by bailing approximately 20 gallons of groundwater from the well. Development water was transferred to a 55-gallon steel drum for storage on the Eva Manor site. Immediately following development, a groundwater sample from MW-8 was collected and submitted for VOC analysis under standard chain-of-custody conditions. In addition, depth to groundwater measurements were collected from all of the existing monitoring wells, and following purging, samples from monitoring wells MW-1, MW-2, MW-3 and MW-4 and piezometer MW-1P were also collected and submitted for VOC analysis.

Using the surveyed top of casing elevations, the depth to groundwater measurements were converted to groundwater elevations which could then be mapped to determine flow direction. According to the depth to water measurements collected on March 28, 2018, shallow groundwater on the Site generally flows to the south-southeast. However, between MW-3, MW-7 and MW-8 locations, the shallow groundwater flows to the east. The depth to groundwater measurements are summarized on **Table A.6** and a groundwater flow map is attached as **Figure B.3.c**.

The results of the analyses performed on the samples collected from existing wells MW-1, MW-1P, MW-2 MW-3 and MW-4 were generally consistent with the results from the December 2017 sampling event. No VOC constituents were detected in the sample collected from piezometer MW-1. The sample collected from monitoring well MW-4 contained an estimated concentration of PCE of 0.40 micrograms per liter ( $\mu\text{g/L}$ ). The result was estimated due to the concentration being between the limit of detection (LOD) and limit of quantitation (LOQ).

The samples submitted from monitoring wells MW-2, MW-3 and MW-8 contained elevated concentrations of PCE ranging between 163  $\mu\text{g/L}$  at the MW-8 location to 184  $\mu\text{g/L}$  at the MW-3 location. All three (3) of these reported concentrations exceeded the enforcement standard (ES) for PCE of 5  $\mu\text{g/L}$ .

The sample collected from monitoring well MW-1 contained elevated concentrations of PCE (95  $\mu\text{g/L}$ ), trichloroethene (TCE) (2.12  $\mu\text{g/L}$ ) and an estimated concentration of cis-1,2-dichloroethene (cis-1,2-DCE) (0.86  $\mu\text{g/L}$ ). The concentration of PCE in MW-1 exceeded its ES while the concentration of TCE exceeded its preventive action limit (PAL) of 0.5  $\mu\text{g/L}$ .

On May 7, 2018, at the direction of the WDNR, a second sample was collected from monitoring well MW-8 for VOC analysis. The sample collected from monitoring well MW-8 on May 7, 2018 contained PCE at a concentration of 161  $\mu\text{g/L}$ , which exceeds its ES of 5  $\mu\text{g/L}$ .

The results of the groundwater sampling are summarized on **Table A.1.a**. The approximate extent of PCE in groundwater is depicted on **Figure B.3.b**. Copies of the analytical results and chain-of-custody forms are attached in **Appendix B**.

## **DISCUSSION OF RESULTS**

Historically, the highest concentration of PCE in the groundwater was detected in a sample collected from monitoring well MW-1 in February 2008 (350  $\mu\text{g/L}$ ). During the same time period, the concentration of PCE in monitoring wells MW-2 and MW-3 were 0.88  $\mu\text{g/L}$  and 31  $\mu\text{g/L}$ , respectively. Conversely, during the March 2018 sampling event, the PCE concentration in monitoring well MW-1 was 95  $\mu\text{g/L}$  while the PCE concentration in monitoring wells MW-2 and MW-3 was 180  $\mu\text{g/L}$  and 184  $\mu\text{g/L}$ , respectively. It appears the residual plume of contamination, while slowly migrating to the southeast, is not growing in size or concentration. Additionally, recent sampling indicates the plume of PCE contamination extends onto the adjoining property to the east, but is relatively stable with no indications of natural degradation products such as cis- or trans-1,2-dichloroethene or vinyl chloride.

## **PROPOSED REMEDIAL ACTION PLAN**

While the analytical results indicate the shallow soils at the Site do not exceed non-industrial direct contact RCLs, the soils do exhibit exceedances of the soil-to-groundwater pathway RCL. Therefore, the floor slabs for the garage structure, as well as the asphalt pavement in the parking lot over the areas of residual contamination will be delineated as an engineered barrier to reduce the amount of precipitation from entering the subsurface, thereby reducing the possibility for the further migration of contaminants into the groundwater. The extent of the required surface barrier to be maintained is depicted on **Figure D.2**.

### **ASPHALT PAVEMENT PARKING LOT**

The current elevation of the Site within the delineated area of residually contaminated soil is between 622 and 623 feet above mean sea level (amsl). The proposed elevation of the asphalt pavement within this area is between 623 and 623.50 feet amsl. Assuming a ten (10) inch pavement and base course section for the asphalt parking lot, the prepared subgrade elevation for the parking lot within the delineated residually contaminated area will be approximately 622.17 to 622.67 feet amsl, resulting in potential cuts of 0.83 feet to fills of 0.67 feet. As the remedial excavations performed by Drake extended to a minimum of four (4) ft bgs, the surficial soils within the remedial excavation areas will not require management. Therefore, approximately 960 square feet (sf) of residually contaminated soil located within the proposed parking lot to the north of the remedial excavation will require management. Assuming a maximum of one (1) foot of soil will be removed in this area to establish the proposed pavement subgrade elevation, approximately 35.5 cubic yards (cy) of soil will require management off-Site.

### **GARAGE FLOOR SLAB**

The proposed elevation of the finished floor of the garages is from 623.50 ft amsl on the west side of the slab to 623.70 ft amsl on the east side of the slab. Assuming a nine (9) inch concrete and base course section for the garage slabs, the prepared subgrade elevations for the garage slabs will range between 622.75 and 622.95 ft amsl, resulting in cuts of less than one-half (0.5) foot. As the remedial excavations performed by Drake extended to a minimum of four (4) ft bgs, the surficial soils within the remedial excavation areas will not require management. Therefore, approximately 1,180 sf of residually contaminated soil located within the proposed garage structure to the north of the remedial excavation will require management. Assuming a maximum of one-half (0.5) foot of soil will be removed in this area to establish the proposed floor slab subgrade elevation, approximately 21.9 cy of soil will require management off-Site.

### **GREEN SPACE AND STORM WATER POND**

The proposed elevation of the green space to the east of the garages within the delineated area of residually contaminated soils is generally at the existing elevations. As a large portion of this area includes approximately one-half of Excavation #2 and all of Excavation #3, this area has been sufficiently capped with the backfill placed in the remedial excavations. Therefore, no additional grading or cap construction is proposed in this area.

The proposed development includes the construction of a storm water detention pond in the northeast corner of the Site. The extreme southern extent of the footprint of the storm water detention pond encroaches into the area delineated as containing residually contaminated soils. The ground surface elevation within the proposed storm water pond area in the vicinity of the delineated area of residually contaminated soils ranges between 622 and 623 ft amsl. The proposed finished grades for the storm water pond within the delineated area of residually contaminated soils ranges from 617 ft amsl at the edge of the delineated area south of SB-2 to 621 ft amsl. Due to the permeability of the soils encountered during the geotechnical investigation, Endpoint recommended that the storm water pond be over-excavated two (2) feet to allow for the installation of a compacted clay impermeable liner. Therefore, the proposed subgrade elevation for the storm water detention pond within the delineated area of residually contaminated soil ranges between 615 to 621 ft amsl, resulting in excavations up to seven and one-half (7.5) ft bgs.

Based on the proposed location of the storm water detention pond and the need to over-excavate two (2) feet to install a compacted clay liner, a maximum of 213 cy of soil contained within the footprint of the proposed storm water detention pond located north of the remedial excavations will require off-Site management. In addition, approximately 150 sf of the proposed pond footprint extends into the northern reaches of Excavation #3 which was excavated to four (4) ft bgs. Pond subgrade elevations within the Excavation #3 footprint require an excavation of up to five (5) ft bgs. Therefore, approximately 22 cy of soil will need to be managed off-Site.

In total, approximately 292 cy of soil excavated from within the approximate extent of soils containing soil-to-groundwater RCL exceedances as delineated on **Figure D.2** will be transported off-Site for proper disposal. Grading and excavation on the remainder of the Site will not result in the management of contaminated soils; therefore, it is our opinion, the preparation of a Wisconsin Administrative Code (WAC) Chapter NR 718 Soil Management Plan will not be necessary.

The redevelopment of the Site will result in a large portion of the Site being covered with impermeable cover consisting of either buildings or pavement. The construction of these impermeable surfaces will further reduce the likelihood of further migration of the contaminant plume. In order to evaluate the contaminant trend following the construction of the impermeable surfaces, we propose to continue to perform quarterly monitoring of monitoring wells MW-1, MW-2, MW-3 and MW-8 for a minimum of four (4) consecutive quarters following completion of the redevelopment. Furthermore, we propose the remainder of the monitoring wells (MW-4, MW-6 and MW-7) along with piezometer MW-1P be abandoned prior to Site redevelopment.

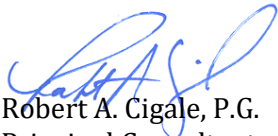
Following completion of the Site redevelopment, a Closure Request, including the WDNR geographic information system (GIS) Registry submittal, will be prepared and submitted to the WDNR with the appropriate review and registry fees. The GIS Registry submittal will include a Barrier Maintenance Plan to address the ongoing obligations associated with the paved parking lot, garage floor slabs and clean soil layer over the area of residual contamination.

**CLOSING**

We trust the contents of this RAP are consistent with what was discussed in our meeting and outlined in your February 21, 2018 letter. As such, we request the WDNR approve the SI/RAP for the Eva Manor site. If you have any questions or comments, please feel free to contact me directly at 414-858-1202.

