



September 14, 2017

Village of Whitefish Bay
Attn: Steven Sheiffer & John Edlebeck
5300 North Marlborough Drive
Whitefish Bay, WI 53217

Subject: Revised Plan to address Direct Contact Risk and Plan to Evaluate Offsite Vapor and Groundwater Conditions, Village of Whitefish Bay Landfill, 5201 West Good Hope Road, Milwaukee, WI

License Number 356
FID: 241218670
BRRTS: 02-41-000254

Dear Mr. Sheiffer & Mr. Edlebeck:

The Wisconsin Department of Natural Resources ("DNR") has reviewed the March 16, 2017 submittal from The Sigma Group (Sigma). The submittal proposes a plan to address the direct contact risk on the property and an evaluation of offsite vapor and groundwater conditions associated with the Whitefish Bay landfill on West Good Hope Road.

The proposed activities include:

- Revised Plan to Address Direct Contact Risk
- Off-Site Subsurface Vapor Assessment
- Off-Site Groundwater Conditions

Revised Plan to Address Direct Contact Risk

Instead of a direct contact cap or removal of shallow impacted soil Sigma proposes to install chain-link fence enclosures around the identified shallow soil impacted areas as shown on the attached map Figure 1. The chain-link fence will be approximately 10-feet high around each of the areas with appropriate warning signs and lockable gates. A maintenance plan will be implemented to inspect the fence every spring to assess any damage during the previous seasons and implement any repair work. The objective of the fence enclosures is to prevent any unauthorized entry within these areas and allow needed access for any future work for monitoring and/or remediation work.

Note: The DNR considers the use of the chain-link fences as an interim action for the site that doesn't fully address soil and groundwater contamination at these locations. This temporarily addresses the direct contact issues in the designated areas but, it doesn't address infiltration into the groundwater from the contaminated soils. Future remediation activities may require soil removal and/or groundwater remediation after selection of an acceptable remedial action per ch. NR 722, Wisconsin Administrative Code (WAC) for the property and additional remediation activities offsite depending on the results of future evaluations.

Village of Whitefish Bay Landfill
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Off-Site Subsurface Vapor Assessment

Sigma proposes a vapor assessment to evaluate the subsurface conditions at off-site downgradient locations. Subslab samples SSV-1 through SSV-3, will be completed at the former Milwaukee Public School and soil vapor samples from locations within the residential subdivision along the city street right-of-way as shown on the attached Figure 2.

Note: Future maps should include the residences and Presidio Apartments on the maps to better understand what properties are being affected by the contamination. For the off-site soil vapor assessment along 51st and 52nd Street, the DNR recommends that vapor points VP-1 through VP-6 should “line-up” with the nearest residence in order to be as close as possible to each house in the right-of-way to better assess any vapor potential.

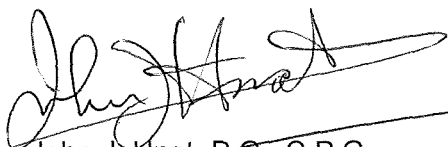
Off-Site Groundwater Conditions

Sigma proposes to further define the groundwater contamination plume within the residential subdivision by installing two ch. NR 141, WAC, compliant monitoring well nests MW-12/PZ-12 and MW-13/PZ-13 at locations indicated on the attached map Figure 2, to the appropriate depths as discussed in their proposal.

The DNR approves Sigma’s proposal. Additional on- and/or offsite investigation, evaluation, or remediation may be required depending on the results from this proposal.

The Department appreciates the actions you have taken to investigate and remediate the contamination at this site. If you have any questions or comments, please feel free to contact me at the above address or at (414) 263-8644. Please refer to the FID number at the top of this letter in any future correspondence. Future correspondence should be sent directly to me the above address.

