January 11, 2019

Mr. Chad Staniszewski
Mr. Eugene Melnyk
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203
OU2 West Remedial Action Work Plan Addendum
NYSDEC Site No. C915201C

Dear Mr. Staniszewski & Mr. Melnyk:

On behalf of Elk Street Commerce Park, LLC (ESCP), Amec E&E PC (AMEC) has prepared this Addendum to the approved *Remedial Action Work Plan for Operable Unit 2 West* (RAWP), dated May 7, 2018. The Addendum presents the scope of work to conduct a Track 4 Remedial Action (RA). A previous Addendum was submitted requesting a change from the identified Track 2 RA presented in the RAWP to the contingent Track 4 RA also presented in the RAWP. This Addendum is submitted in response to the New York State Department of Environmental Conservation's (NYSDEC) letter dated January 4, 2019 and email dated January 7, 2019. These documents are presented as attachments to this letter. This Addendum is being submitted with the intent that it supersedes all previous works plans submitted and approved for the OU2 West site.

Background

The approved RAWP presented a Track 2 remedy that included limited excavation of soils exceeding commercial criteria for semi-volatile organic compounds (SVOCs) as well as three limited excavations where previous investigations encountered grossly contaminated media (GCM). The locations of the excavations are shown on **Figure 1**. Per the RAWP, confirmation sampling and testing of excavation bottom and sidewalls were conducted in accordance with NYSDEC's *Technical Guidance for Site Investigation and Remediation* (DER-10) for the SVOC area and visual observation, odor and photoionization detector (PID) scans were conducted within the GCM excavations. Confirmation samples were also collected in GCM-1.

On July 25, 2018 excavation of the delineated SVOC area commenced with the removal of 12-inches of soil. The excavated soils were stockpiled in a lined stockpile area on the OU2 East site (NYSDEC Site No. C915201B). During the NYSDEC's inspection of the SVOC excavation, material meeting the definition of GCM was present in several locations at the bottom of the excavation. Additional excavation and removal of impacted soils were conducted to remove GCM. After completion of the excavation, bottom and sidewall samples were collected and delivered to Test America Laboratories, Inc. in Amherst, NY for analysis. The samples were tested for 16 carcinogenic polycyclic aromatic hydrocarbons (cPAHs) as previously agreed with NYSDEC. Results of the testing are presented in **Table 1.** SVOC concentrations greater than

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Clifton Park NY
(518) 372-0906
amecfw.com

industrial criteria were identified for benzo[a]pyrene at seven locations, all within the southern portion of the excavation. The locations of the samples that exceeded criteria are indicated on **Figure 1**.

Excavation of the GCM areas commenced on August 28, 2018 in the presence of the NYSDEC. Within GCM-1, GCM impacted soils were encountered in the fill, native alluvial material and into the upper lacustrine clay. PID readings up to 400 ppm and odors were also observed during the excavation. The depth of the excavation extended to approximately 8 feet below ground surface. Excavated material was stockpiled in a lined stockpile area on OU2 East. Excavation sidewall and bottom samples were collected in accordance with DER-10. Samples were analyzed for metals (EPA 6010_7471), SVOCs (EPA 8270) and VOCs (EPA 8260). Results of the testing are presented in **Tables 2-4**. Results that exceeded industrial criteria include benzo[a]pyrene in two locations, arsenic in four locations, and barium in 2 locations. The locations and concentrations of each exceedance are presented on **Figure 1**.

Based on visual, olfactory and PID scans, GCM was not encountered within either GCM-2 or GCM-3. These excavations were backfilled with the material removed during the excavations. Due to GCM not being encountered, analytical sampling was not conducted at these locations.