Sincerely,

***Endpoint Solutions***



Robert A. Cigale, P.G.  
Principal Consultant

Cc: Joe Schwenker – Bear Development, LLC

**FIGURES**

FIGURE B.1.A – LOCATION MAP

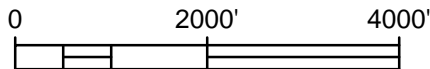
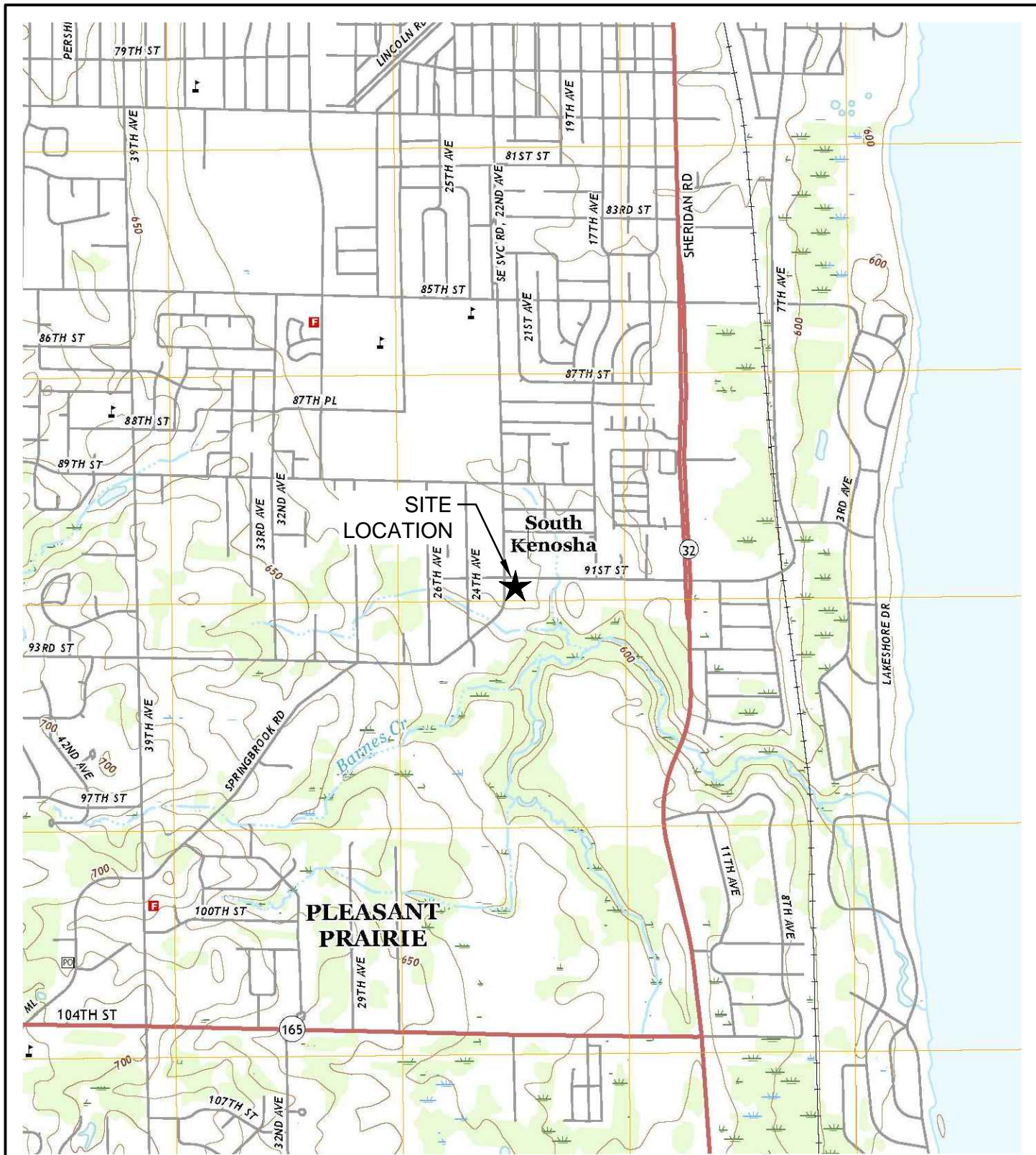
FIGURE B.1.B – DETAILED SITE MAP

FIGURE B.2.B – PCE RESIDUALS IN SOIL

FIGURE B.3.B – PCE IN GROUNDWATER (MARCH 28, 2018)

FIGURE D.2 – BARRIER LOCATION PLAN





SOURCE: USGS

# LOCATION MAP

EVA MANOR  
91ST STREET  
PLEASANT PRAIRIE, WISCONSIN

## Endpoint Solutions

6871 S. Lovers Lane  
Franklin, WI 53132

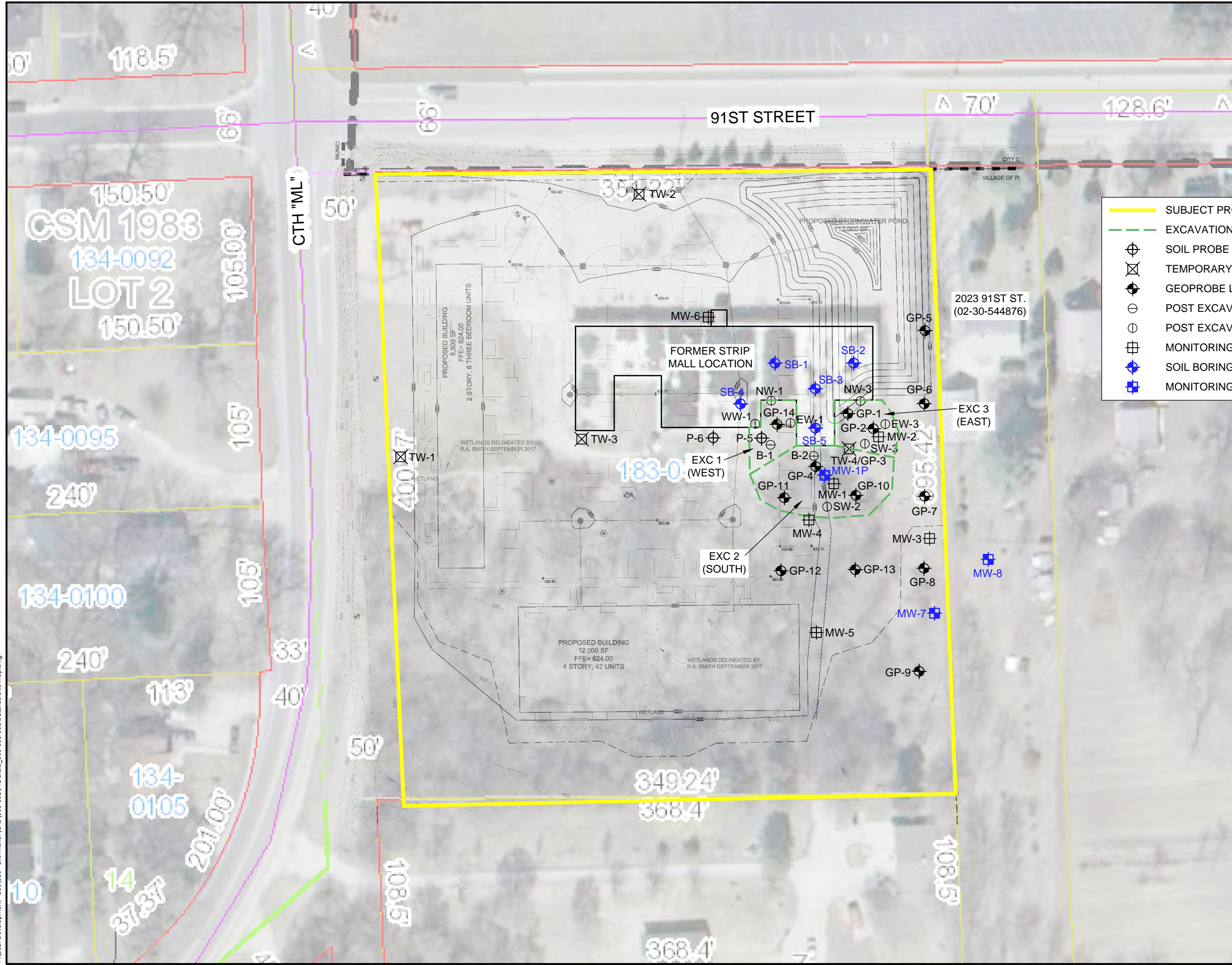
Phone: (414) 427-1200

Fax: (414) 427-1259

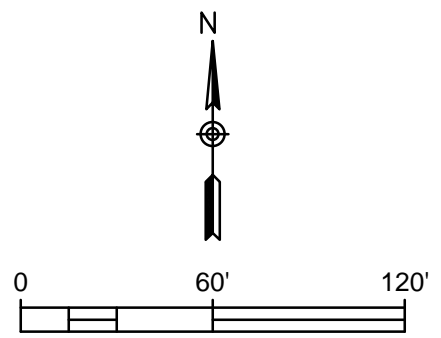
DRAWN BY: NWD      DATE: 01/05/18

REVIEWED BY: RAC      PROJECT NO: 360-006-001

B.1.a



- 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)



**DETAILED SITE MAP**

EVA MANOR  
91ST STREET  
PLEASANT PRAIRIE, WISCONSIN

**Endpoint Solutions**

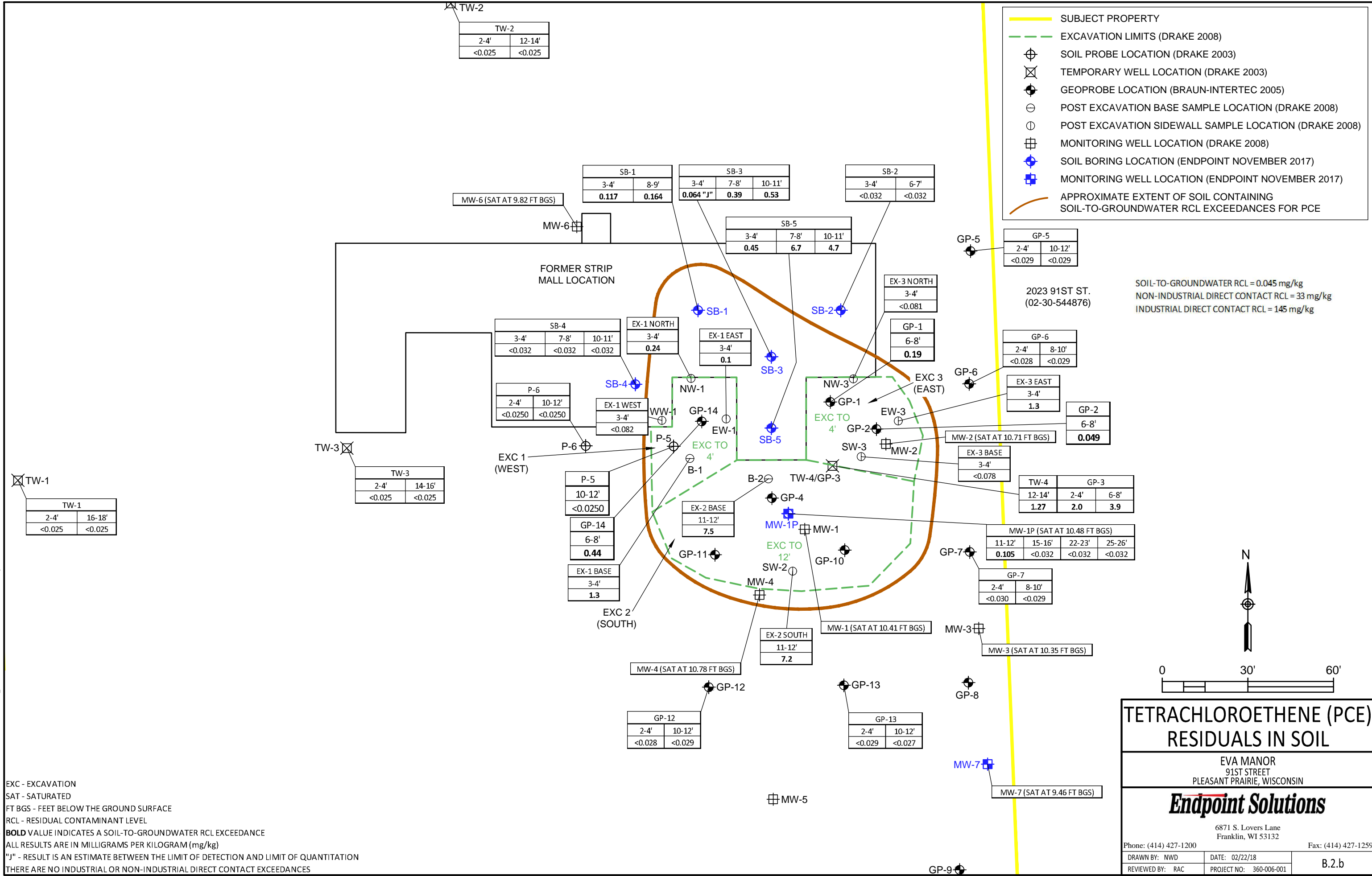
6871 S. Lovers Lane  
Franklin, WI 53132

