I M P O R T A N T

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GILES ENGINEERING ASSOCIATES, INC.

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GEOTECHNICAL, ENVIRONMENTAL & CONSTRUCTION MATERIALS CONSULTANTS

• Atlanta, GA
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• Milwaukee, WI

June 16, 2017

Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
Southeast Region Headquarters
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee, WI 53212-3128

Attention: Ms. Nancy Ryan
Hydrogeologist

Subject: Addendum 01 – Ch. NR 718 Soil Management Plan
The *Couture* Development – (Former MCTC)
909 East Michigan Street
Milwaukee, Wisconsin
Project No. 1E-1704007
WDNR BRRTS No. 02-41-579105
WDNR FID No. 341286220

Dear Ms. Ryan:

On behalf of The *Couture* LLC the property owner and "Responsible Party" (RP), Giles Engineering Associates, Inc. (Giles) has prepared this Addendum 01 Ch. NR 718 Soil Management Plan for the Former Milwaukee County Transit Center (MCTC) property ("Site") located at 909 East Michigan Street in the City of Milwaukee, Milwaukee County, Wisconsin (Figure 1). The proposed plan for the management of impacted soil and fill material at the Site is documented herein. The primary focus of the plan is to provide a segregation protocol to facilitate the disposal of low-level polycyclic aromatic hydrocarbon (PAH) compounds and/or RCRA metals (arsenic and lead) impacted fill material and soil at an alternative disposal site rather than at a special waste landfill facility. This approach to the disposal of low-level impacted fill material and soil is addressed under Wisconsin Administrative Code (WAC), Ch. NR 718.12. We respectfully request the Wisconsin Department of Natural Resources (WDNR) review and, if in agreement with the protocol, approve the Site Investigation Work Plan and this Addendum 01.

DOCUMENTED SITE CONDITIONS

Due diligence investigation activities were conducted at the Site in late-2016. The results of the investigations were documented in the following documents:

- *Phase I Environmental Site Assessment* (ESA) report (Project No. 1E-16010006) dated November 4, 2016).

- *Limited Phase II Environmental Site Assessment* Report (Project No. 1E-1610007) dated January 13, 2017.

- *Geotechnical Exploration and Analysis* report (Project No. 1G-161001) dated April 5, 2017).

On March 7, 2017, Giles provided the WDNR notification of a non-emergency release at the Site relating to the detection of volatile organic compounds (VOCs), PAH compounds, and metals (arsenic and lead) detections in the fill soil at the Site. In response, the WDNR issued a "Responsible Party" letter dated March 20, 2017, to The Couture LLC, indicating their responsibility for the release and their requirement to take the appropriate actions to remediate the conditions identified at the property.

Giles prepared a Site Investigation Work Plan (SIWP) for the property dated May, 15, 2017, and submitted it to the WDNR, including a $700 review fee. Giles met with the WDNR on May 31, 2017, to discuss the information presented in the SIWP relating to the soil and groundwater data collected during the Limited Phase II ESA (Giles, January 2017).

During the meeting discussions, it was brought to the WDNR's attention that the eight 1-inch-diameter wells installed during the Limited Phase II ESA were completed with pre-packaged well screens, backfilled with filter sand around the screens, and backfilled to the surface with bentonite. The wells were developed with a peristaltic pump and sampled after 12 hours in general conformance with Ch. NR 141. The well construction was intended to meet the general requirements of Ch. NR 141, such that a variance could be granted if the Site case file was opened. The well development, construction, and abandonment forms will be included with a Site Investigation Report which will later be prepared and submitted to the WDNR. The WDNR has indicated that the groundwater sampling performed during the Limited Phase II ESA has shown that the impact to the groundwater is nominal and that the need for future well installation and additional sampling may be waived if no significant contamination is detected with the proposed soil sampling.

The SIWP included a proposed soil sampling methodology to further evaluate the vertical and horizontal extent of impacted fill material in general accordance with WAC, Ch. NR 716, and to collect a representative sample set sufficient to meet the requirements of WAC, Ch. NR 718.12. The following sections of this Addendum present a detailed rational for boring location and sample interval selection.

PROPOSED DEVELOPMENT

The proposed *Couture* development will utilize the 2.71 acres of land for a 44-story mixed-use building structure. The tower will include 312 high-end apartments, a restaurant, and retail space. Transit service will be included with end use of the first two stories of the building.

The *Couture* development will also incorporate a parking structure that will extend two stories below the existing grade over the entire footprint of the Site. The parking structure will provide the needed parking for both the apartment residents and their visitors.