Contingent Track 4 Remedy Rationale

Section 3.10.1 of the RAWP presents the contingent Track 4 remedy. The paragraph is presented below for reference:

A contingent Track 4 cleanup for OU-2 West will be implemented if the Track 2 cleanup is determined, during remediation activities, to be infeasible to implement. Soils exceeding commercial SCOs will be left in-place. A demarcation fabric will be installed above the soils and 12-inches clean cover meeting commercial use SCOs will be installed over the soils. New pavement and existing pavement that is in good condition may also serve as cover material. The Site Management Plan will provide direction for handling of impacted soils should they be encountered during post remediation site development.

Based on the observations and analytical results from the SVOC and GCM excavations, it is not feasible to continue with the Track 2 remedy. The Track 2 remedy would require all impacted material above commercial SCOs within 15 feet of the ground surface to be removed. Residual petroleum impacted soil was found at depths of approximately 8 feet below existing grade within GCM-1 adjacent to the existing occupied building. Removing the soils to this depth, and potentially deeper, to achieve a Track 2 cleanup proximate to the existing structure would require shoring to prevent structural damage to the building. It is unknown if residual petroleum impacted material exists below the building. Sidewall and bottom sample analytical testing results from the SVOC area indicate that additional excavation would be required to extend the footprint of the excavation to remove impacted material above commercial standards. Additionally, the extents of the SVOC and residual petroleum impacted material are not fully delineated. The NYSDEC provided direction in an email dated October 4, 2018 that additional sampling was required to continue with a Track 2 remedy. The primary concern expressed by the NYSDEC was a lack of analytical data in the northern area of OU2 West. The need to further investigate an area of the site, where the Track 2 remedy did not initially require any additional action, could potentially add additional areas for excavation and off-site disposal to achieve the Track 2 remedy.

Track 4 Remedial Action

The proposed Track 4 RA presented herein conforms with the intent of the contingent remedy as presented in the RAWP. The extreme northern area of the site that extends to Elk Street is heavily vegetated and separated from the main portion of OU2 West by a fence. This portion of the site encompasses an area of approximately 3,600 square feet. AMEC proposes to collect soil samples within the upper 12-inches of soil at a frequency of 1 sample location per 1,000 square feet for a total of 4 sample locations. The proposed sample locations, SS-OU2W-01 through SS-OU2W-04, are shown on the attached Drawing C-108. At each sample location, samples would be collected at depths of: 0 - 2-inches, 2 – 6-inches, and 6 – 12-inches for a total of 12 samples. The samples will be tested for the full suite of analytical parameters per the requirements of DER-10. At the completion of the sampling and analysis, a letter report to include analytical laboratory testing results will be provided to the NYSDEC.

The analytical testing results of the samples collected within the extreme northern reach of the site will dictate the RA in this area. If the results of the analytical testing indicate that the material meets commercial criteria, no action will be required. If analytical results indicate exceedances to commercial criteria, the site will be cleared and grubbed, a demarcation layer will be placed over existing material and covered with 12-inches of clean imported material.

For the remaining areas of the site that are not paved, the RA will consist of the following:

- removal of 12-inches of material;
- backfilling the open excavations (i.e. GCM-1 excavation) to within a foot of final grade with clean imported material;
- placing a demarcation layer over the bottom of excavation;
- placement of a minimum of 12-inches of clean imported material over demarcation fabric.

Excavated material would be used within the OU2 East site as fill material at depths greater than 1 foot below final grade (i.e., below the soil cover system) and would be stabilized in the same manner as GCM impacted material under the OU2 East RA. Neither characterization testing of the excavated material nor confirmation testing on the material left in place will be conducted as part of the RA.

Areas that are either covered with asphaltic pavement or concrete will be inspected and repaired as necessary to construct a competent cover system to support the intended use.

The proposed Track 4 remedy is presented on the attached contract drawing, C-108 rev 3.