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

DRAWN BY: NWD	DATE: 05/14/18	B.1.b
REVIEWED BY: RAC	PROJECT NO: 360-006-001	

P:\Bear Development - 360\006 - Eva Manor\CAD\006-001\FIG B.1.b\_360-006-001\_Detailed Site Map.dwg

P:\Bear Development - 360\006 - Eva Manor\CAD\006-001\FIG B.2.b\_360-006-001\_Residual Soil Contamination.dwg



TW-2	
2-4'	12-14'
<0.025	<0.025

SB-1	
3-4'	8-9'
<b>0.117</b>	<b>0.164</b>

SB-3		
3-4'	7-8'	10-11'
<b>0.064 "J"</b>	<b>0.39</b>	<b>0.53</b>

SB-2	
3-4'	6-7'
<0.032	<0.032

SB-5		
3-4'	7-8'	10-11'
<b>0.45</b>	<b>6.7</b>	<b>4.7</b>

GP-5	
2-4'	10-12'
<0.029	<0.029

SB-4		
3-4'	7-8'	10-11'
<0.032	<0.032	<0.032

EX-1 NORTH
3-4'
<b>0.24</b>

EX-1 EAST
3-4'
<b>0.1</b>

EX-3 NORTH
3-4'
<0.081

GP-1
6-8'
<b>0.19</b>

GP-6	
2-4'	8-10'
<0.028	<0.029

EX-3 EAST
3-4'
<b>1.3</b>

GP-2
6-8'
<b>0.049</b>

P-6	
2-4'	10-12'
<0.0250	<0.0250

EX-1 WEST
3-4'
<0.082

GP-14
6-8'
<b>0.44</b>

P-5
10-12'
<0.0250

EX-2 BASE
11-12'
<b>7.5</b>

GP-4
6-8'
<b>0.105</b>

MW-1P (SAT AT 10.48 FT BGS)		
11-12'	15-16'	22-23'
<b>0.105</b>	<0.032	<0.032
<0.032	<0.032	<0.032

GP-3	
12-14'	2-4'
<b>1.27</b>	<b>2.0</b>
<b>3.9</b>	

EX-1 BASE
3-4'
<b>1.3</b>

GP-11
6-8'
<b>0.44</b>

EX-2 SOUTH
11-12'
<b>7.2</b>

GP-10
6-8'
<b>0.105</b>

GP-7	
2-4'	8-10'
<0.030	<0.029

GP-12	
2-4'	10-12'
<0.028	<0.029

GP-13	
2-4'	10-12'
<0.029	<0.027

GP-7	
2-4'	8-10'
<0.030	<0.029

GP-12	
2-4'	10-12'
<0.028	<0.029

GP-13	
2-4'	10-12'
<0.029	<0.027

GP-7	
2-4'	8-10'
<0.030	<0.029

EXC - EXCAVATION  
 SAT - SATURATED  
 FT BGS - FEET BELOW THE GROUND SURFACE  
 RCL - RESIDUAL CONTAMINANT LEVEL  
**BOLD VALUE INDICATES A SOIL-TO-GROUNDWATER RCL EXCEEDANCE**  
 ALL RESULTS ARE IN MILLIGRAMS PER KILOGRAM (mg/kg)  
 "J" - RESULT IS AN ESTIMATE BETWEEN THE LIMIT OF DETECTION AND LIMIT OF QUANTITATION  
 THERE ARE NO INDUSTRIAL OR NON-INDUSTRIAL DIRECT CONTACT EXCEEDANCES

P:\Bear Development - 360\006 - Eva Manor\CAD\006-001\FIG B.3.b\_360-006-001.GW Contamination.dwg

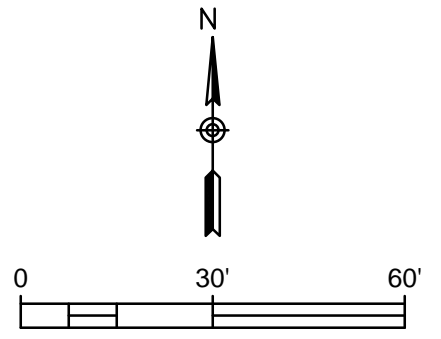


- SUBJECT PROPERTY
- - - EXCAVATION LIMITS (DRAKE 2008)
- SOIL PROBE LOCATION (DRAKE 2003)
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- POST EXCAVATION SIDEWALL SAMPLE LOCATION (DRAKE 2008)
- MONITORING WELL LOCATION (DRAKE 2008)
- SOIL BORING LOCATION (ENDPOINT NOVEMBER 2017)
- MONITORING WELL LOCATION (ENDPOINT NOVEMBER 2017)
- <0.48 PCE VALUE
- - - ISOCONCENTRATION CONTOUR (USING MOST RECENT DATA) (DASHED WHERE INFERRED)

TW-1 TO TW-4: 2/17/03  
 GP-1 TO GP-14: 11/16/05  
 SB-1 TO SB-5: 11/13/17  
 MW-1 TO MW-7: 12/7/17

PAL - PREVENTIVE ACTION LIMIT  
 ES - ENFORCEMENT STANDARD  
 PAL = 0.5 ug/L  
 ES = 5 ug/L

**BOLD** VALUE INDICATES A PAL EXCEEDANCE  
UNDERLINED VALUE INDICATES AN ES EXCEEDANCE  
 ALL RESULTS ARE IN MICROGRAMS PER LITER (ug/L)  
 "J" - RESULT IS AN ESTIMATE BETWEEN THE LIMIT OF DETECTION AND LIMIT OF QUANTITATION



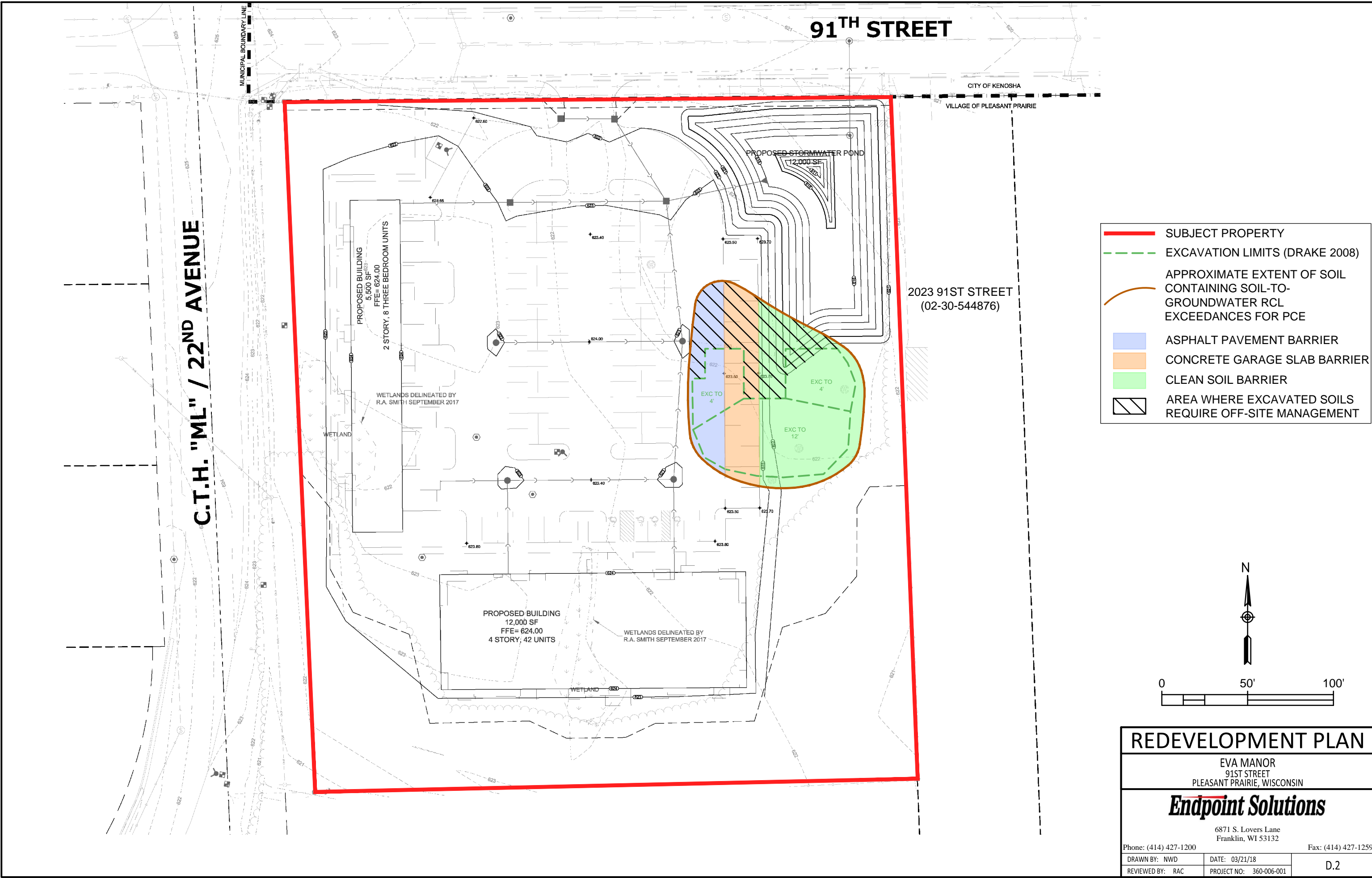
**TETRACHLOROETHENE (PCE)  
 IN GROUNDWATER (3/28/18)**

EVA MANOR  
 91ST STREET  
 PLEASANT PRAIRIE, WISCONSIN

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

Phone: (414) 427-1200	DATE: 04/13/18	B.3.b
DRAWN BY: NWD	PROJECT NO: 360-006-001	
REVIEWED BY: RAC		

P:\Bear Development - 360\006 - Eva Manor\CAD\006-001\FIG D.2\_360-006-001.ReDevelopment.Plan.dwg



91<sup>TH</sup> STREET

C.T.H. "ML" / 22<sup>ND</sup> AVENUE

CITY OF KENOSHA

VILLAGE OF PLEASANT PRAIRIE

2023 91ST STREET  
(02-30-544876)

PROPOSED BUILDING  
5,500 SF  
FFE= 624.00  
2 STORY, 8 THREE BEDROOM UNITS

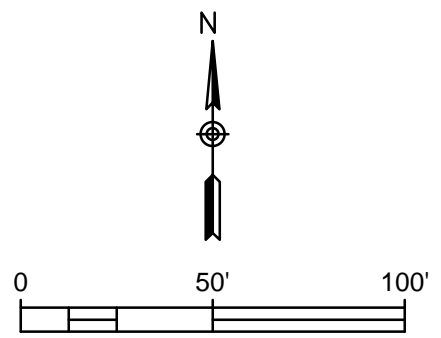
PROPOSED BUILDING  
12,000 SF  
FFE= 624.00  
4 STORY, 42 UNITS

PROPOSED STORMWATER POND  
12,000 SF

WETLANDS DELINEATED BY  
R.A. SMITH SEPTEMBER 2017

WETLANDS DELINEATED BY  
R.A. SMITH SEPTEMBER 2017

- 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



### REDEVELOPMENT PLAN

EVA MANOR  
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: 03/21/18
REVIEWED BY: RAC	PROJECT NO: 360-006-001