PROPOSED FILL MATERIAL AND SOIL SAMPLING

Ch. NR 716 Site Investigation Sampling

It is understood that the fill condition is not limited to The *Couture* Development property, but is an area-wide condition extending along the Lake Michigan shoreline. Therefore, the focus of the Ch. NR 716 soil sampling plan will be to evaluate the vertical extent of impacted fill material and distinguish the fill variation to assess if there is any correlation between the fill types and the types of contamination encountered.

The data documented in the Site Limited Phase II ESA confirm that there are four distinguishable materials encountered in the soil profile from 0 to 25 feet including: 1) soil (clay, sand, and sand & gravel) fill, 2) foundry waste fill, 3) incineration waste and cinder fill, and 4) native sand and clay. The NR 716 SI will incorporate the existing 13 native soil samples and an additional six native soil samples (B-19 through B-21, B-23, B-25, and B-34) for laboratory analysis to better understand the vertical distribution of contamination at the fill material/native soil interface (Figure 1). Also, a representative sampling of distinguishable soil fill, foundry material, and/or cinder-bearing material will be conducted when encountered in a single boring to assess if the type of fill displays a specific contamination suite and to understand its distribution.

The Site investigation will include collecting soil samples for analysis from 21 perimeter borings designated with an A, B, and C, and 14 additional borings to “infill” the 75 to 80-foot grid completed during the Limited Phase II ESA (Figure 1). Samples will be collected from varying intervals in each boring based on the thickness and type of fill encountered. The samples will be submitted from each boring to a State of Wisconsin certified analytical laboratory for laboratory analysis of volatile organic compounds (VOCs) by US EPA Method 8260B, polycyclic aromatic hydrocarbons (PAHs) by US EPA Method 8070, and select metals (arsenic, lead, mercury and selenium).

The soil boring and sampling scheme is presented in Table 1. The sampling interval and type of soil sampled for the existing 16 soil borings are also included. In addition, the proposed perimeter borings and in-fill borings, with their perspective intervals and anticipated soil/fill type(s), will be sampled. A boring location map is illustrated on Figure 1.

Ch. NR 718 Soil Disposal Sampling

A below grade parking structure will be constructed at the Site during the construction phase of The *Couture* Development. Driven-interlocking steel sheeting will be installed around the perimeter of the property to stabilize and hold the sidewalls back for the referenced parking structure.

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If the entire 2.71 acre lot were excavated to 25 feet, the depth of the parking structure, the total volume of soil to be removed is approximately 109,300 cubic yards. Based on the depths to the fill material/native soil interface from the boring logs of the Limited Phase II ESA and Geotechnical Evaluation, Giles estimates that between 39,000 to 45,000 cubic yards (cy) of fill material will be generated during the excavation of the parking structure. The balance of the excavation will include native soil estimated to include from 64,300 to 70,300 cubic yards (cy).

Giles proposes to use the laboratory analytical results from fill soil samples from the existing and proposed soil borings collected to generate a representative assessment of Site soil conditions. A sampling methodology of the existing and proposed soil borings and sample intervals is presented in Table 1. In accordance with NR 718.12(e)(1), and based on the estimated total spoil soil volume of approximately 39,000 cy to 45,000 cy, Giles calculated a representative sample range of 134 to 154 for the referenced volume(s). Presently, based on the proposed boring program, we will generate 134 soil samples assuming no unanticipated zones of contamination are encountered. Therefore, our proposed sampling protocol will generate samples in excess of the number requirements established in NR 718.12(e)(1).

CLOSURE

Please contact the undersigned at your convenience should you have any questions regarding the information contained herein.

Very truly yours,

GILES ENGINEERING ASSOCIATES, INC.

Kevin T. Bugel, P.G., C.P.G.
Environmental Division Manager

Mark K. Borucki, P.G.
Project Manager

Enclosures:

Figure 1 Site Plan with Sampling Locations
Table 1 Fill Soil Sample Summary

Distribution: Wisconsin Department of Natural Resources
Attn: Ms. Nancy Ryan (1 via USPS, 1 via email to: nancy.ryan@wisconsin.gov)

B.M. "A"