Sincerely,
AMEC E&E, PC

Richard Egan
Associate Geotechnical Engineer

Sam Farnsworth
Project Manager

Attachments

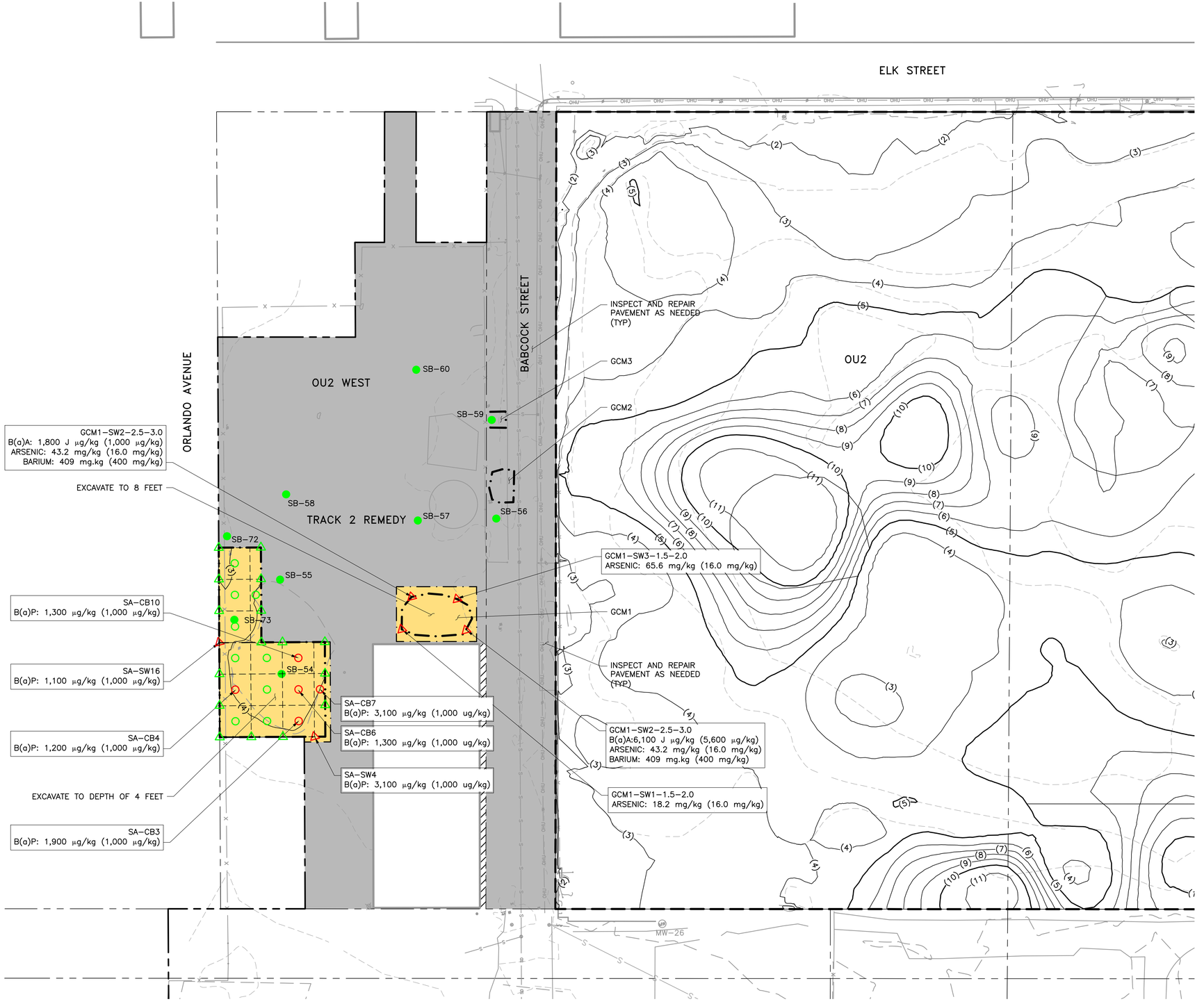
Figures
Drawings
Tables
NYSDEC Letter
NYSDEC Email

