

Ramboll US Consulting, Inc. 234 West Florida Street Fifth Floor Milwaukee, WI 53204 • 262.901.3502

To: Ms. Jane Pfeiffer Wisconsin Department of Natural Resources 1701 North 4th Steet Superior, WI 54880-1068



RE: 716 Site Investigation And Remedial Action Options Report Bear Development, LLC Filer & Stowell Property 147 East Becher Street Milwaukee, Wisconsin BRRTS 02-41-589088

March 29, 2022 Ramboll Project 1690023383

WE ARE SENDING YOU:

Enclosed	\boxtimes	Under separate cover via WDNR Portal the following item:						
Shop drawings		P.E. Signature for SIR RAOR	Prints		Plans			
DNR Review Checks		Samples	Specifications		Reports			

COPIES	ТҮРЕ	DATE	DESCRIPTION
1	Additional Information	03/29/2022	Information for the Beta-Becher Acquisition Co, LLC (BRRTS case 02-41-589088) Site Investigation, as requested in the WDNR's March 21, 2022, email.

THESE ARE TRANSMITTED AS CHECKED BELOW:

- For approval
- Approved as noted

Approved as submitted

- For your use
- As requested
- Returned for corrections
- Resubmit____copies for approval
 Submit____copies for distribution
 Return____corrected prints

For Review and Comment

REMARKS: Ramboll appreciates the Agency's efforts to expedite the document review. Please keep me updated. Thank you,

Richard Mazurkiewicz Managing Consultant D 262 901 3502 rmazurkiewicz@ramboll.com Please find the following response to the DNR's March 21, 2022, email requesting additional information for the Beta-Becher Acquisition Co, LLC (BRRTS case 02-41-589088). The DNR's questions are presented below followed by Ramboll's response (in blue type).

On March 17, 2022, the DNR performed a preliminary review of the materials management plan (MMP) and historic fill exemption (HFE) request that were submitted for the above-referenced site with their applicable fees received on March 3, 2022. As we discussed today during our phone call, the DNR understands that the responsible party has requested that a DNR response be provided by March 22, 2022, as earthworks are scheduled to begin this day. However, the DNR is unable to provide a formal review and the requested MMP approval and HFE by this date. The DNR understands this strict redevelopment timeline and is still working to provide your client an expedited response earlier than the standard 60 day time period. At this time, the DNR has the following additional questions and preliminary feedback regarding the MMP and HFE:

MMP:

1. Confirm whether the Kinnickinnic River is within 300 feet of all areas on the site where soil reuse will occur. If so, then an exemption to the locational criteria presented in Wis. Admin. Code § NR 718.12(1)(c) will be required.

The Kinnickinnic River is more than 300 feet away from all planned soil reuse areas. See **Figure 1** for the site location, planned soil reuse areas, and dimensions from planned soil reuse areas to the Kinnickinnic River. Therefore, Ramboll is not requesting a locational exemption.

2. Clarify whether any of the soil to be reused on the site may be placed within three feet (ft) of the highwater level. If so, then an exemption to the locational criteria presented in Wis. Admin. Code § NR 718.12(1)(c) will be required.

The planned reuse soil will not be placed within 3 feet of the high water table. Note that the groundwater elevation in Wisconsin Administrative Code (WAC) Chapter NR 141 groundwater monitoring well MW-2, which is located within the planned soil reuse area and has the highest groundwater elevation at the site, had groundwater elevations ranging from 4.7 to 4.8 feet below ground surface (bgs). The planned site cut and fill map illustrates that 3 to 5 feet of soil will be placed <u>on top</u> of this area. Therefore, the planned reuse soil will be approximately 4.7 to 4.8 feet above the highest groundwater elevation at the site and not perceived to need a locational exemption. Additionally, the soil placed here shall not pose a threat to public health, safety, welfare, or the environment, based on the soil reuse analytical results. Please find the attached **Figure 2** (Site Layout), **Figure 3** (Cut and Fill Map), and **Table 1** (Groundwater Elevations).

