



February 24, 2021

Village of Whitefish Bay  
ATTN: John Edlebeck  
155 W. Fairmount Avenue  
Whitefish Bay, WI 53217

Subject: Review of *Site Investigation Completion Report*  
Village of Whitefish Bay Landfill  
5201 W. Good Hope Road, Milwaukee, WI 53223  
DNR BRRTS Activity #: 02-41-000254; FID #: 241218670

Dear Mr. Edlebeck:

On December 1, 2020, the Wisconsin Department of Natural Resources (DNR) received the *Site Investigation Completion Report*, dated November 18, 2020 (Report) for the site identified above. The Report was prepared for the Village of Whitefish Bay by your consultant, The Sigma Group, Inc. (Sigma) and was submitted with a fee for DNR review and response. The Report was reviewed for compliance with Wis. Admin. Code ch. NR 716. The DNR has determined that additional actions and/or information is required to complete the site investigation. The DNR requests that you submit a supplemental site investigation report which details the activities requested below.

### **Report Summary**

The Report provides an overview of environmental investigation completed at the site and areas south of the site, including soil, vapor, and groundwater conditions; presents recent groundwater monitoring and vapor sampling results; evaluates the degree and extent of the subsurface impacts; and, presents rationale supporting conclusion that site investigation has been complete meeting the NR 716 requirements. The Report also contains a request for DNR concurrence that the site investigation is complete, and the site can move towards the remediation phase.

The site is currently an approximately 11-acre vacant lot. The village of Whitefish Bay acquired the property in 1960 and operated the site as a landfill for disposal of incinerator ash and construction debris from approximately 1960 -1972. The Village of Whitefish Bay's landfill operations were reportedly limited to the northern half of the site. The site was reportedly graded and covered with clean fill in the 1980s to comply with DNR landfill closure regulations, however documentation of the placement of clean fill does not appear to have been submitted to the DNR.

Site investigation activities conducted to date have identified chlorinated volatile organic compounds (CVOCs) and petroleum volatile organic compounds (PVOCs) in soil, groundwater, and vapor at the site and adjacent properties. Source area soil contamination has been identified on the southern half of the landfill, with the highest identified impacts in the southwest corner of the landfill. The CVOC and PVOC contamination is suspected to be the result of illicit disposal of contaminated material on the landfill site. Illicit disposal of CVOC and PVOC impacted material is also suspected to have occurred on the western adjacent Presidio Square Apartments property. Contamination associated with sources on the Presidio Square Apartments property is addressed under the separate bureau for remediation and redevelopment tracking system (BRRTS) number 02-41-181762.

### **DNR Review**

The DNR has reviewed the Report for compliance with Wis. Admin. Code ch. NR 716 and has determined that additional actions and/or information is required to complete the site investigation as detailed below.

#### 1) Degree and Extent of Contamination in All Affected Media

Wis. Admin. Code § NR 716.11(3) requires the site investigation to determine the nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media.

##### A. Soil

Site investigation activities conducted to date have identified chlorinated volatile organic compounds (CVOCs) and petroleum volatile organic compounds (PVOCs) in soil at the site and adjacent properties. Source area soil contamination has been identified on the southern half of the landfill, with the highest identified impacts in the southwest corner of the landfill. Two areas of shallow soil impacts identified at the site that pose direct contact risks are currently enclosed with chain-link fence and locked gates to prevent public access.

- 1) The degree and extent of shallow CVOC soil contamination within the direct contact zone near borings B6 and B11 does not appear to be fully defined. Specifically, the degree and extent of shallow soil contamination is not fully defined north of B6 and southwest, south, and southeast of B11. Conduct additional soil sampling to fully define the degree and extent of CVOC soil contamination within the direct contact zone (0-4 feet below ground surface).
- 2) Contamination at the site has been attributed to illegal disposal of material on the property. Analysis of samples collected during the site investigation has been limited to VOCs. Due to the unknown nature of the source material, the potential exists for other classes of contaminants, including polycyclic aromatic hydrocarbons (PAHs) and metals, to be present at the site as a result of the source material. Conduct additional site investigation to determine the degree and extent of contaminants other than VOCs in all affected media. This additional site investigation should at a minimum include an investigation of PAHs and metals, the need for an investigation of other contaminant classes should be evaluated based on site history and the site scoping requirements of Wis. Admin. Code § NR716.07.
- 3) The site was reportedly graded and covered with a clean fill cap in the 1980s to comply with DNR landfill closure regulations, however documentation of the placement of a cap does not appear to have been submitted to the DNR. Based on the presence of shallow soil contamination and irregular topography, it does not appear that a cap is in place at the property. As requested in the DNR letter *Notice of Noncompliance and Request for Work Plan for Addressing Groundwater Contamination Information*, dated October 28, 2013, the DNR requests that you provide documentation that a cap was constructed on the landfill, or conduct a survey of the landfill cover on the entire site. Consider the results of the cap evaluation when evaluating potential remedial actions for the site.