cc: Paul Neureuter ESCP, LLC
Pete Pederson ESCP, LLC
Arnie Cubins, Krog

Figures

LEGEND

- TRACK 2 REMEDY SHADE A
- PREVIOUSLY EXCAVATED AREAS
- REPAIR CONCRETE/PAVEMENT COVER
- (10) — SOIL DEPTH TO CLAY CONTOUR (FROM EXISTING GRADE)
- LEAD IMPACTED SOIL LIMITS
- OU2 WEST IMPACTED SOIL EXCAVATION LIMITS
- EXCAVATION CELL LIMTS
- ○ EXCAVATION FLOOR SAMPLE NOT EXCEEDING COMMERCIAL CRITERIA ONE PER 900 SF
- △ EXCAVATION WALL SAMPLE NOT EXCEEDING COMMERCIAL CRITERIA ONE PER 30 LF
- ○ EXCAVATION FLOOR SAMPLE EXCEEDING COMMERCIAL CRITERIA ONE PER 900 SF
- △ EXCAVATION WALL SAMPLE EXCEEDING COMMERCIAL CRITERIA ONE PER 30 LF
- SB–58 SOIL BORING
- SA–CB4 SAMPLE NUMBER
- B(a)P ANALYTE
- 1,200 µg/kg ANALYTE CONCENTRATION
- (1,000 µg/kg) COMMERCIAL CONCENTRATION FOR PROTECTION OF PUBLIC HEALTH



0 25 50 100
SCALE IN FEET

Prepared/Date: WJW 12/19/18
Checked/Date: RSE 12/19/18

REMEDIAL DESIGN ELK STREET PROPERTY BUFFALO, NEW YORK	amec	OU2 WEST PROPOSED TRACK 2 REMEDY INVESTIGATION Project 3617-16-7397 Figure 1

Z:\Projects\ExxonMobil–nREG–Elk Street\OU2 Design\Sheets\Figures\F0s_1 – OU2 West Track 2 Remedy.dwg Wed, 19 Dec 2018 – 2:32pm william.whitten

Drawing C-108 Rev 3

NOTE
SEE REFERENCE DRAWING A–1190 FOR HISTORICAL DRAWING DEPICTING UNDERGROUND UTILITIES AND STUCTURES WITHIN WORK LIMITS

CLEAR AND GRUB
EXCAVATE 1–FT BELOW GRADE
INSTALL DEMARCATION FABRIC AND BACKFILL TO GRADE

SS–OU2W–01
SS–OU2W–02
SS–OU2W–03
SS–OU2W–04

PROPOSED SURFACE SOIL SAMPLE LOCATION (TYP)

INSPECT AND REPAIR PAVEMENT AS NEEDED (TYP)

EXCAVATE NON–PAVED AREAS TO 1–FT BELOW EXISTING GRADE
INSTALL DEMARCATION FABRIC AND BACKFILL TO GRADE

EXCAVATE TO A DEPTH OF 1 FT BELOW EXISTING GRADE
INSTALL DEMARCATION FABRIC AND BACKFILL TO GRADE

INSTALL DEMARCATION FABRIC AND BACKFILL TO GRADE

BACKFILL TO 1–FT BELOW GRADE
INSTALL DEMARCATION FABRIC AND BACKFILL TO GRADE

EXCAVATE TO A DEPTH OF 1 FT BELOW EXISTING GRADE
INSTALL DEMARCATION FABRIC AND BACKFILL TO GRADE

REPAIR CONCRETE/PAVEMENT COVER (TYP)

INSPECT AND REPAIR PAVEMENT AS NEEDED (TYP)

ELK STREET

ORLANDO AVENUE

FORMERLY BABCOCK AVENUE

FORMERLY PRENATT STREET

MW–26

MW–17

SB–16

MATCH LINE SEE DWG C–109 FOR CONTINUATION

NOTE
SEE DRAWING C–109 FOR LEGEND.