ADJUST MANHOLE FRAME TO MATCH SLAB GRADE

OLD POST OFFICE GARAGE

FOR DRIVEWAY CONSTRUCTION GRADES, SEE DETAIL 1/C6

PATTERNED CONCRETE PAVEMENT SEE DETAIL 5/C6 FOR GRADES

E. MICHIGAN STREET

MATCH FLOWLINE GRADES AT LOCATION OF NEW CURB AND GUTTER

TO BE ABANDONED

FOR DRIVEWAY CONSTRUCTION GRADES SEE DETAIL 2/C6

PLANTER

FIRST FLOOR ELEVATION=13.00

WEPCO MANHOLE

APPROXIMATE SCALE

0 20' 40'

N

W E

S

SCALE 0' 10' 20' 40'

REFERENCE LINE N 89°13'03" E

90°00'00"

ADJUST MANHOLE FRAME TO MATCH SLAB GRADE

1A 1B 1C TWB-1 2A 2B 2C B-2 MW-1 B-3 TWB-4 MW-2 TWB-5 B-9 TWB-10 10A 10B 10C B-8 TWB-11 11A 11B 11C B-6 TWB-13 B-12 TWB-7 B-16 B-15 15A 15B 15C TWB-14 14A 14B MW-3

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34

MATCH FLOWLINE GRADES AT LOCATION OF NEW CURB AND GUTTER

FOR SIDEWALK GRADES AT NORTHEAST STAIRCASE SEE DETAIL 7/C6

SLOPE SOD TO MEET THE BACK OF THE SIDEWALK

NEW 5" CONCRETE SIDEWALK SEE DETAIL 5/C6 FOR GRADES

BUS MARSHALLING FACILITY

SLOPE SOD @1/2"/'

NEW 5" CONCRETE SIDEWALK SEE DETAIL 5/C6 FOR GRADES

ADJUST MANHOLE FRAME TO MATCH SLAB GRADE

FOR DRIVEWAY CONSTRUCTION GRADES, SEE DETAIL 3/C6

MATCH EXIST

REFERENCE LINE S 00°46'57" E

N. LINCOLN MEMORIAL DRIVE

18"ST 24"ST 12"ST

(ABANDONED)

48"x76" H.E. COMBINED SEWER

WEPCO BES COMM 12" SAN. WM.

LEGEND:

1A 34	PROPOSED SOIL BORING (QTY: 36)
B-1	ENVIRONMENTAL SOIL BORING
TWB-5	ENVIRONMENTAL SOIL BORING / TEMPORARY WELL
MW-1	GEOTECHNICAL TEST BORING / GROUNDWATER MONITORING WELL
	APPROXIMATE EXTENT OF FILL TO BE REMOVED

NOTES:

1.) BORING LOCATIONS ARE APPROXIMATE.

2.) BASE MAP DEVELOPED FROM THE "DRIVEWAY / SIDEWALK CONCRETE SLAB GRADES" (SHEET C4), DATED 11-26-91, PREPARED BY DONOHUE.

GILES ENGINEERING ASSOCIATES, INC.
N8 W22350 JOHNSON DRIVE, SUITE A1
WAUKESHA, WI 53186 (262)544-0118

FIGURE 1
SITE PLAN - PROPOSED BORING LOCATIONS (LTD PHASE II ESA)
THE COUTURE
909 EAST MICHIGAN STREET
MILWAUKEE, WISCONSIN

DESIGNED	DRAWN	SCALE	DATE	REVISED
KTB	JSZ	approx. 1"=40'	06-16-17	--
PROJECT NO.: 1E-1704007			CAD No. 1E1704007A	

Table 1
Fill Soil Sample Summary
The Couture
909 East Michigan Street
Milwaukee, Wisconsin
Project Number 1E-1704007

TWB-1		TWB-1A				TWB-1B				TWB-1C			
2 -4	12- 14	2 - 4	6 - 8	10 - 12	14 - 16	2 - 4	6 - 8	10 - 12	14 - 16	2 - 4	6 - 8	10 - 12	14 - 16
Sand Fill	Sand/Native	Sand Fill	Sand Fill	Sand Fill	Native	Sand Fill	Sand Fill	Sand Fill	Native	Sand Fill	Sand Fill	Sand Fill	Native
--	--	1	1	1	--	1	1	1	--	1	1	1	--
Boring Depth	22	Boring Depth			15	Boring Depth			15	Boring Depth			15
Depth to Native	12	Depth to Native			12	Depth to Native			12	Depth to Native			12

