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Colliers Engineering & Design

Via email
September 29, 2023

Jenelle Gaylord
New York State Department of Environmental Conservation
625 Broadway
Albany, New York

University of Rochester Site 828166

Dear Ms. Gaylord,

At the request of the University of Rochester (UR), Colliers Engineering & Design (CED) has prepared this addendum to the previously NYSDEC-approved Excavation Work Plan (EWP), dated March 2023, for the URMC Hospital Emergency Department Expansion, located at 110 Crittenden Boulevard, Rochester, Monroe County, New York (Site). In accordance with the EWP, confirmation sampling was completed in August 2023. This EWP addendum has been prepared to address the exceedances of criteria detected in soil samples in the August 2023 confirmation sampling.

The purpose of this work plan is to address the excavation remaining hot spots (HS) identified during the first confirmation sampling completed from August 21 to 24, 2023.

In accordance with the EWP, soil samples were collected using a sample grid system, approved by the NYSDEC. The sample grid for the former transformer area was a 5 square foot grid and samples were collected for the analysis of volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), pesticides and polychlorinated biphenyls (PCB), and total target analyte list (TAL metals). The soil samples collected outside of the former transformer area followed a 10 ft grid and the soil samples were submitted for analysis of PCBs.

Confirmation Sampling

As part of the Former Transformer Area Confirmation Sampling, 180 soil samples were collected and submitted for the analysis of PCBs, and in addition, 115 soil samples were also analyzed for VOCs, SVOCs, and TAL Metals. The confirmation sampling included both the initial hot spot removal (Hot Spot 1) (HS-1, HS-2, HS-3 and HS-4) confirmation samples and the grid-based sampling, where possible, the same points served both purposes.

Confirmation Sampling Results

The PCB results were compared to the NYSDEC Part 375 Commercial Use Soil Cleanup Objective (CUSCO) criteria of 1 mg/kg. Below is a summary of the analytical data results:

- PCBs were not detected above the reporting limit (RL) in 124 soil samples.

- PCBs were detected in 56 soil samples.
- PCBs were detected at concentrations above the criteria of 1 mg/kg in 24 soil samples.
- The concentrations of PCBs range from 0.147 mg/kg (A3) to 1,215 mg/kg (HS3 EW C7).

The PCB analytical results are provided in Table 1.

Hot Spot Excavation

Hot Spot Excavation 1

The HS 1 included the excavation of HS-1, HS-2, HS-3, and HS-4 and was completed in August 2023. The HS locations were based on the results of preliminary screening and historical data. The results of the HS 1 excavation were included in the site-wide confirmation data set.

Hot Spot Excavation 2

The purpose of this HS 2 excavation plan is to further remediate areas where PCBs, SVOCs, and Mercury were detected at concentrations above the criteria. PCBs were detected above criteria in 24 soil samples, one or more SVOCs were detected at concentrations above criteria in eight (8) samples, and Mercury was detected above criteria in one (1) sample (F14). The limits of the proposed excavation areas are shown on Figure 1 and the excavation depths are provided in Table 2. The excavation work plan was developed based on a known horizontal extent and an estimate of the depth of contaminated soil in each HS. The estimation of the depths of the contaminated soil were based on the concentrations of the PCBs or SVOCs.

The HS 2 excavation will include both hot spot removal in the floor of the excavation but also into the walls of the excavation. The northwest corner of the excavation wall will be excavated 5-feet to the north and the south wall in the area of D14 will be excavated an additional ten (10) feet to the south. In the area of F14, the excavation will be two (2) feet into the south wall.

Following the HS 2 excavations, confirmation soil samples will be collected using a 5-ft grid and submitted for PCBs, SVOCs, and/or Mercury analysis. Table 2 provides a summary of the confirmation sampling analysis for each Hot Spot.

It is anticipated that approximately 142 cubic yards of soil will be removed during the HS 2 excavation. Consistent with the approved EWP, excavated soil will be transported and disposed of as Toxic Substances Control Act (TSCA) waste. Liquid waste (water pumped out of the excavation and decontamination fluids) will be treated onsite in accordance with the approved Groundwater Dewatering, Treatment, and Discharge Plan.