##### B. Groundwater

The Report discusses the multiphase groundwater investigation conducted at the site and concludes that the degree and extent of groundwater contamination at the site has been defined to the extent practicable. Groundwater contaminated with CVOCs at concentrations exceeding regulatory standards has been identified both on-site and off-site. Off-site contamination is comingling with the contaminant plume from the adjacent Presidio Square Apartments property and is present on the Wyrick Park property, the former Milwaukee Public School property, and the residential neighborhood south of West Green Tree

Road. The Report concludes that the groundwater monitoring data show that the groundwater plume is stable or decreasing for the groundwater systems encountered beneath the site and biodegradation parameters indicate the subsurface environment is conducive to reductive dechlorination of chlorinated compounds and natural attenuation of the residual groundwater impacts is ongoing at both on- and off-site locations.

- 1) The DNR concurs that the degree and extent of VOC groundwater contamination has been defined to the extent practicable and requires no further groundwater sampling related to the VOC groundwater site investigation at this time. Additional groundwater monitoring may be necessary to demonstrate the effectiveness of remedial actions including, but not limited to, monitored natural attenuation.

C. Vapor

To date, vapor sampling has been conducted at the western adjacent Presidio Square Apartments, the southern adjacent middle school, and in the residential area south of West Green Tree Road. The Report states that the vapor intrusion potential at the site has been evaluated through multiple investigations at the school building and the residential neighborhood south of the landfill and no immediate vapor intrusion risk was identified.

The vapor intrusion investigation conducted on the Presidio Square Apartments property is being addressed under the separate BRRTS number 02-41-181762 and will not be discussed further in this letter. Vapor sampling of the middle school consisted of a total of 20 indoor air samples, 3 external soil vapor samples, and 4 high purge volume sub-slab samples. Vapor sampling in the residential area south of West Green Tree Road consisted of an initial round of 11 external soil vapor samples collected in 2000 and was followed by 6 external soil vapor samples collected in 2018. No sub-slab vapor samples have been collected in the residential area south of West Green Tree Road.

- 1) High purge volume sub-slab vapor samples were collected at four locations during one sampling event within the middle school located on the former Milwaukee Public School Property south of the landfill. The high purge volume sub-slab samples identified the presence of multiple contaminants of concern including PCE, TCE, and vinyl chloride. However, the concentrations identified are below their respective vapor risk screening levels (VRSLs). Due to the presence of contaminants of concern within the previous sub-slab samples, the TCE vapor action level exceedance in the indoor air sample collected at MPS-5 on July 10, 2000, the potential variability of vapor concentrations throughout time, and the potential exposure to an at-risk population, the DNR requests that you conduct an additional round(s) of sub-slab sampling at the middle school from the existing sampling ports. The DNR recommends following the quality control measures for high purge volume samples discussed in the DNR publication *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin* (RR-800). The need for additional vapor investigation and/or interim or remedial actions should be evaluated based on the results of the sub-slab vapor samples requested above.
- 2) No VRSL exceedances were identified in the 17 soil gas samples that have been collected in the residential neighborhood south of West Green Tree Road. However, no sub-slab vapor samples have been collected from homes in the residential neighborhood. The DNR requests that you conduct a vapor screening evaluation to determine whether sub-slab sampling is necessary at any homes in the residential area. The screening evaluation should evaluate known soil, groundwater, and soil gas data to determine if sub-slab sampling is necessary. The DNR recommends utilizing the CVOC vapor intrusion screening guidelines contained in RR-800.

- 3) The Vapor Analytical Results Table (Table 4) includes both sub-slab and indoor air results, but it does not include the vapor action level standards. Include the vapor action level regulatory standards on Table 4 and indicate if any of the indoor air sample concentrations exceed any of their respective vapor action levels.

## 2) Emerging Contaminants Evaluation

- A) The Report states that an evaluation of emerging contaminants, including Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) will be submitted at a later date as part of a Site Investigation Report Addendum. The DNR will require the submittal of an evaluation of emerging contaminants, including PFAS, prior to DNR approval of the site investigation. See the DNR letter *Reminder to Include Evaluation of Emerging Contaminants in Site Investigation*, dated August 17, 2020 for additional information.

### Schedule

Please submit a plan for the requested soil delineation activities and vapor sampling within 60 days of the date of this letter. The DNR must be notified of the sampling results within 10 business days of receiving the results, and submittal of a supplemental site investigation report is required within 60 days after completion of the additional field investigation. The supplemental site investigation report should include the results of the additional soil and vapor sampling, vapor intrusion screening evaluation for the residential neighborhood, emerging contaminants scoping statement, and document revisions requested above. Additional actions may be necessary based on the results of the activities requested above.

Also, please note that the landfill site has not complied with the requirements of the October 28, 2013 Notice of Noncompliance by the Waste and Materials Management Program. It will remain in a state of noncompliance until all requests identified in the October 28, 2013 letter are addressed.

We appreciate your efforts to restore the environment at this site. If you have any questions concerning the site or this letter, please contact me at (414) 218-6042, or by email at joseph.martinez@wisconsin.gov.

Sincerely,



Joseph J. Martinez  
Hydrogeologist – Southeast Region  
Remediation & Redevelopment Program