0 25 50 100
SCALE IN FEET

NO.	DATE	REVISION	CHK	APVD
3	1/11/19	REVISED PER STATE REVIEW	WJW	RSE
2	12/17/18	OU2 WEST TRACK 2 - FOR STATE REVIEW	WJW	RSE
1	6/07/18	ADDENDUM 1	WJW	RSE
0	5/21/18	ISSUED FOR CONSTRUCTION	WJW	RSE
DSGN		DR	BY	APVD
		R. Egan	W.Whitten	M. Peters	J. Peterson

1/11/19

OU2 REMEDIAL DESIGN
ELK STREET PROPERTY
BUFFALO, NEW YORK

DRAWING STATUS
ISSUED FOR CONSTRUCTION

CIVIL
SITE PLAN WEST
INSITU SOIL STABILIZATION AND EXCAVATION

amec
E & E, PC
511 Congress Street
Portland, Maine 04101
(207) 775-5401

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JAN 2019
PROJ	3617-16-7397
DWG	C-108
SHEET	10 OF 32

FILE NAME: Z:\Projects\ExxonMobil-KROG-Elk Street\OU2 Design\sheets\C-108 Soil Stabilization Plan West.dwg PLOT DATE: Fri, 11 Jan 2019 PLOT TIME: 11:56 AM