D.2

**TABLES**

TABLE A.1.A – GROUNDWATER VOC RESULTS

TABLE A.6 – WATER ELEVATIONS

Table A.1.a  
Groundwater VOC Results

Eva Manor  
2103-2133 91st Street  
Pleasant Prairie, Wisconsin  
BRRTS #: 02-30-543562

Parameter	NR 140 Table 1		Sample ID and Date of Collection																				
	ES	PAL	TW-1	TW-2	TW-3	TW-4	GP-1	GP-5	GP-6	GP-7	GP-8	GP-9	GP-10	GP-11	GP-12	GP-13	GP-14	SB-1	SB-2	SB-3	SB-4	SB-5	
			2/17/2003	2/17/2003	2/17/2003	2/17/2003	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/16/2005	11/13/17	11/13/17	11/13/17	11/13/17	11/13/17
VOC (µg/L)																							
Benzene	5	0.5	<0.500	<0.500	<0.500	<0.500	<0.2	<0.2	0.42	<0.2	0.37	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.29 *J	<0.17	<0.17	<0.17	<0.17	<0.17
Bromobenzene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.43	<0.43	<0.43	<0.43	<0.43
Bromodichloromethane	0.6	0.06	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.31	<0.31	<0.31	<0.31	<0.31
Bromoform	4.4	0.44	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.49	<0.49	<0.49	<0.49	<0.49
tert-Butylbenzene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.39	<0.39	<0.39	<0.39	<0.39
sec-Butylbenzene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.24	<0.24	<0.24	<0.24	<0.24
n-Butylbenzene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.34	<0.34	<0.34	<0.34	<0.34
Carbon Tetrachloride	5	0.5	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.21	<0.21	<0.21	<0.21	<0.21
Chlorobenzene	100	20	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.27	<0.27	<0.27	<0.27	<0.27
Chloroethane	400	80	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	6	0.6	<0.140	<0.140	<0.140	<0.140	<0.2	<0.2	<0.2	2.1	<0.2	<0.2	1.9	0.63	<0.2	<0.2	<0.2	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96
Chloromethane	30	3	<0.600	<0.600	<0.600	<0.600	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<1.3	<1.3	<1.3	<1.3	<1.3
2-Chlorotoluene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.36	<0.36	<0.36	<0.36	<0.36
4-Chlorotoluene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.35	<0.35	<0.35	<0.35	<0.35
1,2-Dibromo-3-chloropropane	0.2	0.02	<0.390	<0.390	<0.390	<0.390	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<1.88	<1.88	<1.88	<1.88	<1.88
Dibromodichloromethane	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.45	<0.45	<0.45	<0.45	<0.45
1,4-Dichlorobenzene	75	15	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.42	<0.42	<0.42	<0.42	<0.42
1,3-Dichlorobenzene	600	120	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.45	<0.45	<0.45	<0.45	<0.45
1,2-Dichlorobenzene	600	60	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.34	<0.34	<0.34	<0.34	<0.34
Dichlorodifluoromethane	1000	200	<0.500	<0.500	<0.500	<0.500	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.38	<0.38	<0.38	<0.38	<0.38
1,2-Dichloroethane	5	0.5	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.45	<0.45	<0.45	<0.45	<0.45
1,1-Dichloroethane	850	85	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.42	<0.42	<0.42	<0.42	<0.42
1,1-Dichloroethene	7	0.7	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.46	<0.46	<0.46	<0.46	<0.46
cis-1,2-Dichloroethene	70	7	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.41	<0.41	<0.41	<0.41	<0.41
trans-1,2-Dichloroethene	100	20	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.35	<0.35	<0.35	<0.35	<0.35
1,2-Dichloropropane	5	0.5	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.39	<0.39	<0.39	<0.39	<0.39
1,3-Dichloropropane	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.49	<0.49	<0.49	<0.49	<0.49
trans-1,3-Dichloropropene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.42	<0.42	<0.42	<0.42	<0.42
cis-1,3-Dichloropropene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.21	<0.21	<0.21	<0.21	<0.21
Di-isopropyl ether	-----	-----	<5.00	<5.00	<5.00	<5.00	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.26	<0.26	<0.26	<0.26	<0.26
1,2-Dibromoethane (EDB)	0.05	0.005	<0.380	<0.380	<0.380	<0.380	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.34	<0.34	<0.34	<0.34	<0.34
Ethylbenzene	700	140	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.2	<0.2	<0.2	<0.2	<0.2
Hexachlorobutadiene	-----	-----	<5.00	<5.00	<5.00	<5.00	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<1.47	<1.47	<1.47	<1.47	<1.47
Isopropylbenzene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.29	<0.29	<0.29	<0.29	<0.29
p-Isopropyltoluene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.28	<0.28	<0.28	<0.28	<0.28
Methylene Chloride	5	0.5	<0.530	<0.530	<0.530	<0.530	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.94	<0.94	<0.94	<0.94	<0.94
Methyl-tert-butyl-ether (MTBE)	60	12	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.82	<0.82	<0.82	<0.82	<0.82
Naphthalene	100	10	<2.00	<2.00	<2.00	<2.00	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<2.17	<2.17	<2.17	<2.17	<2.17
n-Propylbenzene	-----	-----	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.19	<0.19	<0.19	<0.19	<0.19
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.350	<0.350	<0.350	<0.350	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.69	<0.69	<0.69	<0.69	<0.69
1,1,1,2-Tetrachloroethane	70	7	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.47	<0.47	<0.47	<0.47	<0.47
Tetrachloroethene (PCE)	5	0.5	<0.500	<0.500	<0.500	48.7	80	<0.5	<0.5	180	20	0.59	77	<0.5	<0.5	<0.5	15	<0.48	<0.48	11.5	<0.48	9.9	
Toluene	800	160	<0.500	<0.500	<0.500	<0.500	<0.2	<0.2	0.66	<0.2	0.46	<0.2	0.25	0.22	<0.2	<0.2	0.35	<0.67	<0.67	<0.67	<0.67	<0.67	
1,2,4-Trichlorobenzene	70	14	<2.00	<2.00	<2.00	<2.00	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<1.29	<1.29	<1.29	<1.29	<1.29
1,2,3-Trichlorobenzene	-----	-----	<2.00	<2.00	<2.00	<2.00	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.83	<0.83	<0.83	<0.83	<0.83
1,1,1-Trichloroethane	200	40	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.35	<0.35	<0.35	<0.35	<0.35
1,1,2-Trichloroethane	5	0.5	<0.160	<0.160	<0.160	<0.160	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.65	<0.65	<0.65	<0.65	<0.65
Trichloroethene (TCE)	5	0.5	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.45	<0.45	<0.45	<0.45	<0.45
Trichlorofluoromethane	3,490	698	<0.500	<0.500	<0.500	<0.500	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	<0.64	<0.64	<0.64	<0.6	

Table A.1.a  
Groundwater VOC Results

Eva Manor  
2103-2133 91st Street  
Pleasant Prairie, Wisconsin  
BRRTS #: 02-30-543562