Sincerely,



John J. Hnat, P.G., C.P.G.
Project Manager/Hydrogeologist
Southeast Region
Remediation and Redevelopment Program

Attachments:

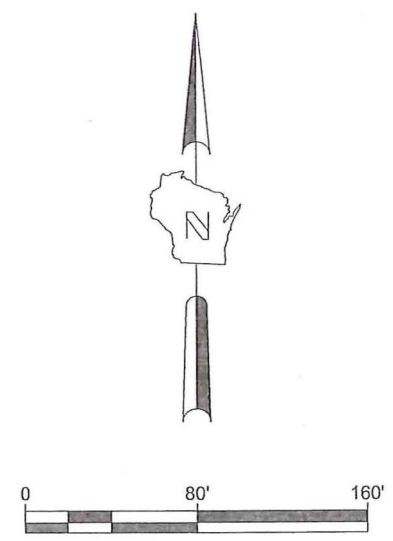
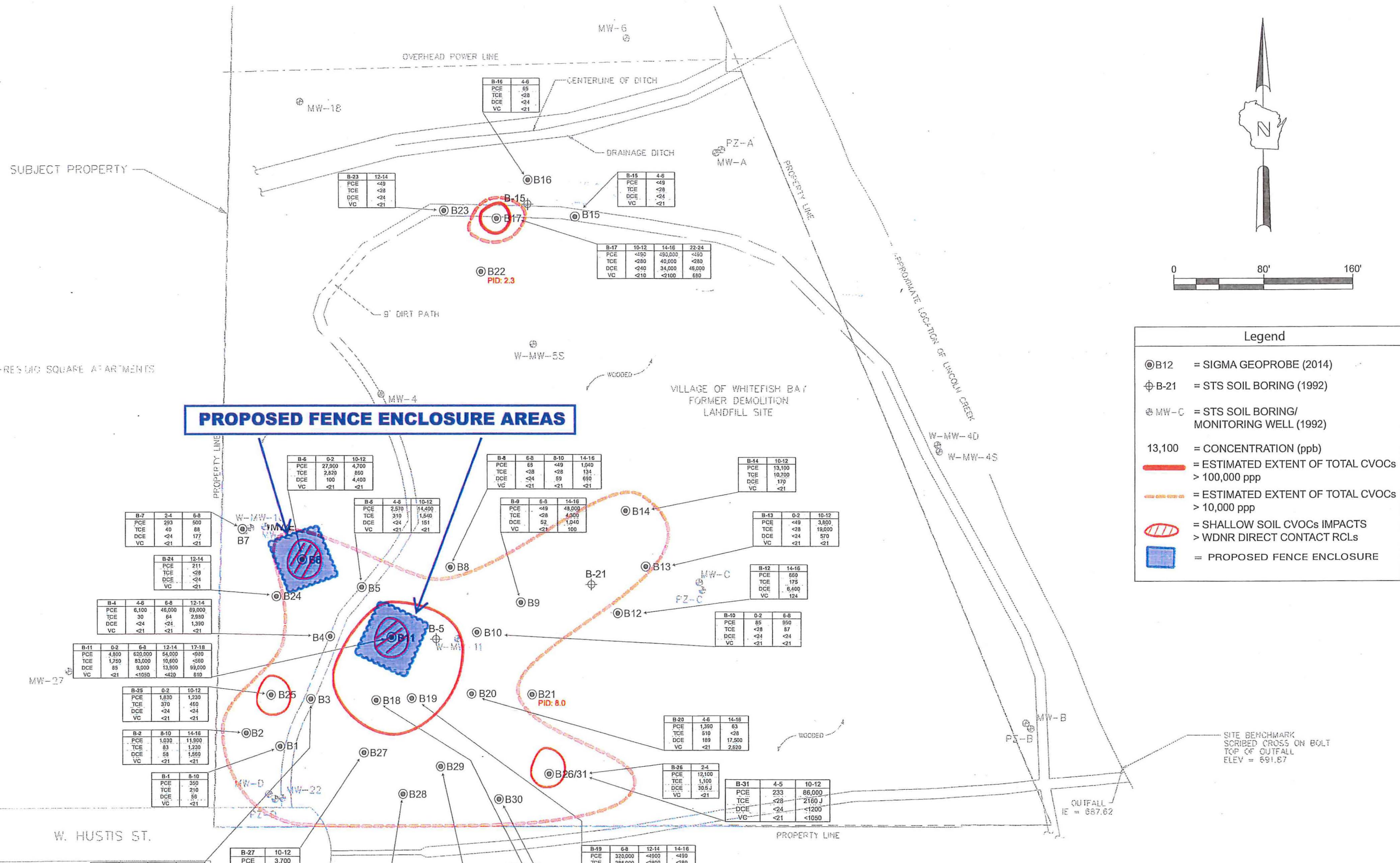
- Soil Quality Map With Proposed Fence Enclosure, Figure 1, The Sigma Group, dated July 1, 2014
- Proposed Vapor Sampling Point and Groundwater Monitoring Well Location Map – South of Whitefish Bay Landfill, Figure 2

