

January 2, 2018

Project Reference #16620

Mr. Issac Ross
c/o Mr. Chue Yee Yang, Env. Program Associate
Wisconsin Department of Natural Resources
Remediation & Redevelopment Program
2300 N. Dr. Martin Luther King Jr. Drive
Milwaukee, WI 53212

Subject: Soil Management & Engineered Barriers Documentation
Bader Philanthropies Headquarters - 3300 N. Martin Luther King Jr. Drive,
Milwaukee, WI 53212
BRRTS #02-41-578975 / FID #341285010

Dear Mr. Ross:

On behalf of MLK, LLC, The Sigma Group, Inc. (Sigma) has prepared this letter report to document recent NR 718 soil management and engineered barrier construction activities completed at the above-referenced property (the "Site") between August and mid-November 2017. The Site remediation work was completed in accordance with Sigma's March 2017 *Site Investigation Report & Remedial Action Plan*¹ (SI / RAP) and the Wisconsin Department of Natural Resources (WDNR) May 2017 approval letter². Additionally, the NR 718 soil management work was completed in accordance with Sigma's request letters³ and associated WDNR approvals⁴.

¹ *Site Investigation Report & Remedial Action Plan, Bader Philanthropies Headquarters, 3300, 3306, 3314, and 3318 N. Martin Luther King Jr. Drive & 3317, 3323, and 3333 N. 4th Street, Milwaukee, Wisconsin 53212* by Sigma (dated March 24, 2017)

² *Review of "Site Investigation Report & Remedial Action Plan", dated March 24, 2017, Bader Philanthropies Headquarters - 3300, 3306, 3314, and 3318 N. MLK Jr. Drive & 3317 3323, and 3333 N. 4th Street, Milwaukee, WI 53212* by WDNR (dated May 18, 2017)

³ *NR 718.12 Contaminated Soil Management Request, Source Property: Bader Philanthropies Headquarters - 3300, 3306, 3314, and 3318 N. Martin Luther King Jr. Drive & 3317, 3323, and 3333 N. 4th Street, Milwaukee, WI 53212...* by Sigma (dated March 24, 2017)

Amendment to NR 718.12 Contaminated Soil Management Volume, Source Property: Bader Philanthropies Headquarters - 3300, 3306, 3314, and 3318 N. Martin Luther King Jr. Drive & 3317, 3323, and 3333 N. 4th Street, Milwaukee, WI 53212... by Sigma (dated June 12, 2017)

⁴ *Approval for Management of Contaminated Soil under Wis. Admin. Code § NR 718.12, Generator Property: Bader Philanthropies Headquarters - 3300, 3306, 3314, and 3318 N. MLK Jr. Drive & 3317, 3323, and 3333 N. 4th Street, Milwaukee, WI 53212...* by WDNR (dated May 12, 2017)

Amendment to NR 718.12 Contaminated Soil Management Volume, Generator Property: Bader Philanthropies Headquarters - 3300, 3306, 3314, and 3318 N. MLK Jr. Drive & 3317, 3323, and 3333 N. 4th Street, Milwaukee, WI 53212... by WDNR (dated June 14, 2017)

NR 718 SOIL MANAGEMENT

Sigma's September 2017 update report⁵ documented NR 718 soil management activities completed between early June and late August 2017. Through August 25th, a total of 319 truckloads of soil from the excavation for the new building basement, the south greenspace area, pier footings on the north side of the building, and column pads in the basement area had been transported from the Site to Lakefield Sand and Gravel.

Since late August, the remaining mass grading / subgrade preparation work beneath the new parking lot areas on the north and northeast portions of the Site (refer to **Figure 1**) have been completed and an additional 125 truckloads of soil have been transported from the Site to Lakefield Sand and Gravel as summarized in a soil tracking table in **Attachment 1**. At approximately 10.5 to 11 cubic yards of soil per truckload (which Sigma has been measuring on other recent soil hauling projects with clay-based soils), the 444 total loads of soil exported from the Site to Lakefield Sand and Gravel corresponds to approximately 4,660 to 4,885 cubic yards, which is +/- 100 CY of the 4,750 cubic yards estimated in Sigma's June 12, 2017 letter.

Soil management work was performed under the direction of Sigma personnel and each truckload hauled to Lakefield Sand and Gravel has been accompanied by a unique truck ticket. The NR 718 soil management work completed in October and November 2017 has included:

- October 2, 2017
 - 54 truckloads of soil were removed from the parking lot subgrade in the north and northeast portions of the Site.
- October 3, 2017
 - 37 truckloads of soil were removed from the parking lot subgrade in the north and northeast portions of the Site.
- October 4, 2017
 - 27 truckloads of soil were removed from the parking lot subgrade in the north and northeast portions of the Site.
- October 5, 2017
 - 4 truckloads of soil were removed from the parking lot subgrade in the northeast portion of the Site.
- November 8, 2017
 - 3 truckloads of soil were removed from the parking lot in the north portion of the Site due to soft subgrade soil conditions.

Photographs of the NR 718 soil management work are included in **Attachment 2**.