Parameter	NR 140 Table 1		Sample ID and Date of Collection																
	ES	PAL	MW-1					MW-1P		MW-2					MW-3				
VOC (µg/L)			2/8/08	5/6/08	1/7/11	12/7/17	3/28/18	12/7/17	3/28/18	2/8/08	5/6/08	1/17/11	12/7/17	3/28/18	2/8/08	5/6/08	1/17/11	12/7/17	3/28/18
Benzene	5	0.5	<0.29	<2.9	<0.23	<0.17	<0.22	<0.17	<0.22	<0.29	<0.29	<0.23	<0.17	<0.22	<0.29	<0.29	<0.23	<0.17	<0.22
Bromobenzene	-----	-----	<0.24	<2.4	<0.23	<0.43	<0.44	<0.43	<0.44	<0.24	<0.24	<0.23	<0.43	<0.44	<0.24	<0.24	<0.23	<0.43	<0.44
Bromodichloromethane	0.6	0.06	<0.37	<3.7	<0.23	<0.31	<0.33	<0.31	<0.33	<0.37	<0.37	<0.23	<0.31	<0.33	<0.37	<0.37	<0.23	<0.31	<0.33
Bromoform	4.4	0.44	<0.51	<5.1	<0.37	<0.49	<0.45	<0.49	<0.45	<0.51	<0.51	<0.37	<0.49	<0.45	<0.51	<0.51	<0.37	<0.49	<0.45
tert-Butylbenzene	-----	-----	<0.20	<2	<0.20	<0.39	<0.25	<0.39	<0.25	<0.20	<0.20	<0.20	<0.39	<0.25	<0.20	<0.20	<0.20	<0.39	<0.25
sec-Butylbenzene	-----	-----	<0.22	<2.2	<0.22	<0.24	<0.79	<0.24	<0.79	<0.22	<0.22	<0.22	<0.24	<0.79	<0.22	<0.22	<0.22	<0.24	<0.79
n-Butylbenzene	-----	-----	<0.23	<2.3	<0.31	<0.34	<0.71	<0.34	<0.71	<0.23	<0.23	<0.31	<0.34	<0.71	<0.23	<0.23	<0.31	<0.34	<0.71
Carbon Tetrachloride	5	0.5	<0.31	<3.1	<0.20	<0.21	<0.31	<0.21	<0.31	<0.31	<0.31	<0.20	<0.21	<0.31	<0.31	<0.31	<0.20	<0.21	<0.31
Chlorobenzene	100	20	<0.26	<2.6	<0.30	<0.27	<0.26	<0.27	<0.26	<0.26	<0.26	<0.30	<0.27	<0.26	<0.26	<0.26	<0.30	<0.27	<0.26
Chloroethane	400	80	<0.86	<8.6	<0.87	<0.5	<0.61	<0.5	<0.61	<0.86	<0.86	<0.87	<0.5	<0.61	<0.86	<0.86	<0.87	<0.5	<0.61
Chloroform	6	0.6	<0.33	3.9	0.76 "J"	<0.96	<0.26	<0.96	<0.26	<0.33	<0.33	<0.27	<0.96	<0.26	<0.33	1.7	<0.27	<0.96	<0.26
Chloromethane	30	3	<0.25	<2.5	<0.76	<1.3	<0.54	<1.3	<0.54	<0.25	<0.25	<0.76	<1.3	<0.54	<0.25	<0.25	<0.76	<1.3	<0.54
2-Chlorotoluene	-----	-----	<0.22	<2.2	<0.28	<0.36	<0.31	<0.36	<0.31	<0.22	<0.22	<0.28	<0.36	<0.31	<0.22	<0.22	<0.28	<0.36	<0.31
4-Chlorotoluene	-----	-----	<0.16	<1.6	<0.20	<0.35	<0.26	<0.35	<0.26	<0.16	<0.16	<0.20	<0.35	<0.26	<0.16	<0.16	<0.20	<0.35	<0.26
1,2-Dibromo-3-chloropropane	0.2	0.02	<0.48	<4.8	<1.3	<1.88	<2.96	<1.88	<2.96	<0.48	<0.48	<1.3	<1.88	<2.96	<0.48	<0.48	<1.3	<1.88	<2.96
Dibromodichloromethane	-----	-----	NR	NR	NR	<0.45	<0.22	<0.45	<0.22	NR	NR	NR	<0.45	<0.22	NR	NR	NR	<0.45	<0.22
1,4-Dichlorobenzene	75	15	<0.30	<3	<0.31	<0.42	<0.7	<0.42	<0.7	<0.30	<0.30	<0.31	<0.42	<0.7	<0.30	<0.30	<0.31	<0.42	<0.7
1,3-Dichlorobenzene	600	120	<0.19	<1.9	<0.29	<0.45	<0.85	<0.45	<0.85	<0.19	<0.19	<0.29	<0.45	<0.85	<0.19	<0.19	<0.29	<0.45	<0.85
1,2-Dichlorobenzene	600	60	<0.29	<2.9	<0.29	<0.34	<0.86	<0.34	<0.86	<0.29	<0.29	<0.29	<0.34	<0.86	<0.29	<0.29	<0.29	<0.34	<0.86
Dichlorodifluoromethane	1000	200	<0.54	<5.4	<1.6	<0.38	<0.32	<0.38	<0.32	<0.54	<0.54	<1.6	<0.38	<0.32	<0.54	<0.54	<1.6	<0.38	<0.32
1,2-Dichloroethane	5	0.5	<0.27	<2.7	<0.25	<0.45	<0.25	<0.45	<0.25	<0.27	<0.27	<0.25	<0.45	<0.25	<0.27	<0.27	<0.25	<0.45	<0.25
1,1-Dichloroethane	850	85	<0.31	<3.1	<0.32	<0.42	<0.36	<0.42	<0.36	<0.31	<0.31	<0.32	<0.42	<0.36	<0.31	<0.31	<0.32	<0.42	<0.36
1,1-Dichloroethene	7	0.7	<0.50	<5	<0.41	<0.46	<0.42	<0.46	<0.42	<0.50	<0.50	<0.41	<0.46	<0.42	<0.50	<0.50	<0.41	<0.46	<0.42
cis-1,2-Dichloroethene	70	7	<0.38	<3.8	1.3	<0.41	0.86 "J"	<0.41	<0.37	<0.38	<0.38	1.3	<0.41	<0.37	<0.38	<0.38	1.3	<0.41	<0.37
trans-1,2-Dichloroethene	100	20	<0.30	<3	<0.26	<0.35	<0.34	<0.35	<0.34	<0.30	<0.30	<0.26	<0.35	<0.34	<0.30	<0.30	<0.26	<0.35	<0.34
1,2-Dichloropropane	5	0.5	<0.52	<5.2	<0.39	<0.39	<0.44	<0.39	<0.44	<0.52	<0.52	<0.39	<0.39	<0.44	<0.52	<0.52	<0.39	<0.39	<0.44
1,3-Dichloropropane	-----	-----	<0.23	<2.3	<0.28	<0.49	<0.3	<0.49	<0.3	<0.23	<0.23	<0.28	<0.49	<0.3	<0.23	<0.23	<0.28	<0.49	<0.3
trans-1,3-Dichloropropene	-----	-----	<0.24	<2.4	<0.24	<0.42	<0.32	<0.42	<0.32	<0.24	<0.24	<0.24	<0.42	<0.32	<0.24	<0.24	<0.24	<0.42	<0.32
cis-1,3-Dichloropropene	-----	-----	<0.26	<2.6	<0.25	<0.21	<0.26	<0.21	<0.26	<0.26	<0.26	<0.25	<0.21	<0.26	<0.26	<0.26	<0.25	<0.21	<0.26
Diisopropyl ether	-----	-----	NR	NR	<0.26	<0.26	<0.21	<0.26	<0.21	NR	NR	<0.26	<0.26	<0.21	NR	NR	<0.26	<0.26	<0.21
1,2-Dibromoethane (EDB)	0.05	0.005	<0.48	<4.8	<0.27	<0.34	<0.34	<0.34	<0.34	<0.48	<0.48	<0.27	<0.34	<0.34	<0.48	<0.48	<0.27	<0.34	<0.34
Ethylbenzene	700	140	<0.22	<2.2	<0.22	<0.2	<0.26	<0.2	<0.26	<0.22	<0.22	<0.22	<0.2	<0.26	<0.22	<0.22	<0.22	<0.2	<0.26
Hexachlorobutadiene	-----	-----	<0.49	<4.9	<0.38	<1.47	<1.34	<1.47	<1.34	<0.49	<0.49	<0.38	<1.47	<1.34	<0.49	<0.49	<0.38	<1.47	<1.34
Isopropylbenzene	-----	-----	<0.19	<1.9	<0.20	<0.29	<0.78	<0.29	<0.78	<0.19	<0.19	<0.20	<0.29	<0.78	<0.19	<0.19	<0.20	<0.29	<0.78
p-Isopropyltoluene	-----	-----	<0.21	<2.1	<0.31	<0.28	<0.24	<0.28	<0.24	<0.21	<0.21	<0.31	<0.28	<0.24	<0.21	<0.21	<0.31	<0.28	<0.24
Methylene Chloride	5	0.5	<0.30	3	<0.91	<0.94	<1.32	<0.94	<1.32	<0.30	<0.30	<0.91	<0.94	<1.32	<0.30	<0.30	<0.91	<0.94	<1.32
Methyl-tert-butyl-ether (MTBE)	60	12	<0.19	<1.9	<0.63	<0.82	<0.28	<0.82	<0.28	<0.19	<0.19	<0.63	<0.82	<0.28	<0.19	<0.19	<0.63	<0.82	<0.28
Naphthalene	100	10	0.93	<1.7	<0.98	<2.17	<2.1	<2.17	<2.1	<0.17	<0.17	<0.98	<2.17	<2.1	<0.17	<0.17	<0.98	<2.17	<2.1
n-Propylbenzene	-----	-----	<0.22	<2.2	<0.31	<0.19	<0.61	<0.19	<0.61	<0.22	<0.22	<0.31	<0.19	<0.61	<0.22	<0.22	<0.31	<0.19	<0.61
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.22	<2.2	<0.25	<0.69	<0.3	<0.69	<0.3	<0.22	<0.22	<0.25	<0.69	<0.3	<0.22	<0.22	<0.25	<0.69	<0.3
1,1,1,2-Tetrachloroethane	70	7	<0.40	<4	<0.32	<0.47	<0.35	<0.47	<0.35	<0.40	<0.40	<0.32	<0.47	<0.35	<0.40	<0.40	<0.32	<0.47	<0.35
Tetrachloroethene (PCE)	5	0.5	350	300	67	30.7	95	<0.48	<0.38	0.88 "J"	100	230	197	180	31	130	340	203	184
Toluene	800	160	<0.27	<2.7	<0.32	<0.67	<0.19	<0.67	<0.19	<0.27	<0.27	<0.32	<0.67	<0.19	<0.27	<0.27	<0.32	<0.67	<0.19
1,2,4-Trichlorobenzene	70	14	<0.26	<2.6	<0.35	<1.29	<1.15	<1.29	<1.15	<0.26	<0.26	<0.35	<1.29	<1.15	<0.26	<0.26	<0.35	<1.29	<1.15
1,2,3-Trichlorobenzene	-----	-----	<0.24	<2.4	<0.32	<0.83	<1.71	<0.83	<1.71	<0.24	<0.24	<0.32	<0.83	<1.71	<0.24	<0.24	<0.32	<0.83	<1.71
1,1,1-Trichloroethane	200	40	<0.27	<2.7	<0.31	<0.35	<0.33	<0.35	<0.33	<0.27	<0.27	<0.31	<0.35	<0.33	<0.27	<0.27	<0.31	<0.35	<0.33
1,1,2-Trichloroethane	5	0.5	<0.45	<4.5	<0.29	<0.65	<0.42	<0.65	<0.42	<0.45	<0.45	<0.29	<0.65	<0.42	<0.45	<0.45	<0.29	<0.65	<0.42
Trichloroethene (TCE)	5	0.5	<0.37	<3.7	<0.31	0.48 "J"	2.12	<0.45	<0.3	<0.37	<0.37	<0.31	<0.45	<0.3	<0.37	<0.37	<0.31	<0.45	<0.3
Trichlorofluoromethane	3,490	698	<0.29	<2.9	<1.1	<0.64	<0.35	<0.64	<0.35	<0.29	<0.29	<1.1	<0.64	<0.35	<0.29	<0.29	<1.1	<0.64	<0.35
1,2,4-Trimethylbenzene	480	96	<0.20	<2	<0.18	<1.14	<0.8	<1.14	<0.8	<0.20	<0.20	<0.18	<1.14	<0.8	<0.20	<0.20	<0.18	<1.14	<0.8
1,3,5-Trimethylbenzene	-----	-----	<0.20	<2															



Table A.1.a  
Groundwater VOC Results

Eva Manor  
2103-2133 91st Street  
Pleasant Prairie, Wisconsin  
BRRTS #: 02-30-543562