Tables

Table 1

SVOC Excavation Area
Summary of cPAHs in Soil Samples

Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-CB1	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-CB1	8270D	208-96-8	Acenaphthylene	27	ug/Kg	J	100000	500000	1000000
SA-CB1	8270D	120-12-7	Anthracene	ND	ug/Kg		100000	500000	1000000
SA-CB1	8270D	56-55-3	Benzo[a]anthracene	ND	ug/Kg		1000	5600	11000
SA-CB1	8270D	50-32-8	Benzo[a]pyrene	99	ug/Kg		1000	1000	1100
SA-CB1	8270D	205-99-2	Benzo[b]fluoranthene	120	ug/Kg		1000	5600	11000
SA-CB1	8270D	191-24-2	Benzo[g,h,i]perylene	140	ug/Kg	J	100000	500000	1000000
SA-CB1	8270D	207-08-9	Benzo[k]fluoranthene	23	ug/Kg	J	800	56000	110000
SA-CB1	8270D	218-01-9	Chrysene	260	ug/Kg	J	1000	56000	110000
SA-CB1	8270D	53-70-3	Dibenz(a,h)anthracene	55	ug/Kg		330	560	1100
SA-CB1	8270D	206-44-0	Fluoranthene	73	ug/Kg	J	100000	500000	1000000
SA-CB1	8270D	86-73-7	Fluorene	39	ug/Kg	J	30000	500000	1000000
SA-CB1	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	71	ug/Kg		500	5600	11000
SA-CB1	8270D	91-20-3	Naphthalene	140	ug/Kg	J	12000	500000	1000000
SA-CB1	8270D	85-01-8	Phenanthrene	220	ug/Kg	J	100000	500000	1000000
SA-CB1	8270D	129-00-0	Pyrene	120	ug/Kg	J	100000	500000	1000000
SA-CB10	8270D	83-32-9	Acenaphthene	71	ug/Kg	J	20000	500000	1000000
SA-CB10	8270D	208-96-8	Acenaphthylene	220	ug/Kg	J	100000	500000	1000000
SA-CB10	8270D	120-12-7	Anthracene	330	ug/Kg	J	100000	500000	1000000
SA-CB10	8270D	56-55-3	Benzo[a]anthracene	1400	ug/Kg		1000	5600	11000
SA-CB10	8270D	50-32-8	Benzo[a]pyrene	**1300**	ug/Kg		1000	1000	1100
SA-CB10	8270D	205-99-2	Benzo[b]fluoranthene	1900	ug/Kg		1000	5600	11000
SA-CB10	8270D	191-24-2	Benzo[g,h,i]perylene	830	ug/Kg		100000	500000	1000000
SA-CB10	8270D	207-08-9	Benzo[k]fluoranthene	780	ug/Kg		800	56000	110000
SA-CB10	8270D	218-01-9	Chrysene	1600	ug/Kg		1000	56000	110000
SA-CB10	8270D	53-70-3	Dibenz(a,h)anthracene	290	ug/Kg		330	560	1100
SA-CB10	8270D	206-44-0	Fluoranthene	2700	ug/Kg		100000	500000	1000000
SA-CB10	8270D	86-73-7	Fluorene	220	ug/Kg	J	30000	500000	1000000
SA-CB10	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	920	ug/Kg		500	5600	11000
SA-CB10	8270D	91-20-3	Naphthalene	200	ug/Kg	J	12000	500000	1000000
SA-CB10	8270D	85-01-8	Phenanthrene	2100	ug/Kg		100000	500000	1000000
SA-CB10	8270D	129-00-0	Pyrene	2600	ug/Kg		100000	500000	1000000