- 3. The MMP indicates that the soil to be reused on site will be taken from the NW corner of the site from up to 5-6 ft below ground surface (bgs). Fourteen soil samples were collected from 4-10 ft bgs in the soil reuse area. Considering this sample interval does not provide data for the upper 4 ft bgs, one of the following activities must be conducted:
 - *a.* Perform additional sampling within the NW corner of the site within the upper 4 ft bgs to characterize the soil that will be reused, or
 - *b.* Separate the upper 4 ft bgs from the soil to be reused on site and properly dispose of the soil at a licensed landfill.

Bear Development, LLC will excavate 4 feet of material from the planned soil reuse area before using the remainder for fill purposes. The separated soil will be taken to a licensed landfill for disposal.

HFE:

1. 1. Provide additional information on methane sample collection methods, particularly pertaining to the use of the vapor ports. Justify how this type of sampling is appropriate.

Due to the presence of peat observed at depth, a methane evaluation was conducted at the site. While the degradation of peat in saturated conditions can generate methane, it is uncommon for it to be a significant concern in the Milwaukee area. The generation of methane from woody material is significantly slower than that from animal-based putrescible waste found in landfills. Further, as the material ages, the generation of methane tends to decrease. Given that this is a naturally occurring peat layer (and is not related to a release or spill) that is likely present in several areas with no identified concerns, the likelihood of this thin peat layer causing an issue is low. There are no known protrusible materials in the fill material being reused at the Site. Nonetheless, Ramoll used a two-pronged approach to evaluate the potential presence of methane. Ramboll used sub-slab vapor points the area to characterize vapor content in soil pore space immediately beneath some building slabs, which should provide data on any methane that could accumulate beneath a potential future structure and is conservative versus a soil gas sampling point away from the slab in that the slab permits methane to accumulate. Ramboll also measured soil gas in monitor wells at the site to gather data on methane that could be off-gassed from the groundwater as well as methane present in the vadose zone soils above the water table.

The methane evaluation was performed to determine if methane generated by the peat would pose a threat to the planned residential units at the site. Methane gas measurements were collected from 17 Vapor Pins[®] (VP-1 through VP-13, and VP 17 through VP-20), five NR 141 monitoring wells (MW-1 through MW-5), and temporary monitoring well TW-14. A Landtec GEM Series (5000) landfill monitor was utilized to purge and collect methane measurements. The gas monitor was zeroed and calibrated with a 5 percent (%) methane gas standard according to the manufacturer's specifications before use. This instrument is commonly used around landfills and in utility work to evaluate for the presence of methane and other explosive gases that may accumulate and pose a hazard to workers or nearby residences. The methane readings were recorded after purging at least three volumes of air from the sub-slab sampling point using the gas analyzer's pump. The methane concentrations at the site were referenced against WAC Ch. NR 507.22(1)(c), which states that the maximum allowable methane level in landfill boundary gas monitoring wells cannot exceed the lower explosive limit (5 % methane by volume), which is a safety standard. The methane sampling methods are detailed in Ramboll's February 24, 2022, site investigation report (**Appendix D**).

The testing methodology and basic rationale for evaluating potential methane concentrations beneath the slab are similar to sub-slab soil vapor sampling for volatile organic compounds, which is used to determine the potential presence of chemicals in shallow soils beneath a building that may accumulate and pose a risk to occupants of the buildings via vapor intrusion. The methane sub-slab soil vapor testing was used at the site as a precautionary action because we could do so at the time, i.e., the Vapor Pins[®] were already in place at the site. These samples evaluated air quality directly beneath the slab-on-grade floor foundations.