Parameter	Sample ID and Date of Collection															
	NR 140 Table 1		MW-4					MW-5		MW-6				MW-7	MW-8	
	ES	PAL	2/8/08	5/6/08	1/17/11	12/7/17	3/28/18	2/8/08	5/6/08	2/8/08	5/6/08	1/17/11	12/7/17	12/7/17	3/28/18	5/7/18
VOC (µg/L)																
Benzene	5	0.5	<0.29	<0.29	<0.23	<0.17	<0.22	<0.29	<0.29	<0.29	<0.29	<0.23	<0.17	<0.17	NR	NR
Bromobenzene	-----	-----	<0.24	<0.24	<0.23	<0.43	<0.44	<0.24	<0.24	<0.24	<0.24	<0.23	<0.43	<0.43	NR	NR
Bromodichloromethane	0.6	0.06	<0.37	<0.37	<0.23	<0.31	<0.33	<0.37	<0.37	<0.37	<0.37	<0.23	<0.31	<0.31	NR	NR
Bromoforn	4.4	0.44	<0.51	<0.51	<0.37	<0.49	<0.45	<0.51	<0.51	<0.51	<0.51	<0.37	<0.49	<0.49	NR	NR
tert-Butylbenzene	-----	-----	<0.20	<0.20	<0.20	<0.39	<0.25	<0.20	<0.20	<0.20	<0.20	<0.20	<0.39	<0.39	NR	NR
sec-Butylbenzene	-----	-----	<0.22	<0.22	<0.22	<0.24	<0.79	<0.22	<0.22	<0.22	<0.22	<0.22	<0.24	<0.24	NR	NR
n-Butylbenzene	-----	-----	<0.23	<0.23	<0.31	<0.34	<0.71	<0.23	<0.23	<0.23	<0.23	<0.31	<0.34	<0.34	NR	NR
Carbon Tetrachloride	5	0.5	<0.31	<0.31	<0.20	<0.21	<0.31	<0.31	<0.31	<0.31	<0.31	<0.20	<0.21	<0.21	NR	NR
Chlorobenzene	100	20	<0.26	<0.26	<0.30	<0.27	<0.28	<0.26	<0.26	<0.26	<0.26	<0.30	<0.27	<0.27	NR	NR
Chloroethane	400	80	<0.86	<0.86	<0.87	<0.5	<0.61	<0.86	<0.86	<0.86	<0.86	<0.87	<0.5	<0.5	NR	NR
Chloroform	6	0.6	<0.33	0.41	<0.27	<0.96	<0.26	<0.33	<0.33	<0.33	0.97	<0.27	<0.96	<0.96	NR	NR
Chloromethane	30	3	<0.25	<0.25	<0.76	<1.3	<0.54	<0.25	<0.25	<0.25	<0.25	<0.76	<1.3	<1.3	NR	NR
2-Chlorotoluene	-----	-----	<0.22	<0.22	<0.28	<0.36	<0.31	<0.22	<0.22	<0.22	<0.22	<0.28	<0.36	<0.36	NR	NR
4-Chlorotoluene	-----	-----	<0.16	<0.16	<0.20	<0.35	<0.26	<0.16	<0.16	<0.16	<0.16	<0.20	<0.35	<0.35	NR	NR
1,2-Dibromo-3-chloropropane	0.2	0.02	<0.48	<0.48	<1.3	<1.88	<2.96	<0.48	<0.48	<0.48	<0.48	<1.3	<1.88	<1.88	NR	NR
Dibromodichloromethane	-----	-----	NR	NR	NR	<0.45	<0.22	NR	NR	NR	NR	NR	<0.45	<0.45	NR	NR
1,4-Dichlorobenzene	75	15	<0.30	<0.30	<0.31	<0.42	<0.7	<0.30	<0.30	<0.30	<0.30	<0.31	<0.42	<0.42	NR	NR
1,3-Dichlorobenzene	600	120	<0.19	<0.19	<0.29	<0.45	<0.85	<0.19	<0.19	<0.19	<0.19	<0.29	<0.45	<0.45	NR	NR
1,2-Dichlorobenzene	600	60	<0.29	<0.29	<0.29	<0.34	<0.86	<0.29	<0.29	<0.29	<0.29	<0.29	<0.34	<0.34	NR	NR
Dichlorodifluoromethane	1000	200	<0.54	<0.54	<1.6	<0.38	<0.32	<0.54	<0.54	<0.54	<0.54	<1.6	<0.38	<0.38	NR	NR
1,2-Dichloroethane	5	0.5	<0.27	<0.27	<0.25	<0.45	<0.25	<0.27	<0.27	<0.27	<0.27	<0.25	<0.45	<0.45	NR	NR
1,1-Dichloroethane	850	85	<0.31	<0.31	<0.32	<0.42	<0.36	<0.31	<0.31	<0.31	<0.31	<0.32	<0.42	<0.42	NR	NR
1,1-Dichloroethene	7	0.7	<0.50	<0.50	<0.41	<0.46	<0.42	<0.50	<0.50	<0.50	<0.50	<0.41	<0.46	<0.46	NR	NR
cis-1,2-Dichloroethene	70	7	<0.38	<0.38	1.3	<0.41	<0.37	<0.38	<0.38	<0.38	<0.38	1.3	<0.41	<0.41	NR	NR
trans-1,2-Dichloroethene	100	20	<0.30	<0.30	<0.26	<0.35	<0.34	<0.30	<0.30	<0.30	<0.30	<0.26	<0.35	<0.35	NR	NR
1,2-Dichloropropane	5	0.5	<0.52	<0.52	<0.39	<0.39	<0.44	<0.52	<0.52	<0.52	<0.52	<0.39	<0.39	<0.39	NR	NR
1,3-Dichloropropane	-----	-----	<0.23	<0.23	<0.28	<0.49	<0.3	<0.23	<0.23	<0.23	<0.23	<0.28	<0.49	<0.49	NR	NR
trans-1,3-Dichloropropene	-----	-----	<0.24	<0.24	<0.24	<0.42	<0.32	<0.24	<0.24	<0.24	<0.24	<0.24	<0.42	<0.42	NR	NR
cis-1,3-Dichloropropene	-----	-----	<0.26	<0.26	<0.25	<0.21	<0.26	<0.26	<0.26	<0.26	<0.26	<0.25	<0.21	<0.21	NR	NR
Diisopropyl ether	-----	-----	NR	NR	<0.26	<0.26	<0.21	NR	NR	NR	NR	<0.26	<0.26	<0.26	NR	NR
1,2-Dibromoethane (EDB)	0.05	0.005	<0.48	<0.48	<0.27	<0.34	<0.34	<0.48	<0.48	<0.48	<0.48	<0.27	<0.34	<0.34	NR	NR
Ethylbenzene	700	140	<0.22	<0.22	<0.22	<0.2	<0.26	<0.22	<0.22	<0.22	<0.22	<0.22	<0.2	<0.2	NR	NR
Hexachlorobutadiene	-----	-----	<0.49	<0.49	<0.38	<1.47	<1.34	<0.49	<0.49	<0.49	<0.49	<0.38	<1.47	<1.47	NR	NR
Isopropylbenzene	-----	-----	<0.19	<0.19	<0.20	<0.29	<0.78	<0.19	<0.19	<0.19	<0.19	<0.20	<0.29	<0.29	NR	NR
p-Isopropyltoluene	-----	-----	<0.21	<0.21	<0.31	<0.28	<0.24	<0.21	<0.21	<0.21	<0.21	<0.31	<0.28	<0.28	NR	NR
Methylene Chloride	5	0.5	<0.30	<0.30	<0.91	<0.94	<1.32	<0.30	<0.30	<0.30	<0.30	<0.91	<0.94	<0.94	NR	NR
Methyl-tert-butyl-ether (MTBE)	60	12	<0.19	<0.19	<0.63	<0.82	<0.28	<0.19	<0.19	<0.19	<0.19	<0.63	<0.82	<0.82	NR	NR
Naphthalene	100	10	<0.17	<0.17	<0.98	<2.17	<2.1	<0.17	<0.17	<0.17	<0.17	<0.98	<2.17	<2.17	8.3	NR
n-Propylbenzene	-----	-----	<0.22	<0.22	<0.31	<0.19	<0.61	<0.22	<0.22	<0.22	<0.22	<0.31	<0.19	<0.19	NR	NR
1,1,2,2-Tetrachloroethane	0.2	0.02	<0.22	<0.22	<0.25	<0.69	<0.3	<0.22	<0.22	<0.22	<0.22	<0.25	<0.69	<0.69	NR	NR
1,1,1,2-Tetrachloroethane	70	7	<0.40	<0.40	<0.32	<0.47	<0.35	<0.40	<0.40	<0.40	<0.40	<0.32	<0.47	<0.47	NR	NR
Tetrachloroethene (PCE)	5	0.5	140	0.87	1.0	<0.48	0.40 *J	<0.29	<0.29	<0.29	<0.29	<0.32	<0.48	<0.48	163	161
Toluene	800	160	<0.27	<0.27	<0.32	<0.67	<0.19	<0.27	<0.27	<0.27	<0.27	<0.32	<0.67	<0.67	NR	NR
1,2,4-Trichlorobenzene	70	14	<0.26	<0.26	<0.35	<1.29	<1.15	<0.26	<0.26	<0.26	<0.26	<0.35	<1.29	<1.29	NR	NR
1,2,3-Trichlorobenzene	-----	-----	<0.24	<0.24	<0.32	<0.83	<1.71	<0.24	<0.24	<0.24	<0.24	<0.32	<0.83	<0.83	NR	NR
1,1,1-Trichloroethane	200	40	<0.27	<0.27	<0.31	<0.35	<0.33	<0.27	<0.27	<0.27	<0.27	<0.31	<0.35	<0.35	NR	NR
1,1,2-Trichloroethane	5	0.5	<0.45	<0.45	<0.29	<0.65	<0.42	<0.45	<0.45	<0.45	<0.45	<0.29	<0.65	<0.65	NR	NR
Trichloroethene (TCE)	5	0.5	<0.37	<0.37	<0.31	<0.45	<0.3	<0.37	<0.37	<0.37	<0.37	<0.31	<0.45	<0.45	NR	NR
Trichlorofluoromethane	3,490	698	<0.29	<0.29	<1.1	<0.64	<0.35	<0.29	<0.29	<0.29	<0.29	<1.1	<0.64	<0.64	NR	NR
1,2,4-Trimethylbenzene	480	96	<0.20	<0.20	<0.18	<1.14	<0.8	<0.20	<0.20	<0.20	<0.20	<0.18	<1.14	<1.14	NR	NR
1,3,5-Trimethylbenzene	-----	-----	<0.20	<0.20	<0.33	<0.91	<0.63	<0.20	<0.20	<0.20	<0.20	<0.33	<0.91	<0.91	NR	NR
Vinyl Chloride	0.2	0.02	<0.27	<0.27	<0.34	<0.19	<0.2	<0.27	<0.27	<0.27	<0.27	<0.34	<0.19	<0.19	NR	NR
m&p-Xylene	2,000	400	<0.86	<0.86	<0.86	<1.56	<0.43	<0.86	<0.86	<0.86	<0.86	<0.86	<1.56	<1.56	NR	NR
o-Xylene	-----	-----	<0.86	<0.86	<0.86	<0.39	<0.29	<0.86	<0.86	<0.86	<0.86	<0.86	<0.39	<0.39	NR	NR

1) VOCs- Volatile organic compounds  
2) µg/L - micrograms per liter  
3) WAC NR 140 Table 1 - Public Health Groundwater Quality Standards  
4) ES - WAC Table 1 Enforcement Standard  
5) PAL - WAC Table 1 Preventive Action Limit  
6) ----- - Standard not established  
7) \*J - Indicates estimated result between the LOD and the LOQ  
8) NR - Result not reported

**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	11/3/2017	622.20	624.87	13.23	611.64	10.56
	12/7/2017			13.36	611.51	10.69
	3/28/2018			13.17	611.70	10.50
MW-1P	11/3/2017	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
MW-2	11/3/2017	622.46	625.09	13.21	611.88	10.58
	12/7/2017			13.34	611.75	10.71
	3/28/2018			13.15	611.94	10.52
MW-3	11/3/2017	621.43	624.20	12.51	611.69	9.74
	12/7/2017			12.61	611.59	10.87
	3/28/2018			12.42	611.78	10.68
MW-4	11/3/2017	621.95	624.37	12.28	612.09	9.86
	12/7/2017			12.38	611.99	9.96
	3/28/2018			12.20	612.17	9.78
MW-6	11/3/2017	622.11	624.16	11.62	612.54	9.57
	12/7/2017			11.79	612.37	9.74
	3/28/2018			11.58	612.58	9.53
MW-7	11/3/2017	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
MW-8	12/7/2017	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

Notes:

TOC = Top of casing

Elevations established using the top of water valve cover for hydrant in NE corner of site as 100.00 feet.

MW-5 has not been located.

**APPENDIX A**

MW-8 SOIL BORING LOG

MW-8 MONITORING WELL CONSTRUCTION DETAIL

MW-8 WELL DEVELOPMENT FORM

Route To: Watershed/Wastewater  Waste Management   
Remediation/Revelopment  Other  \_\_\_\_\_

Page 1 of       

Facility/Project Name			License/Permit/Monitoring Number		Boring Number	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: _____ Last Name: _____ Firm: _____			Date Drilling Started m m / d d / y y y y		Date Drilling Completed m m / d d / y y y y	Drilling Method
WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level _____ Feet MSL		Surface Elevation _____ Feet MSL	Borehole Diameter _____ inches
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input type="checkbox"/> State Plane _____ N, _____ E _____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____			Lat _____ ' _____ '' Long _____ ' _____ ''		Local Grid Location _____ Feet <input type="checkbox"/> N _____ Feet <input type="checkbox"/> E _____ Feet <input type="checkbox"/> S _____ Feet <input type="checkbox"/> W	
Facility ID		County	County Code	Civil Town/City/ or Village		

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			1 2 3 4 5 6 7 8 9 10											

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

Signature	Firm
-----------	------

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in 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 this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.