SA-CB11	8270D	83-32-9	Acenaphthene	800	ug/Kg		20000	500000	1000000
SA-CB11	8270D	208-96-8	Acenaphthylene	200	ug/Kg	J	100000	500000	1000000
SA-CB11	8270D	120-12-7	Anthracene	610	ug/Kg		100000	500000	1000000
SA-CB11	8270D	56-55-3	Benzo[a]anthracene	800	ug/Kg		1000	5600	11000
SA-CB11	8270D	50-32-8	Benzo[a]pyrene	710	ug/Kg		1000	1000	1100
SA-CB11	8270D	205-99-2	Benzo[b]fluoranthene	1100	ug/Kg		1000	5600	11000
SA-CB11	8270D	191-24-2	Benzo[g,h,i]perylene	440	ug/Kg	J	100000	500000	1000000
SA-CB11	8270D	207-08-9	Benzo[k]fluoranthene	390	ug/Kg		800	56000	110000
SA-CB11	8270D	218-01-9	Chrysene	970	ug/Kg		1000	56000	110000
SA-CB11	8270D	53-70-3	Dibenz(a,h)anthracene	160	ug/Kg		330	560	1100
SA-CB11	8270D	206-44-0	Fluoranthene	1800	ug/Kg		100000	500000	1000000
SA-CB11	8270D	86-73-7	Fluorene	680	ug/Kg		30000	500000	1000000
SA-CB11	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	530	ug/Kg		500	5600	11000
SA-CB11	8270D	91-20-3	Naphthalene	1600	ug/Kg		12000	500000	1000000
SA-CB11	8270D	85-01-8	Phenanthrene	2100	ug/Kg		100000	500000	1000000
SA-CB11	8270D	129-00-0	Pyrene	2600	ug/Kg		100000	500000	1000000
SA-CB12	8270D	83-32-9	Acenaphthene	360	ug/Kg	J	20000	500000	1000000
SA-CB12	8270D	208-96-8	Acenaphthylene	110	ug/Kg	J	100000	500000	1000000
SA-CB12	8270D	120-12-7	Anthracene	280	ug/Kg	J	100000	500000	1000000
SA-CB12	8270D	56-55-3	Benzo[a]anthracene	240	ug/Kg		1000	5600	11000
SA-CB12	8270D	50-32-8	Benzo[a]pyrene	220	ug/Kg		1000	1000	1100
SA-CB12	8270D	205-99-2	Benzo[b]fluoranthene	370	ug/Kg		1000	5600	11000
SA-CB12	8270D	191-24-2	Benzo[g,h,i]perylene	160	ug/Kg	J	100000	500000	1000000
SA-CB12	8270D	207-08-9	Benzo[k]fluoranthene	120	ug/Kg		800	56000	110000
SA-CB12	8270D	218-01-9	Chrysene	280	ug/Kg	J	1000	56000	110000
SA-CB12	8270D	53-70-3	Dibenz(a,h)anthracene	52	ug/Kg		330	560	1100
SA-CB12	8270D	206-44-0	Fluoranthene	510	ug/Kg		100000	500000	1000000
SA-CB12	8270D	86-73-7	Fluorene	440	ug/Kg		30000	500000	1000000
SA-CB12	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	190	ug/Kg		500	5600	11000
SA-CB12	8270D	91-20-3	Naphthalene	1100	ug/Kg		12000	500000	1000000
SA-CB12	8270D	85-01-8	Phenanthrene	1800	ug/Kg		100000	500000	1000000
SA-CB12	8270D	129-00-0	Pyrene	950	ug/Kg		100000	500000	1000000
SA-CB13	8270D	83-32-9	Acenaphthene	200	ug/Kg	J	20000	500000	1000000
SA-CB13	8270D	208-96-8	Acenaphthylene	79	ug/Kg	J	100000	500000	1000000