C: Mafizul Islam & Randy Boness – the Sigma Group
WDNR SER Files

SUBJECT PROPERTY

FRESHWATER SQUARE APARTMENTS

PROPOSED FENCE ENCLOSURE AREAS



W. HUSTIS ST.

**FORMER DEMOLITION LANDFILL
WHITEFISH BAY, WISCONSIN**

DATE: 7-1-2014 DRW: AEK SCALE: 1" = 80'

**SOIL QUALITY MAP WITH
PROPOSED FENCE ENCLOSURE**

SIGMA GROUP
Single Source. Sound Solutions.

www.thisigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

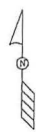
WFB Landfill borings.dwg

FIGURE 1

SITE BENCHMARK
SCRIBED CROSS ON BOLT
TOP OF GUTFALL
ELEV = 691.67

GUTFALL
E = 687.62

MILWAUKEE
PUBLIC SCHOOL
PROPERTY



NOTES:
 1. BOUNDARIES ARE APPROXIMATE.
 2. THIS MAP WAS DEVELOPED FROM A MILWAUKEE COUNTY MAP, THENSVILLE QUADRANGLE TOPOGRAPHIC MAP, AND SURVEY DATA.
 3. SHADDED WELLS REPRESENT CONCENTRATION BELOW DETECTION LIMIT.
 4. GROUNDWATER CONCENTRATION DATA INCLUDE RESULTS FROM SAMPLING PERFORMED IN JUNE 2014 FOR MOST OF THE SAMPLING POINTS. WELLS THAT COULD NOT BE SAMPLED (EITHER DESTROYED OR DRY) LAST AVAILABLE DATA WAS USED.
 5. EXTENT OF GROUNDWATER IMPACTS:
 - - - - - > 100 ppb TETRACHLOROETHENE
 - - - - - > 10 ppb TRICHLOROETHENE
 - - - - - > 10 ppb cis-1,2-DICHLOROETHENE
 - - - - - > 1 ppb VINYL CHLORIDE
 6. WHERE CURRENT DATA ARE NOT AVAILABLE HISTORICAL GROUNDWATER DATA WAS USED TO GENERATE THE GROUNDWATER CVOC PLUME MAP.

ANALYTICAL KEY

PCE	= TETRACHLOROETHENE
TCE	= TRICHLOROETHENE
DCE	= cis-1,2-DICHLOROETHENE
VC	= VINYL CHLORIDE

ALL CONCENTRATIONS EXPRESSED IN MICROGRAMS PER LITER (ug/l)