Facility/Project Name		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name	
Facility License, Permit or Monitoring No.		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Well Location <input type="checkbox"/>		Wis. Unique Well No. DNR Well ID No.	
Facility ID		Lat. " Long. " or		Date Well Installed m m / d d / y y y y	
Type of Well		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	
Well Code /		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	
Distance from Waste/Source ft.		Enf. Stds. Apply <input type="checkbox"/>			

A. Protective pipe, top elevation ----- ft. MSL

B. Well casing, top elevation ----- ft. MSL

C. Land surface elevation ----- ft. MSL

D. Surface seal, bottom ----- ft. MSL or ----- ft.

12. USCS classification of soil near screen:  
GP  GM  GC  GW  SW  SP   
SM  SC  ML  MH  CL  CH   
Bedrock

13. Sieve analysis performed?  Yes  No

14. Drilling method used: Rotary  5 0  
Hollow Stem Auger  4 1  
Other

15. Drilling fluid used: Water  0 2 Air  0 1  
Drilling Mud  0 3 None  9 9

16. Drilling additives used?  Yes  No  
Describe \_\_\_\_\_

17. Source of water (attach analysis, if required):  
\_\_\_\_\_

E. Bentonite seal, top ----- ft. MSL or ----- ft.

F. Fine sand, top ----- ft. MSL or ----- ft.

G. Filter pack, top ----- ft. MSL or ----- ft.

H. Screen joint, top ----- ft. MSL or ----- ft.

I. Well bottom ----- ft. MSL or ----- ft.

J. Filter pack, bottom ----- ft. MSL or ----- ft.

K. Borehole, bottom ----- ft. MSL or ----- ft.

L. Borehole, diameter ----- in.

M. O.D. well casing ----- in.

N. I.D. well casing ----- in.

1. Cap and lock?  Yes  No

2. Protective cover pipe:  
a. Inside diameter: ----- in.  
b. Length: ----- ft.  
c. Material: Steel  0 4  
Other

d. Additional protection?  Yes  No  
If yes, describe: \_\_\_\_\_

3. Surface seal: Bentonite  3 0  
Concrete  0 1  
Other

4. Material between well casing and protective pipe:  
Bentonite  3 0  
Other

5. Annular space seal: a. Granular/Chipped Bentonite  3 3  
b. \_\_\_\_\_ Lbs/gal mud weight . . . Bentonite-sand slurry  3 5  
c. \_\_\_\_\_ Lbs/gal mud weight . . . . . Bentonite slurry  3 1  
d. \_\_\_\_\_ % Bentonite . . . . . Bentonite-cement grout  5 0  
e. \_\_\_\_\_ Ft<sup>3</sup> volume added for any of the above  
f. How installed: Tremie  0 1  
Tremie pumped  0 2  
Gravity  0 8

6. Bentonite seal: a. Bentonite granules  3 3  
b.  1/4 in.  3/8 in.  1/2 in. Bentonite chips  3 2  
c. \_\_\_\_\_ Other

7. Fine sand material: Manufacturer, product name & mesh size  
a. \_\_\_\_\_  
b. Volume added \_\_\_\_\_ ft<sup>3</sup>

8. Filter pack material: Manufacturer, product name & mesh size  
a. \_\_\_\_\_  
b. Volume added \_\_\_\_\_ ft<sup>3</sup>

9. Well casing: Flush threaded PVC schedule 40  2 3  
Flush threaded PVC schedule 80  2 4  
Other

10. Screen material: \_\_\_\_\_  
a. Screen type: Factory cut  1 1  
Continuous slot  0 1  
Other

b. Manufacturer \_\_\_\_\_  
c. Slot size: 0. \_\_\_\_\_ in.  
d. Slotted length: ----- ft.

11. Backfill material (below filter pack): None  1 4  
Other

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

Signature \_\_\_\_\_ Firm \_\_\_\_\_

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	County Name	Well Name	
Facility License, Permit or Monitoring Number	County Code	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  4 1
  - surged with bailer and pumped  6 1
  - surged with block and bailed  4 2
  - surged with block and pumped  6 2
  - surged with block, bailed and pumped  7 0
  - compressed air  2 0
  - bailed only  1 0
  - pumped only  5 1
  - pumped slowly  5 0
  - Other \_\_\_\_\_  \_\_\_\_\_
3. Time spent developing well \_\_\_\_\_ min.
4. Depth of well (from top of well casing) \_\_\_\_\_ ft.
5. Inside diameter of well \_\_\_\_\_ in.
6. Volume of water in filter pack and well casing \_\_\_\_\_ gal.
7. Volume of water removed from well \_\_\_\_\_ gal.
8. Volume of water added (if any) \_\_\_\_\_ gal.
9. Source of water added \_\_\_\_\_
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. _____ ft.	_____ ft.
Date	b. ____/____/____ m m d d y y y y	____/____/____ m m d d y y y y
Time	c. ____:____ <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	____:____ <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.
12. Sediment in well bottom	_____ inches	_____ inches
13. Water clarity	Clear <input type="checkbox"/> 1 0 Turbid <input type="checkbox"/> 1 5 (Describe) _____	Clear <input type="checkbox"/> 2 0 Turbid <input type="checkbox"/> 2 5 (Describe) _____

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

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

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

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

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Firm: \_\_\_\_\_

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party


First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Facility/Firm: \_\_\_\_\_

Street: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

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

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

Print Name: \_\_\_\_\_

Firm: \_\_\_\_\_

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

**APPENDIX B**

ANALYTICAL RESULTS

CHAIN-OF-CUSTODY FORMS



# Synergy Environmental Lab, INC.

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

BOB CIGALE  
ENDPOINT SOLUTIONS  
6871 SOUTH LOVER'S LANE  
FRANKLIN, WI 53132

Report Date 03-Apr-18

Project Name EVA MANOR  
Project # 360-002  
Lab Code 5034426A  
Sample ID MW-1  
Sample Matrix Water  
Sample Date 3/28/2018

Invoice # E34426

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		4/2/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		4/2/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		4/2/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		4/2/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		4/2/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		4/2/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		4/2/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		4/2/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		4/2/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		4/2/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		4/2/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		4/2/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		4/2/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		4/2/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		4/2/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		4/2/2018	CJR	1
cis-1,2-Dichloroethene	0.86 "J"	ug/l	0.37	1.16	1	8260B		4/2/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		4/2/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		4/2/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		4/2/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		4/2/2018	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-002

**Invoice #** E34426

**Lab Code** 5034426A  
**Sample ID** MW-1  
**Sample Matrix** Water  
**Sample Date** 3/28/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		4/2/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		4/2/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		4/2/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		4/2/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		4/2/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		4/2/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		4/2/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		4/2/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		4/2/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		4/2/2018	CJR	1
Tetrachloroethene	95	ug/l	0.38	1.21	1	8260B		4/2/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		4/2/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		4/2/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		4/2/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		4/2/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		4/2/2018	CJR	1
Trichloroethene (TCE)	2.12	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		4/2/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		4/2/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		4/2/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		4/2/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		4/2/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		4/2/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	102	REC %			1	8260B		4/2/2018	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		4/2/2018	CJR	1
SUR - Dibromofluoromethane	110	REC %			1	8260B		4/2/2018	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		4/2/2018	CJR	1

Project Name EVA MANOR  
 Project # 360-002

Invoice # E34426

Lab Code 5034426B  
 Sample ID MW-1P  
 Sample Matrix Water  
 Sample Date 3/28/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		4/2/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		4/2/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		4/2/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		4/2/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		4/2/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		4/2/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		4/2/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		4/2/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		4/2/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		4/2/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		4/2/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		4/2/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		4/2/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		4/2/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		4/2/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		4/2/2018	CJR	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.16	1	8260B		4/2/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		4/2/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		4/2/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		4/2/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		4/2/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		4/2/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		4/2/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		4/2/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		4/2/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		4/2/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		4/2/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		4/2/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		4/2/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		4/2/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		4/2/2018	CJR	1
Tetrachloroethene	< 0.38	ug/l	0.38	1.21	1	8260B		4/2/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		4/2/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		4/2/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		4/2/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		4/2/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		4/2/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		4/2/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		4/2/2018	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-002

**Invoice #** E34426

**Lab Code** 5034426B  
**Sample ID** MW-1P  
**Sample Matrix** Water  
**Sample Date** 3/28/2018

	<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>
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		4/2/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		4/2/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		4/2/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		4/2/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	103	REC %			1	8260B		4/2/2018	CJR	1
SUR - 4-Bromofluorobenzene	114	REC %			1	8260B		4/2/2018	CJR	1
SUR - Dibromofluoromethane	108	REC %			1	8260B		4/2/2018	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		4/2/2018	CJR	1

Project Name EVA MANOR  
 Project # 360-002

Invoice # E34426

Lab Code 5034426C  
 Sample ID MW-2  
 Sample Matrix Water  
 Sample Date 3/28/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		4/2/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		4/2/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		4/2/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		4/2/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		4/2/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		4/2/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		4/2/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		4/2/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		4/2/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		4/2/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		4/2/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		4/2/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		4/2/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		4/2/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		4/2/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		4/2/2018	CJR	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.16	1	8260B		4/2/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		4/2/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		4/2/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		4/2/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		4/2/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		4/2/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		4/2/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		4/2/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		4/2/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		4/2/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		4/2/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		4/2/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		4/2/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		4/2/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		4/2/2018	CJR	1
Tetrachloroethene	180	ug/l	0.38	1.21	1	8260B		4/2/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		4/2/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		4/2/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		4/2/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		4/2/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		4/2/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		4/2/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		4/2/2018	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-002

**Invoice #** E34426

**Lab Code** 5034426C  
**Sample ID** MW-2  
**Sample Matrix** Water  
**Sample Date** 3/28/2018

	<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>
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63		2 1	8260B		4/2/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		4/2/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		4/2/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		4/2/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	101	REC %			1	8260B		4/2/2018	CJR	1
SUR - 4-Bromofluorobenzene	110	REC %			1	8260B		4/2/2018	CJR	1
SUR - Dibromofluoromethane	111	REC %			1	8260B		4/2/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		4/2/2018	CJR	1

Project Name EVA MANOR  
 Project # 360-002

Invoice # E34426

Lab Code 5034426D  
 Sample ID MW-3  
 Sample Matrix Water  
 Sample Date 3/28/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		4/2/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		4/2/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		4/2/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		4/2/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		4/2/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		4/2/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		4/2/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		4/2/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		4/2/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		4/2/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		4/2/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		4/2/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		4/2/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		4/2/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		4/2/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		4/2/2018	CJR	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.16	1	8260B		4/2/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		4/2/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		4/2/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		4/2/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		4/2/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		4/2/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		4/2/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		4/2/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		4/2/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		4/2/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		4/2/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		4/2/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		4/2/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		4/2/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		4/2/2018	CJR	1
Tetrachloroethene	184	ug/l	0.38	1.21	1	8260B		4/2/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		4/2/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		4/2/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		4/2/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		4/2/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		4/2/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		4/2/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		4/2/2018	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-002

**Invoice #** E34426

**Lab Code** 5034426D  
**Sample ID** MW-3  
**Sample Matrix** Water  
**Sample Date** 3/28/2018

	<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>
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63		2 1	8260B		4/2/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		4/2/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		4/2/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		4/2/2018	CJR	1
SUR - Dibromofluoromethane	110	REC %			1	8260B		4/2/2018	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		4/2/2018	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		4/2/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			1	8260B		4/2/2018	CJR	1