The soil gas measurements in temporary well TW-14 and NR 141 groundwater monitoring wells MW-1 through MW-5 were collected by lower a tubing down the well to measure the methane concentrations above the water table. This approach is conservative in that it evaluates the potential for methane to accumulate in an open space from both vadose zone soils, as well as dissolved gases in the groundwater. The measurements were made using the vadose zone portion of the screened well to draw the sample. These samples evaluated air quality at depth (from 3 to 5 feet bgs and from intervals of 1 foot [MW-2] to 5 feet [MW-1, MW-3, and MW-4] in thickness).

Methane measurements at the site ranged from 0.1% to 0.2%, well below the 5% by volume NR 507.22 limit. The 0.2% maximum concentration corresponds to 2% of the lower explosion limit (LEL), which is below the 10% LEL standard for work in confined spaces. Ramboll conservatively assess methane concentrations beneath the slab (versus unconfined soil gas points), as well as methane concentrations accumulating in wells with the screen exposed to the vadose zone and did not detect levels of concern. Therefore, methane is not a health threat to human health or the environment. This is further supported by the fact that the peat is naturally occurring in the area and Ramboll did not identify a single case where the peat in this area has resulted in a dangerous condition or caused harm. Further, as part of the redevelopment, a vapor barrier will be installed under the two newly constructed buildings along with active radon piping systems (a form of subslab vapor mitigation system) that will be installed beneath any ground floor areas with residential units.

The DNR is still in the process of reviewing the site investigation report and will provide a formal review letter at a later date. Furthermore, it should be noted that it appears that site investigation activities conducted to-date appear to have investigated contamination related to historic fill material and not historic site operations. Therefore, the pending future case closure of this site would exclusively be for the contamination related to historic fill material as the source of contamination.

Ramboll hopes the information provided meets your needs. We appreciate the DNR's quick review of documents to help meet the project's construction schedule. Please do not hesitate to contact me with questions or comments regarding this project.

Sincerely Yours,

Richard Mazurkiewicz Managing Consultant

234 West Florida Street - 5th Floor Milwaukee, Wisconsin 53204 D 262-901-3502 M 414-517.8846 rmazurkiewicz@ramboll.com

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RMAZURKIEWICZ 3/22/22 C:\USERS\RMAZURKIEWICZ\ONEDRIVE - RAMBOLL\DESKTOP\BECHER CAD LOCAL < SITE MAP (BEAR BECHER ST) 12-08-2021 >





Riley Elementary School

ALL SOIL REUSE AREAS ARE GREATER THAN 300 FEET FROM KINNICKINNIC RIVER

SOIL REUSE TO KINNICKINNIC RIVER PROXIMITY MAP

200

SCALE IN FEET

Filer & Stowell Property 147 East Becher Street Milwaukee, Wisconsin 53207







TABLE 1Groundwater ElevationsFiler Stowell Property147 East Becher Street, Milwaukee, WisconsinRamboll Project 1690023383

Well ID	Measurement Date	Top of Casing Elevation (feet amsl)	Land Surface Elevation (feet amsl)	Total Well Depth (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
	11/23/2021		593.32	12.95	8.00	584.48
N/I\A/_1	11/24/2021	592.48			7.80	584.68
	12/6/2021				7.95	584.53
	11/23/2021	586.46	586.66	13.25	4.20	582.26
NA\A/_2	11/24/2021				4.20	582.26
10100-2	12/6/2021				4.28	582.18
	11/23/2021	589.99	590.55	14.85	8.40	581.59
NA14/ 2	11/24/2021				8.43	581.56
10100-5	12/6/2021				8.46	581.53
	11/23/2021	591.14	591.09	14.70	8.99	582.15
	11/24/2021				8.79	582.35
11110-4	12/6/2021				8.80	582.34
	11/23/2021	584.85	585.29	13.80	6.65	578.20
	11/24/2021				6.51	578.34
10100-5	12/6/2021				6.61	578.24

Notes:

Depth to water measured from top of casing.

AMSL = Above Mean Sea Level

-- = Not Measured.

Wells were surveyed by Ramboll personnel using an RTK GPS-Trimble GeoXH #5 (Model 7x) handheld receiver on 12/6/2021.