Colliers Engineering & Design

Sincerely,

Colliers Engineering & Design, Inc.

Jo Ann Robertson

Jo Ann Robertson, PG CPG
Project Geologist

Attached

Table 1: PCB Concentrations in Soil

Table 2: Summary of PCBs Excavation Areas and Depths

Figure 1: Extent of Hot Spots

Table 1
Hot Spot Removal - Event 2
PCB Concentrations in Soil
Hot Spot Excavation Plan
University of Rochester
110 Crittenden Boulevard
City of Rochester, NY

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Sample Location	PCBs (mg/kg)
A1	1.163
A1 WT	ND (0.176)
A11	ND (0.213)
A13	ND (0.141)
A14	ND (0.175)
A3	0.147
A3WT	ND (0.128)
A5	ND (0.164)
A5WT	ND (0.171)
A7	ND (0.139)
A9	ND (0.157)
B1	48.7
B11	ND (0.176)
B13	ND (0.149)
B14	ND (0.179)
B14WT	ND (0.124)
B1WT	2.02
B3	ND (0.161)
B5	0.261
B9	0.38
C1	ND (0.159)
C13	ND (0.145)
C14	ND (0.190)
C14WC	ND (0.137)
C14WT	ND (0.140)
C1WC	ND (0.139)
C1WT	ND (0.143)
C5	ND (0.190)
C9	0.379
D1	ND (0.194)
D13	0.503
D14	479
D14WC	ND (0.154)
D14WT	ND (0.147)

Table 1
Hot Spot Removal - Event 2
PCB Concentrations in Soil
Hot Spot Excavation Plan
University of Rochester
110 Crittenden Boulevard
City of Rochester, NY

Sample Location	PCBs (mg/kg)
D1WC	ND (0.122)
D1WT	ND (0.155)
D5	ND (0.175)
D6	27.3
D7	447
D8	11.56
D9	ND (0.162)
E1	ND (0.188)
E10	1.72
E11	8.15
E12	10.8
E13	ND (0.174)
E14	ND (0.169)
E14WC	ND (0.145)
E14WT	ND (0.140)
E1WC	ND (0.148)
E1WT	ND (0.128)
E5	24.5
E6	1.79
E7	0.634
E8	0.412
E9	6.54
F1	ND (0.154)
F10	ND (0.186)
F11	1.015
F12	1.171
F13	ND (0.144)
F14	ND (0.111)
F14WC	ND (0.117)
F14WT	ND (0.124)
F1WC	ND (0.184)
F1WT	ND (0.127)
F2	1.57
F3	0.587

Table 1
Hot Spot Removal - Event 2
PCB Concentrations in Soil
Hot Spot Excavation Plan
University of Rochester
110 Crittenden Boulevard
City of Rochester, NY

Colliers Engineering & Design

Sample Location	PCBs (mg/kg)
F4	11.4
F5	23.8
F6	ND (0.201)
F7	0.258
F8	0.233
F9	ND (0.191)
G1	0.417
G10	ND (0.154)
G11	ND (0.172)
G12	ND (0.202)
G13	ND (0.128)
G14	ND (0.166)
G1WC	0.498
G1WT	ND (0.126)
G2	ND (0.179)
G3	ND (0.182)
G4	ND (0.175)
G5	ND (0.156)
G6	ND (0.168)
G8	ND (0.175)
G9	ND (0.158)
GWC	ND (0.132)
GWT	ND (0.137)
H1	0.225
H11	0.358
H13	ND (0.127)
H14	ND (0.195)
H14WT	ND (0.195)
H1WT	0.202
H3	ND (0.177)
H5	ND (0.155)
H7	0.701
H9	0.213
HS1 BS1	ND (0.17)

Table 1
Hot Spot Removal - Event 2
PCB Concentrations in Soil
Hot Spot Excavation Plan
University of Rochester
110 Crittenden Boulevard
City of Rochester, NY