Project Name EVA MANOR  
 Project # 360-002

Invoice # E34426

Lab Code 5034426E  
 Sample ID MW-4  
 Sample Matrix Water  
 Sample Date 3/28/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.22	ug/l	0.22	0.71	1	8260B		4/2/2018	CJR	1
Bromobenzene	< 0.44	ug/l	0.44	1.38	1	8260B		4/2/2018	CJR	1
Bromodichloromethane	< 0.33	ug/l	0.33	1.06	1	8260B		4/2/2018	CJR	1
Bromoform	< 0.45	ug/l	0.45	1.44	1	8260B		4/2/2018	CJR	1
tert-Butylbenzene	< 0.25	ug/l	0.25	0.8	1	8260B		4/2/2018	CJR	1
sec-Butylbenzene	< 0.79	ug/l	0.79	2.53	1	8260B		4/2/2018	CJR	1
n-Butylbenzene	< 0.71	ug/l	0.71	2.25	1	8260B		4/2/2018	CJR	1
Carbon Tetrachloride	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
Chlorobenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Chloroethane	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
Chloroform	< 0.26	ug/l	0.26	0.82	1	8260B		4/2/2018	CJR	1
Chloromethane	< 0.54	ug/l	0.54	1.72	1	8260B		4/2/2018	CJR	1
2-Chlorotoluene	< 0.31	ug/l	0.31	0.98	1	8260B		4/2/2018	CJR	1
4-Chlorotoluene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 2.96	ug/l	2.96	9.43	1	8260B		4/2/2018	CJR	1
Dibromochloromethane	< 0.22	ug/l	0.22	0.69	1	8260B		4/2/2018	CJR	1
1,4-Dichlorobenzene	< 0.7	ug/l	0.7	2.22	1	8260B		4/2/2018	CJR	1
1,3-Dichlorobenzene	< 0.85	ug/l	0.85	2.7	1	8260B		4/2/2018	CJR	1
1,2-Dichlorobenzene	< 0.86	ug/l	0.86	2.74	1	8260B		4/2/2018	CJR	1
Dichlorodifluoromethane	< 0.32	ug/l	0.32	1.02	1	8260B		4/2/2018	CJR	1
1,2-Dichloroethane	< 0.25	ug/l	0.25	0.78	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethane	< 0.36	ug/l	0.36	1.14	1	8260B		4/2/2018	CJR	1
1,1-Dichloroethene	< 0.42	ug/l	0.42	1.34	1	8260B		4/2/2018	CJR	1
cis-1,2-Dichloroethene	< 0.37	ug/l	0.37	1.16	1	8260B		4/2/2018	CJR	1
trans-1,2-Dichloroethene	< 0.34	ug/l	0.34	1.07	1	8260B		4/2/2018	CJR	1
1,2-Dichloropropane	< 0.44	ug/l	0.44	1.39	1	8260B		4/2/2018	CJR	1
1,3-Dichloropropane	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
trans-1,3-Dichloropropene	< 0.32	ug/l	0.32	1.01	1	8260B		4/2/2018	CJR	1
cis-1,3-Dichloropropene	< 0.26	ug/l	0.26	0.81	1	8260B		4/2/2018	CJR	1
Di-isopropyl ether	< 0.21	ug/l	0.21	0.66	1	8260B		4/2/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.34	ug/l	0.34	1.09	1	8260B		4/2/2018	CJR	1
Ethylbenzene	< 0.26	ug/l	0.26	0.83	1	8260B		4/2/2018	CJR	1
Hexachlorobutadiene	< 1.34	ug/l	1.34	4.28	1	8260B		4/2/2018	CJR	1
Isopropylbenzene	< 0.78	ug/l	0.78	2.47	1	8260B		4/2/2018	CJR	1
p-Isopropyltoluene	< 0.24	ug/l	0.24	0.76	1	8260B		4/2/2018	CJR	1
Methylene chloride	< 1.32	ug/l	1.32	4.21	1	8260B		4/2/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.28	ug/l	0.28	0.89	1	8260B		4/2/2018	CJR	1
Naphthalene	< 2.1	ug/l	2.1	6.65	1	8260B		4/2/2018	CJR	1
n-Propylbenzene	< 0.61	ug/l	0.61	1.95	1	8260B		4/2/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.3	ug/l	0.3	0.97	1	8260B		4/2/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.35	ug/l	0.35	1.13	1	8260B		4/2/2018	CJR	1
Tetrachloroethene	0.40 "J"	ug/l	0.38	1.21	1	8260B		4/2/2018	CJR	1
Toluene	< 0.19	ug/l	0.19	0.6	1	8260B		4/2/2018	CJR	1
1,2,4-Trichlorobenzene	< 1.15	ug/l	1.15	3.67	1	8260B		4/2/2018	CJR	1
1,2,3-Trichlorobenzene	< 1.71	ug/l	1.71	5.43	1	8260B		4/2/2018	CJR	1
1,1,1-Trichloroethane	< 0.33	ug/l	0.33	1.05	1	8260B		4/2/2018	CJR	1
1,1,2-Trichloroethane	< 0.42	ug/l	0.42	1.32	1	8260B		4/2/2018	CJR	1
Trichloroethene (TCE)	< 0.3	ug/l	0.3	0.94	1	8260B		4/2/2018	CJR	1
Trichlorofluoromethane	< 0.35	ug/l	0.35	1.1	1	8260B		4/2/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.8	ug/l	0.8	2.55	1	8260B		4/2/2018	CJR	1

**Project Name** EVA MANOR  
**Project #** 360-002

**Invoice #** E34426

**Lab Code** 5034426E  
**Sample ID** MW-4  
**Sample Matrix** Water  
**Sample Date** 3/28/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,3,5-Trimethylbenzene	< 0.63	ug/l	0.63	2	1	8260B		4/2/2018	CJR	1
Vinyl Chloride	< 0.2	ug/l	0.2	0.65	1	8260B		4/2/2018	CJR	1
m&p-Xylene	< 0.43	ug/l	0.43	1.38	1	8260B		4/2/2018	CJR	1
o-Xylene	< 0.29	ug/l	0.29	0.93	1	8260B		4/2/2018	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		4/2/2018	CJR	1
SUR - Dibromofluoromethane	111	REC %			1	8260B		4/2/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	106	REC %			1	8260B		4/2/2018	CJR	1
SUR - 4-Bromofluorobenzene	109	REC %			1	8260B		4/2/2018	CJR	1

**Lab Code** 5034426F  
**Sample ID** MW-8  
**Sample Matrix** Water  
**Sample Date** 3/28/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Naphthalene	8.3	ug/l	2.1	6.65	1	8260B		4/3/2018	CJR	1
Tetrachloroethene	163	ug/l	0.38	1.21	1	8260B		4/3/2018	CJR	1
SUR - Toluene-d8	98	REC %			1	8260B		4/3/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	100	REC %			1	8260B		4/3/2018	CJR	1
SUR - 4-Bromofluorobenzene	108	REC %			1	8260B		4/3/2018	CJR	1
SUR - Dibromofluoromethane	108	REC %			1	8260B		4/3/2018	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 CUSTODY RECORD**

**Synergy**

Chain # **No. 3308**

Page    of   

**Environmental Lab, Inc.**


**Sample Handling Request**  
 Rush Analysis Date Required \_\_\_\_\_  
 (Rushes accepted only with prior authorization)  
 Normal Turn Around

1990 Prospect Ct. • Appleton, WI 54914  
 920-830-2455 • FAX 920-733-0631

Lab I.D. # \_\_\_\_\_ Quote No.: \_\_\_\_\_

Account No.: \_\_\_\_\_

Project #: **360-002**

Sampler: (signature) 

Project (Name / Location): **EVA MANOR - PEAK PARK, WI**

Reports To: **Bob Crote**

Company: **EMPLOINT SOLUTIONS**

Address: **6871 S. LOVENS LANE**

City State Zip: **FRANKLIN, WI 53132**

Phone: **414-858-1202**

FAX: \_\_\_\_\_

Invoice To: \_\_\_\_\_

Company: \_\_\_\_\_

Address: **same**

City State Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

FAX: \_\_\_\_\_

Lab I.D.	Sample I.D.	Collection Date	Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	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 524.2)	VOC (EPA 8260)	8-ROCRA METALS	PID/ FID											
<b>S034726A</b>	<b>MW-1</b>	<b>3/28/18</b>	<b>1110</b>		<b>X</b>	<b>N</b>	<b>3</b>	<b>GW</b>	<b>HC1</b>																											
<b>B</b>	<b>MW-1P</b>		<b>1115</b>																																	
<b>C</b>	<b>MW-2</b>		<b>1120</b>																																	
<b>D</b>	<b>MW-3</b>		<b>1130</b>																																	
<b>E</b>	<b>MW-4</b>		<b>1135</b>																																	
<b>F</b>	<b>MW-8</b>		<b>1140</b>																																	

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

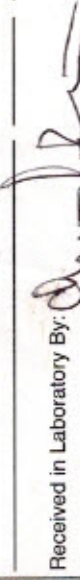
Relinquished By: (sign)  Time **1315** Date **3/28/18**

Sample Integrity - To be completed by receiving lab.

Method of Shipment:    °C On Ice:  No

Temp. of Temp. Blank:    °C

Cooler seal intact upon receipt:  Yes  No

Received in Laboratory By:  Time: **8:00** Date: **3/28/18**

# Synergy Environmental Lab, INC.

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

BOB CIGALE  
ENDPOINT SOLUTIONS  
6871 SOUTH LOVER'S LANE  
FRANKLIN, WI 53132

Report Date 09-May-18

Project Name JABS-PLEASANT PRAIRIE, WI  
Project # 360-006-005

Invoice # E34596

Lab Code 5034596A  
Sample ID MW-8-2  
Sample Matrix Water  
Sample Date 5/7/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Tetrachloroethene	161	ug/l	0.38	1.21	1	8260B	5/9/2018	5/9/2018	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B	5/9/2018	5/9/2018	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B	5/9/2018	5/9/2018	CJR	1
SUR - 4-Bromofluorobenzene	94	REC %			1	8260B	5/9/2018	5/9/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	104	REC %			1	8260B	5/9/2018	5/9/2018	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



**Sample Handling Request**  
 Rush Analysis Date Required **AsP**  
 (Rushes accepted only with prior authorization)  
 Normal Turn Around

Lab I.D. # \_\_\_\_\_

Account No.: \_\_\_\_\_ Quote No.: \_\_\_\_\_

Project #: 360-006-0005

Sampler: (signature) *[Signature]*

Project (Name / Location): **JABS - Pennington Park, WI**

Reports To: **Bob Cigane**

Company: **ENDPOINT SOLUTIONS**

Address: **6871 S. LOVENS LANE**

City State Zip: **FRANKLIN WI 53132**

Phone: **414-858-1202**

FAX: \_\_\_\_\_

Invoice To: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

City State Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

FAX: \_\_\_\_\_

Lab I.D.	Sample I.D.	Collection Date Time	Comp	Grab	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)	8-ROPA METALS	PID/FID
503459607	MW-8-2	5/18/1105		X	N	3	GW	He1													X		

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

Relinquished By: (signature) \_\_\_\_\_ Date: 5/18/11 Time: 1:30

Received By: (signature) \_\_\_\_\_ Date: 5/8/10 Time: 8:20

Received in Laboratory By: (signature) \_\_\_\_\_ Date: 5/8/10

Sample Integrity - To be completed by receiving lab.  
 Method of Shipment: GC  
 Temp. of Temp. Blank: \_\_\_\_\_ °C On Ice: X  
 Cooler seal intact upon receipt: X Yes \_\_\_ No