⁵ Remedial Soil Excavation and Management Update Letter Report, Bader Philanthropies Headquarters - 3300, 3306, 3314 and 3318 N. Martin Luther King Jr. Drive & 3317, 3323, and 3333 N. 4th Street, Milwaukee, WI 53212 by Sigma (dated September 22, 2017)

ENGINEERED BARRIER CONSTRUCTION

Clean Soil Barrier. As mentioned in our September 2017 update report, clean native silty clay from below a depth of 6 feet below ground surface (bgs) within the new building basement excavation was temporarily stockpiled between early-June and mid-July on the eastern portion of the Site (on the former 3317 N. 4th Street parcel) for later reuse on-Site. After the NR 718 soil removal and GP-7/GP-7R remedial excavation was completed for the south portion of the Site as of July 19, 2017 (which was documented in the September 2017 report), the stockpiled clean silty clay was used to construct the first 18 inches of the clean soil barrier on the south portion of the Site in late July and August 2017. Soil was placed and compacted by Rams Contracting, Ltd. with heavy equipment across this entire future green space area as shown in **Figure 2**; photographs are included in **Attachment 2**. This area of the Site is currently used for outdoor construction staging; topsoil placement and landscaping will take place in spring 2018.

Concrete and Asphalt Pavement. The new concrete curb and gutter and asphalt binder course for the parking lot area, as shown in **Figure 2** and a photograph in **Attachment 2**, were installed in early November 2017. Other concrete sidewalks / building approaches, pervious pavement system in the central parking lot area, and the final asphalt surface layer will be installed in spring 2018.

CONCLUSIONS AND RECOMMENDATIONS

The general Site excavation and preparation work has removed approximately 4,750 cubic yards of soil that has been transported from the Site for disposal at the Lakefield Sand and Gravel property. Engineered barriers have been partially completed at the Site as of mid-November 2017; the remaining engineered barrier construction work will continue in accordance with the *SI / RAP*, be documented by Sigma, and presented to the WDNR in future a report.

Please contact us at (414) 643-4200 with any questions about this submittal or the project in general.

Sincerely,

THE SIGMA GROUP, INC.



Sarah E. Fernholz, E.I.T.
Staff Engineer



Adam J. Roder, P.E.
Senior Project Engineer



Randy E. Boness, P.G.
Geoscience Group Leader

Enclosures:

Figure 1 - Soil Excavation and Soil Management Map




Figure 2 - Engineered Barrier Map

Attachment 1 - Summary of NR 718 Soil Management Activities

Attachment 2 - Soil Management & Remediation Photographs

cc: Mr. Frank Cumberbatch - MLK, LLC (via email: frank@bader.org)

LEGEND

-  = GEOPROBE SOIL BORING / TEMPORARY WELL
-  = GEOPROBE SOIL BORING
-  = NR 141-COMPLIANT MONITORING WELL

NORTH PARKING LOT AREA:
 - SOIL EXPORTED TO LAKEFIELD SAND AND GRAVEL PROPERTY UNDER NR 718 APPROVAL ON 10/2/17, 10/3/17, 10/4/17, 10/5/17 AND 11/8/17.

PIER FOOTINGS:
 - SOIL EXPORTED TO LAKEFIELD SAND AND GRAVEL PROPERTY UNDER NR 718 APPROVAL ON 8/15/17 AND 8/16/17.

NEW EAST PARKING LOT AREA:
 - SOIL EXPORTED TO LAKEFIELD SAND AND GRAVEL PROPERTY UNDER NR 718 APPROVAL ON 6/8/17, 6/9/17, 10/2/17 AND 10/3/17.

NEW BASEMENT AREA:
 - SOIL EXPORTED TO LAKEFIELD SAND AND GRAVEL PROPERTY UNDER NR 718 APPROVAL ON 6/6/17, 6/7/17, 6/9/17, 6/14/17, 7/18/17 AND 8/25/17.
 - CLEAN SOIL FROM BELOW 6 FEET BELOW GROUND SURFACE OF THIS BASEMENT EXCAVATION USED TO BACKFILL 3317 N. 4TH STREET BASEMENT AND SOUTH GREENSPACE PORTION OF SITE (REFER TO FIGURE 2).

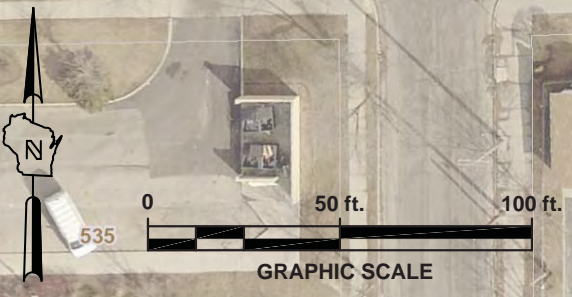
GP-7/GP-7R REMEDIAL SOIL EXCAVATION FOR LEAD AND PAH IMPACTS WAS 20 FT x 20 FT x 4 FT DEEP.
 116.68 TONS OF SOIL HAULED TO WASTE MANAGEMENT'S ORCHARD RIDGE LANDFILL ON 7/19/17.