B-2		B-2A				B-2B				B-2C			
2 - 4	10 - 12	2 - 4	6 - 8	8 - 10	10-12	2 - 4	6 - 8	8 - 10	10-12	2 - 4	6 - 8	8 - 10	10-12
Sandy Clay Fill	Sand/Native	Sandy Clay Fill	Sand Fill	Sand/Clay Fill	Native	Sandy Clay Fill	Sand Fill	Sand/Clay Fill	Native	Sandy Clay Fill	Sand Fill	Sand/Clay Fill	Native
--	--	1	1	1	--	1	1	1	--	1	1	1	--
Boring Depth	16	Boring Depth			12	Boring Depth			12	Boring Depth			12
Depth to Native	9	Depth to Native			9	Depth to Native			9	Depth to Native			9

TWB-4		TWB-4A		TWB-4B		TWB-4C	
2 - 4	14 - 16	2 - 4	6 - 8	2 - 4	6 - 8	2 - 4	6 - 8
Sandy Fill	Clay/Native	Sand Fill	Sand/Clay Fill	Sand Fill	Sand/Clay Fill	Sand Fill	Sand/Clay Fill
--	--	1	1	1	1	1	1
Boring Depth	16	Boring Depth	8	Boring Depth	8	Boring Depth	8
Depth to Native	7	Depth to Native	7	Depth to Native	7	Depth to Native	7

TWB-10		TWB-10A				TWB-10B				TWB-10C			
2 - 4	14 - 16	2 - 4	6 - 8	8 - 10	14 - 16	2 - 4	6 - 8	8 - 10	14 - 16	2 - 4	6 - 8	8 - 10	14 - 16
Sandy Fill	Sand/Native	Sand Fill	Foundry	Sand Fill	Sand/Native	Sand Fill	Foundry	Sand Fill	Sand/Native	Sand Fill	Foundry	Sand Fill	Sand/Native
--	--	1	1	1	--	1	1	1	--	1	1	1	--
Boring Depth	16	Boring Depth			16	Boring Depth			16	Boring Depth			16
Depth to Native	11	Depth to Native			11	Depth to Native			11	Depth to Native			11

B-11		TWB-11A			TWB-11B			TWB-11C		
2 - 4	12 - 14	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10
Sandy/Foundry	Clay/Native	Sandy/Foundry	Foundry/Cinders	Cinders	Sandy/Foundry	Cinders	Cinders	Sandy/Foundry	Cinders	Cinders
--	--	1	1	1	1	1	1	1	1	1
Boring Depth	15	Boring Depth		10	Boring Depth		10	Boring Depth		10
Depth to Native	10	Depth to Native		10	Depth to Native		10	Depth to Native		10

B-14		TWB-14A					TWB-14B					TWB-14C				
2 - 4	14 - 15	2 - 4	6 - 8	10 - 12	14 - 16	18 - 20	2 - 4	6 - 8	10 - 12	14 -16	18 - 20	2 - 4	6 - 8	10 - 12	14 - 16	18 - 20
Sandy Fill	Sandy Fill	Sandy Fill	Foundry	Cinders	Sand Fill	Native	Sandy Fill	Foundry	Cinders	Sand Fill	Native	Sandy Fill	Foundry	Cinders	Sand Fill	Native
--	--	1	1	1	1	--	1	1	1	1	--	1	1	1	1	--
Boring Depth	15	Boring Depth				20	Boring Depth				20	Boring Depth				20
Depth to Native	18	Depth to Native				18	Depth to Native				18	Depth to Native				18

B-15		B-15A				B-15B				B-15C			
2 - 4	16 - 18	2 - 4	6 - 8	10 - 12	14 - 16	2 - 4	6 - 8	10 - 12	14 -16	2 - 4	6 - 8	10 - 12	14 - 16
Foundry	Clay/Native	Sand / Foundry	Foundry	Cinders	Clay Fill	Sand / Foundry	Foundry	Cinders	Clay Fill	Sand / Foundry	Foundry	Cinders	Clay Fill
--	--	1	1	1	1	1	1	1	1	1	1	1	1
Boring Depth	20	Boring Depth			16	Boring Depth			16	Boring Depth			16
Depth to Native	15	Depth to Native			15	Depth to Native			15	Depth to Native			15

Gray Banner: Proposed Borings	Sandy Fill
White Banner: Completed borings	Cinders
	Foundry
	Native

Table 1 (Continued)
Fill Soil Sample Summary
The Couture
909 East Michigan Street
Milwaukee, Wisconsin
Project Number 1E-1704007