Sample Location	PCBs (mg/kg)
HS1 BS2	ND (0.16)
HS1 E Wall	0.211
HS1 N Wall	ND (0.186)
HS1 NE (K2)	0.17
HS1 NEC	ND (0.176)
HS1 NWC (J2)	ND (0.18)
HS1 S Wall	ND (0.190)
HS1 SEC	ND (0.19)
HS1 SWC	ND (0.18)
HS1 NWC14 (depth of 14ft)	ND (0.17)
HS1 SEC	ND (0.128)
HS1 SWC	ND (0.19)
HS1 West Wall (J3)	ND (0.18)
HS2 EB1	ND (0.141)
HS2 NW	ND (0.152)
HS2 NWC	ND (0.132)
HS2 EB2	0.24
HS2 EW (D11)	0.209
HS2 NEC (D10)	0.23
HS2 SEC (D12)	ND (0.19)
HS2 SW (C12)	ND (0.14)
HS2 SWC (BC12)	1.37
HS2 WW (BC11)	ND (0.162)
HS3 EB1	ND (0.187)
HS3 EB2	0.368
HS3 EW (C7)	1215
HS3 NEC (C6)	0.517
HS3 NW (B6)	0.645
HS3 SEC (C8)	0.876
HS3 SW (B8)	0.443
HS3 SWC (B8)	ND (0.142)
HS3 WW (B7)	0.376
HS3 NWC (B6)	4.49
HS4 EB2	ND (0.158)

Table 1
Hot Spot Removal - Event 2
PCB Concentrations in Soil
Hot Spot Excavation Plan
University of Rochester
110 Crittenden Boulevard
City of Rochester, NY

Sample Location	PCBs (mg/kg)
HS4 EW (E3)	20.6
HS4 NEC (E2)	ND (0.137)
HS4 NW (D2)	ND (0.145)
HS4 NWC (C2)	5.97
HS4 SEC (E4)	ND (0.159)
HS4 SW (D4)	ND (0.192)
HS4 WW (C3)	0.199
HS4SWC	ND (0.202)
HS4 EB1	0.173
I1	0.198
I11	ND (0.158)
I13	ND (0.177)
I14	ND (0.174)
I14WT	ND (0.172)
I1WT	ND (0.138)
I3	ND (0.173)
I5	0.404
I7	1.152
I9	ND (0.197)
J1	ND (0.153)
J11	ND (0.184)
J13	ND (0.153)
J14	ND (0.133)
J14WT	ND (0.129)
J1WT	ND (0.118)
J5	ND (0.164)
J7	ND (0.142)
J9	ND (0.140)
K1	ND (0.179)
K11	ND (0.127)
K11WT	ND (0.125)
K13	ND (0.152)
K13WT	ND (0.168)
K14	ND (0.158)

Table 1
Hot Spot Removal - Event 2
PCB Concentrations in Soil
Hot Spot Excavation Plan
University of Rochester
110 Crittenden Boulevard
City of Rochester, NY

Sample Location	PCBs (mg/kg)
K14WT	ND (0.154)
K1WT	ND (0.150)
K3	ND (0.172)
K3WT	ND (0.123)
K5	ND (0.180)
K5WT	ND (0.161)
K7	ND (0.161)
K7WT	ND (0.162)
K9	ND (0.125)
K9WT	ND (0.159)

Soil Samples were collected by Bergmann staff using an excavator
ND: Not Detected.
mg/kg: Milligrams per kilogram
The Report Limit is provided with the ND designation.

Table 2
Hot Spot Removal - Event 2
Summary of PCBs Excavation Areas and Depths
Hot Spot Excavation Plan
University of Rochester
110 Crittenden Boulevard
City of Rochester, NY