SOUTH GREEN SPACE AREA:
 - SOIL EXPORTED TO LAKEFIELD SAND AND GRAVEL PROPERTY UNDER NR 718 APPROVAL ON 7/19/17.

APPROX. SITE BOUNDARY

LEGEND
 X POST-EXCAVATION SOIL SAMPLE LOCATION (APPROXIMATE)




Project: 16620
 Directory: 060 CAD/E - Env
 Filename: 16620 Site Maps 11x17.ai
 Created By: AJR / SEF
 Date: 11/28/2017






SOIL EXCAVATION AND SOIL MANAGEMENT MAP
 BADER PHILANTHROPIES
 3300 N. MARTIN LUTHER KING JR. DR., MILWAUKEE, WI

FIGURE
1

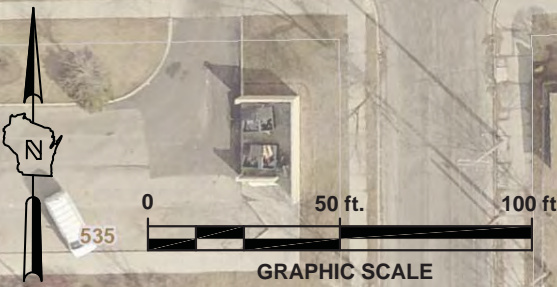
LEGEND


-  = GEOPROBE SOIL BORING / TEMPORARY WELL
-  = GEOPROBE SOIL BORING
-  = NR 141-COMPLIANT MONITORING WELL

-  = PARTIAL (18" CLAY) GREENSPACE CLEAN SOIL COVER (AS OF NOV. 2017)
-  = EXTERIOR CONCRETE SIDEWALK / CURB & GUTTER (AS OF NOV. 2017)
-  = BINDER COURSE FOR ASPHALT PAVEMENT (AS OF NOV. 2017)



Project: 16620 | Directory: 060 CAD / E - Env | Filename: 16620 Site Maps 11x17.ai | Created By: AJR / SEF | Date: 11/28/2017



 <p>Single Source. Sound Solutions. GROUP</p>	<p>ENGINEERED BARRIER MAP</p> <p>BADER PHILANTHROPIES 3300 N. MARTIN LUTHER KING JR. DR., MILWAUKEE, WI</p>	<p>FIGURE</p> <p>2</p>
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ATTACHMENT 1

SUMMARY OF NR 718 SOIL MANAGEMENT ACTIVITIES

Summary of NR 718 Soil Management Activities

Generator Property: Bader Philanthropies Headquarters - 3318 N. Martin Luther King Jr. Drive, Milwaukee, WI

Disposal Property: Former Lakefield Sand and Gravel - 7003 W. Good Hope Road, Milwaukee, WI

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Day	Date	Activity	# of Trucks of NR 718 Soil to Lakefield Sand & Gravel
Tues	6/6/17	north part of new basement	50
Wed	6/7/17	north part of new basement	50
Thur	6/8/17	new parking lot area east of building	42
Fri	6/9/17	northeast part of new basement, new parking lot area east of building	41
Wed	6/14/17	east part of new basement	24
Tues	7/18/17	south part of basement, south greenspace area	63
Wed	7/19/17	south greenspace area	40
Tues	8/15/17	pier footing on north side of building	4
Wed	8/16/17	pier footing on north side of building	3
Fri	8/25/17	column pads in basement of building	2
Mon	10/2/17	north-northeast parking lot area	54
Tues	10/3/17	north-northeast parking lot area	37
Wed	10/4/17	north-northeast parking lot area	27
Thur	10/5/17	north-northeast parking lot area	4
Wed	11/8/17	north parking lot area - soft subgrade	3
Working totals:			444

ATTACHMENT 2

SOIL MANAGEMENT & REMEDIATION PHOTOGRAPHS



Photo 1: Parking lot subgrade removal in progress in northeast portion of Site on October 2, 2017. View looking to northeast.



Photo 2: Parking lot subgrade removal in progress in northeast portion of Site on October 2, 2017. View looking to east.

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Photo 3: Parking lot subgrade removal (including area for pervious pavers and underlying storm water retention) in progress in northeast portion of Site on October 3, 2017. View looking to south.



Photo 4: Parking lot subgrade removal (including area for pervious pavers and underlying storm water retention) in north-northeast portion of Site on October 3, 2017. View looking to northwest.

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Photo 5: Parking lot subgrade removal in progress in northwest portion of Site on October 4, 2017. View looking to east.



Photo 6: Gravel subgrade being placed in north portion of Site for new asphalt parking lot on October 4, 2017. View looking to east.

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Photo 7: Gravel subgrade placed and compacted in northeast portion of Site for new asphalt parking lot on October 4, 2017. View looking to southeast.



Photo 8: First 18 inches of clay placed for green space soil cover system in south portion of Site (currently used for outdoor staging) on October 4, 2017. View looking to west.

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Photo 9: First 18 inches of clay placed for green space soil cover system in south portion of Site (currently used for outdoor staging) on October 4, 2017. View looking to north.



Photo 10: Asphalt binder course installed in north and northeast portion of Site on November 13, 2017. View looking to east.

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