B-17			B-18			B-19			B-20			B-21		
2 - 4	6 - 8	10 - 12	2 - 4	6 - 8	10 - 12	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10
Sandy Fill	Sandy Fill	Sandy Fill	Sandy Fill	Sandy Fill	Sandy Fill	Sandy Fill	Sandy Fill	Native	Sandy Fill	Sandy Fill	Sand/Native	Sandy Fill	Clay/Sand	Native
1	1	1	1	1	1	1	1	--	1	1	--	1	1	--
Boring Depth		12	Boring Depth		12	Boring Depth		10	Boring Depth		10	Boring Depth		10
Depth to Native		14	Depth to Native		14	Depth to Native		8.5	Depth to Native		8	Depth to Native		7

B-22		B-23			B-24			B-25				B-26			
2 - 4	6 - 8	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10	6 - 8	10 - 12	14 - 16	18 - 20	2 - 4	6 - 8	10 - 12	14 - 16
Sandy Fill	Sandy Clay Fill	Silty Clay Fill	Sand	Native	Sandy Fill	Sand/Foundry	Sand/Foundry	Foundry	Silty Clay Fill	Sand Fill	Native	Sand Fill	Foundry	Sand/Cinder	Sand/Cinder
1	1	1	1	--	1	1	1	1	1	1	--	1	1	1	1
Boring Depth	8	Boring Depth		8	Boring Depth		10	Boring Depth			16	Boring Depth			16
Depth to Native	8	Depth to Native		8	Depth to Native		10	Depth to Native			18	Depth to Native			17

B-27				B-28			B-29			B-30			B-31		
2 - 4	6 - 8	10 - 12	14 - 16	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10	2 - 4	6 - 8	8 - 10
Sand Fill	Foundry	Sand Fill	Silty Sand	Sand Fill	Foundry	Sand Fill	Sand / Foundry	Sand/Clay Fill	Clay Fill / Sand	Sand / Foundry	Sand/Clay Fill	Clay Fill / Sand	Sand Fill	Foundry	Sand Fill
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boring Depth			16	Boring Depth		10	Boring Depth		10	Boring Depth		10	Boring Depth		10
Depth to Native			17	Depth to Native		10	Depth to Native		9	Depth to Native		10	Depth to Native		10

B-32			B-33		B-34				
2 - 4	6 - 8	10 - 12	2 - 4	6 - 8	2 - 4	6 - 8	10 - 12	14 - 16	16 - 18
Foundry / Clay	Foundry	Cinder	Foundry / Sand	Foundry / Sand	Sandy Fill	Foundry	Clay Fill/ Cinder	Sand Fill	Native
1	1	1	1	1	1	1	1	1	--
Boring Depth		12	Boring Depth	8	Boring Depth				16
Depth to Native		11	Depth to Native	8	Depth to Native				15

B-3		B-5		B-6		B-7		B-8	
2 - 4	14 - 18	2 - 4	8-10	2 - 4	8-10	2 - 4	16 - 18	2 - 4	12 - 14
Sandy Fill	Silty Clay/Native	Sandy Fill	Sand/Native	Sandy Fill	Sand/Native	Sandy Fill	Sand/Native	Silty Clay Fill	Sand/Native
--	--	--	--	--	--	--	--	--	--
Boring Depth	18	Boring Depth	16	Boring Depth	10	Boring Depth	10	Boring Depth	16
Depth to Native	8	Depth to Native	5	Depth to Native	8	Depth to Native	11	Depth to Native	6

B-9		B-12		B-13		B-16	
2 - 4	10 - 12	2 - 4	14 - 16	2 - 4	14 - 16	2 - 4	
Sandy Fill	Sand/Native	Foundry	Sand	Sandy Fill	Sand/Native	Sandy Fill / Foundry	
--	--	--	--	--	--	--	
Boring Depth	16	Boring Depth	16	Boring Depth	16	Boring Depth	11
Depth to Native	9	Depth to Native	16	Depth to Native	15	Depth to Native	17

Gray Banner: Proposed Borings	Sandy Fill
White Banner: Completed borings	Cinders
	Foundry
	Native

	Completed Borings		Proposed Borings	
TOTALS	Sample Count	30	Sample Count	117
	Sandy Fill	15	Sandy Fill	72
	Cinders	0	Cinders	16
	Foundry	2	Foundry	29
	Native	13	Native	6

Notes:

The place holder "--" and "1" beneath the fill soil type indicates "no sample counted" and "one sample counted," respectively.

Information regarding soil type for the proposed borings was interpreted from the Giles boring logs from the nearest borings completed during the initial investigation. Sample count and total footage are for proposed borings only.

	White Banner: completed borings	Gray: Proposed Borings
Proposed Boring Total Footage	--	495