Sample Location	PCB (mg/kg)	TAL Metals Exceedance	TCL SVOC Exceedance	Hot Spot Location	Excavation Depth (ft below current	Confirmation Sample Analysis
HS4 NWC (C2)	5.97			Hot Spot 5	2	PCBs
E5	24.5			Hot Spot 6	3	PCBs
E6	1.79			Hot Spot 6	3	PCBs
F2	1.57			Hot Spot 6	3	PCBs
F4	11.4			Hot Spot 6	3	PCBs
F5	23.8			Hot Spot 6	3	PCBs
HS4 EW (E3)	20.6			Hot Spot 6	3	PCBs
HS3 NWC (B6)	4.49			Hot Spot 7	2	PCBs, SVOCs
D6	27.3			Hot Spot 7	5	PCBs, SVOCs
D7	447			Hot Spot 7	5	PCBs, SVOCs
D8	11.56		X	Hot Spot 7	5	PCBs, SVOCs
HS3 EW (C7)	1215			Hot Spot 7	5	PCBs, SVOCs
E10	1.72			Hot Spot 8	2	PCBs, SVOCs
E11	8.15			Hot Spot 8	2	PCBs, SVOCs
E12	10.8			Hot Spot 8	2	PCBs, SVOCs
E9	NA		X	Hot Spot 8	2	PCBs, SVOCs
E9	6.54			Hot Spot 8	2	PCBs, SVOCs
F11	1.015			Hot Spot 8	2	PCBs, SVOCs
F12	1.171			Hot Spot 8	2	PCBs, SVOCs
F14	NA	X		Hot Spot 8	2	PCBs, SVOCs
HS2 SWC (BC12)	1.37			Hot Spot 9	2	PCBs
I7	1.152			Hot Spot 10	2	PCBs
J2	NA		X	Hot Spot 11	2	PCBs, SVOCs
F14	NA		X	Hot Spot 12	2	PCBs, SVOCs, Mercury
G13	NA		X	Hot Spot 12	2	PCBs, SVOCs, Mercury
G14	NA		X	Hot Spot 12	2	PCBs, SVOCs, Mercury
A1	1.163			Wall Hot Spot 1	5	PCBs
B1	48.7			Wall Hot Spot 1	5	PCBs
B1WT	2.02			Wall Hot Spot 1	5	PCBs
D14	479			Wall Hot Spot 2	10	PCBs
G1	NA		x	Wall Hot Spot 3	5	PCBs, SVOCs
G1WT	NA		x	Wall Hot Spot 3	5	PCBs, SVOCs

mg/kg: Milligrams per kilogram

Wall HotSpot 3

HotSpot 11

HotSpot 12

WALL HOTSPOT 1

WALL HOTSPOT 2

HOTSPOT 5

HOTSPOT 6

HOTSPOT 7

HOTSPOT 8

HOTSPOT 9

HOTSPOT 10

G7 UNSAMPLED (OBSTRUCTED)

SEE NOTE

NOTE:

LEGEND

- FORMER COFFER EXTENT (APPROX.)
- HOTSPOT FLOOR EXCAVATION
- HOTSPOT WALL EXCAVATION
- WALL SAMPLE (SEE FIGURE 7)
- PCBS DETECTED: <1 PPM
- PCBS DETECTED: 1 PPM TO 10 PPM
- PCBS DETECTED: 10 PPM TO 100 PPM
- NO PCBS DETECTED
- PCBS DETECTED: 100 PPM TO 1,000 PPM
- PCBS DETECTED: >1,000 PPM
- SVOC EXCEEDANCE DETECTED

NOTE: SEE WALL SAMPLE LOCATION FIGURE. WALL SAMPLE POINTS ARE REPRESENTATIVE IN PRESENT FIGURE.

ALLOW 2 FT BUFFER AROUND REMOVAL AREA DUE TO EXCAVATION EQUIPMENT LIMITATIONS.

10 0 10

SCALE : 1" = 10'

2022\22008624A\Environmental\E-BASE.dwg\INTERNAL (2) By: JON.RHEINHARDT

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HOT SPOT REMOVAL - EVENT 2
FOR
U OF R BED TOWER EXCAVATION

110 CRITTENDEN BLVD
SBL: 135.60-1-6.001

CITY OF ROCHESTER, NY

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PROJECT NUMBER: 22008624A
DRAWING NAME: E-BASE
SHEET TITLE: INTERNAL USE
FIELD BOOK: XX PAGE: XX
SHEET NUMBER: FIGURE 1