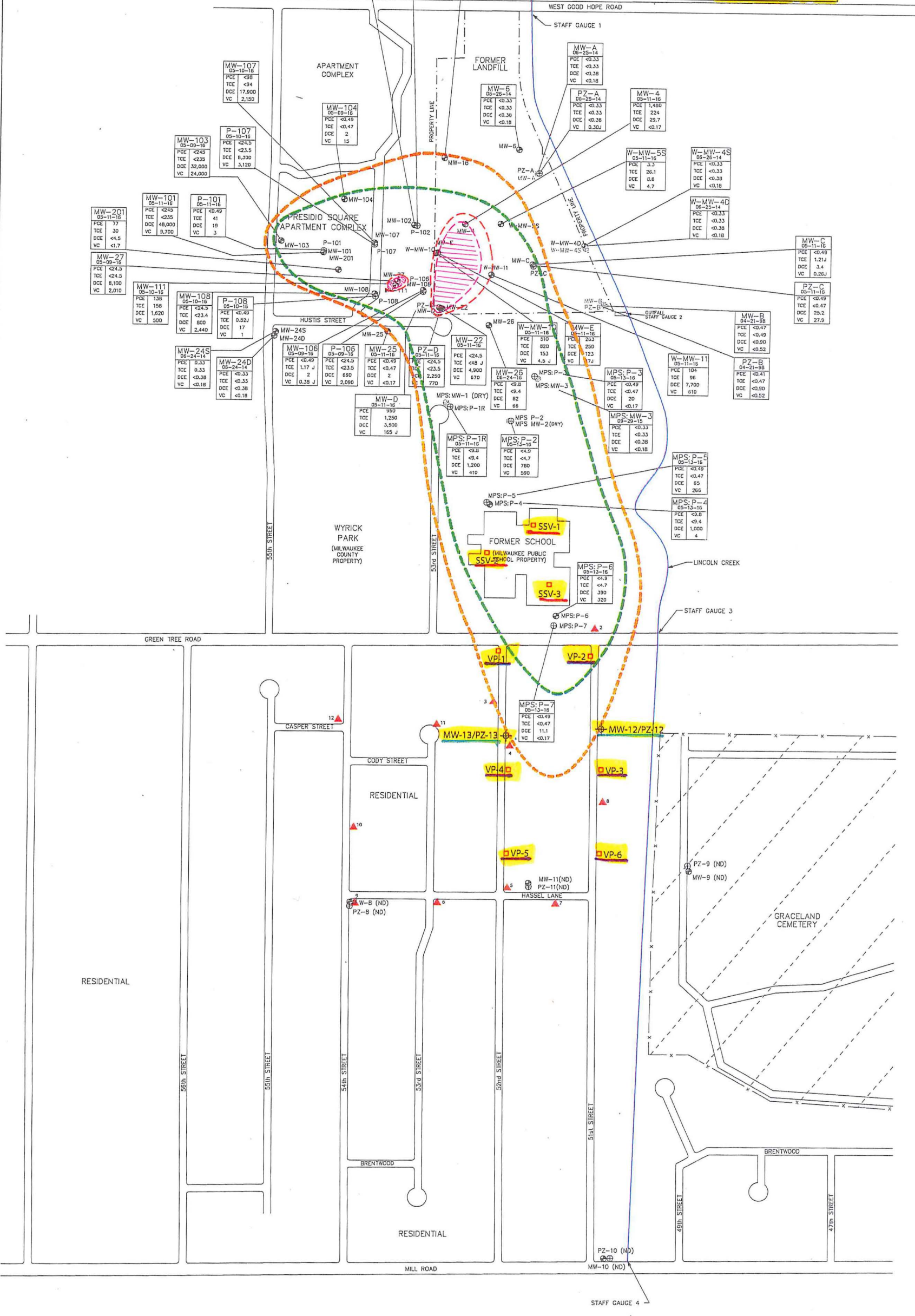
LEGEND

⊕	= MONITORING WELL
⊕	= PIEZOMETER
---	= CHAIN LINK FENCE
- - -	= PROPERTY LINE
▲	= SOIL GAS AND RESPONSE POINT

LEGEND - PROPOSED ACTIVITIES

□	= Proposed Sub-Slab Vapor Point
□	= Proposed Soil Vapor Point
⊕	= Proposed Groundwater Monitoring Well/ Piezometer

MW-102	P-102	MW-1B
09-09-16	09-09-16	06-26-14
PCE <0.51 J	PCE <24.5	PCE <0.33
TCE 13	TCE <23.5	TCE <0.33
DCE 30	DCE 1,310	DCE 2.8
VC 12	VC 1,860	VC 0.84



PROPOSED VAPOR SAMPLING POINT AND GROUNDWATER MONITORING WELL
 LOCATION MAP - SOUTH OF WHITEFISH BAY LANDFILL

DATE: _____
 NAME: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____

BY: AP/ND
 REVISIONS
 NO. DATE

SCALE - 1" = 200'-0"

THE SIGMA GROUP, INC.
 1500 W CANAL STREET, MILWAUKEE, WISCONSIN

DRAWING NUMBER
 3125-057

FIGURE 2