Table 1

SVOC Excavation Area
Summary of cPAHs in Soil Samples

Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-CB13	8270D	120-12-7	Anthracene	580	ug/Kg		100000	500000	1000000
SA-CB13	8270D	56-55-3	Benzo[a]anthracene	450	ug/Kg		1000	5600	11000
SA-CB13	8270D	50-32-8	Benzo[a]pyrene	460	ug/Kg		1000	1000	1100
SA-CB13	8270D	205-99-2	Benzo[b]fluoranthene	720	ug/Kg		1000	5600	11000
SA-CB13	8270D	191-24-2	Benzo[g,h,i]perylene	390	ug/Kg	J	100000	500000	1000000
SA-CB13	8270D	207-08-9	Benzo[k]fluoranthene	260	ug/Kg		800	56000	110000
SA-CB13	8270D	218-01-9	Chrysene	680	ug/Kg		1000	56000	110000
SA-CB13	8270D	53-70-3	Dibenz(a,h)anthracene	110	ug/Kg		330	560	1100
SA-CB13	8270D	206-44-0	Fluoranthene	1100	ug/Kg		100000	500000	1000000
SA-CB13	8270D	86-73-7	Fluorene	230	ug/Kg	J	30000	500000	1000000
SA-CB13	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	360	ug/Kg		500	5600	11000
SA-CB13	8270D	91-20-3	Naphthalene	340	ug/Kg	J	12000	500000	1000000
SA-CB13	8270D	85-01-8	Phenanthrene	1600	ug/Kg		100000	500000	1000000
SA-CB13	8270D	129-00-0	Pyrene	2400	ug/Kg		100000	500000	1000000
SA-CB14	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-CB14	8270D	208-96-8	Acenaphthylene	ND	ug/Kg		100000	500000	1000000
SA-CB14	8270D	120-12-7	Anthracene	ND	ug/Kg		100000	500000	1000000
SA-CB14	8270D	56-55-3	Benzo[a]anthracene	91	ug/Kg		1000	5600	11000
SA-CB14	8270D	50-32-8	Benzo[a]pyrene	78	ug/Kg		1000	1000	1100
SA-CB14	8270D	205-99-2	Benzo[b]fluoranthene	130	ug/Kg		1000	5600	11000
SA-CB14	8270D	191-24-2	Benzo[g,h,i]perylene	77	ug/Kg	J	100000	500000	1000000
SA-CB14	8270D	207-08-9	Benzo[k]fluoranthene	46	ug/Kg		800	56000	110000
SA-CB14	8270D	218-01-9	Chrysene	100	ug/Kg	J	1000	56000	110000
SA-CB14	8270D	53-70-3	Dibenz(a,h)anthracene	23	ug/Kg	J	330	560	1100
SA-CB14	8270D	206-44-0	Fluoranthene	140	ug/Kg	J	100000	500000	1000000
SA-CB14	8270D	86-73-7	Fluorene	ND	ug/Kg		30000	500000	1000000
SA-CB14	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	67	ug/Kg		500	5600	11000
SA-CB14	8270D	91-20-3	Naphthalene	60	ug/Kg	J	12000	500000	1000000
SA-CB14	8270D	85-01-8	Phenanthrene	94	ug/Kg	J	100000	500000	1000000
SA-CB14	8270D	129-00-0	Pyrene	160	ug/Kg	J	100000	500000	1000000
SA-CB2	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-CB2	8270D	208-96-8	Acenaphthylene	38	ug/Kg	J	100000	500000	1000000
SA-CB2	8270D	120-12-7	Anthracene	85	ug/Kg	J	100000	500000	1000000
SA-CB2	8270D	56-55-3	Benzo[a]anthracene	410	ug/Kg		1000	5600	11000
SA-CB2	8270D	50-32-8	Benzo[a]pyrene	370	ug/Kg		1000	1000	1100
SA-CB2	8270D	205-99-2	Benzo[b]fluoranthene	580	ug/Kg		1000	5600	11000
SA-CB2	8270D	191-24-2	Benzo[g,h,i]perylene	330	ug/Kg	J	100000	500000	1000000
SA-CB2	8270D	207-08-9	Benzo[k]fluoranthene	190	ug/Kg		800	56000	110000
SA-CB2	8270D	218-01-9	Chrysene	500	ug/Kg		1000	56000	110000
SA-CB2	8270D	53-70-3	Dibenz(a,h)anthracene	130	ug/Kg		330	560	1100
SA-CB2	8270D	206-44-0	Fluoranthene	620	ug/Kg		100000	500000	1000000
SA-CB2	8270D	86-73-7	Fluorene	56	ug/Kg	J	30000	500000	1000000
SA-CB2	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	300	ug/Kg		500	5600	11000
SA-CB2	8270D	91-20-3	Naphthalene	280	ug/Kg	J	12000	500000	1000000
SA-CB2	8270D	85-01-8	Phenanthrene	600	ug/Kg		100000	500000	1000000
SA-CB2	8270D	129-00-0	Pyrene	680	ug/Kg		100000	500000	1000000
SA-CB3	8270D	83-32-9	Acenaphthene	120	ug/Kg	J	20000	500000	1000000
SA-CB3	8270D	208-96-8	Acenaphthylene	100	ug/Kg	J	100000	500000	1000000
SA-CB3	8270D	120-12-7	Anthracene	400	ug/Kg	J	100000	500000	1000000
SA-CB3	8270D	56-55-3	Benzo[a]anthracene	1700	ug/Kg		1000	5600	11000
SA-CB3	8270D	50-32-8	Benzo[a]pyrene	**1900**	ug/Kg		1000	1000	1100
SA-CB3	8270D	205-99-2	Benzo[b]fluoranthene	2700	ug/Kg		1000	5600	11000
SA-CB3	8270D	191-24-2	Benzo[g,h,i]perylene	1400	ug/Kg		100000	500000	1000000
SA-CB3	8270D	207-08-9	Benzo[k]fluoranthene	1100	ug/Kg		800	56000	110000
SA-CB3	8270D	218-01-9	Chrysene	2300	ug/Kg		1000	56000	110000
SA-CB3	8270D	53-70-3	Dibenz(a,h)anthracene	450	ug/Kg		330	560	1100
SA-CB3	8270D	206-44-0	Fluoranthene	3200	ug/Kg		100000	500000	1000000
SA-CB3	8270D	86-73-7	Fluorene	180	ug/Kg	J	30000	500000	1000000
SA-CB3	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	1400	ug/Kg		500	5600	11000
SA-CB3	8270D	91-20-3	Naphthalene	200	ug/Kg	J	12000	500000	1000000
SA-CB3	8270D	85-01-8	Phenanthrene	2200	ug/Kg		100000	500000	1000000
SA-CB3	8270D	129-00-0	Pyrene	3300	ug/Kg		100000	500000	1000000
SA-CB4	8270D	83-32-9	Acenaphthene	630	ug/Kg		20000	500000	1000000
SA-CB4	8270D	208-96-8	Acenaphthylene	78	ug/Kg	J	100000	500000	1000000
SA-CB4	8270D	120-12-7	Anthracene	1100	ug/Kg		100000	500000	1000000
SA-CB4	8270D	56-55-3	Benzo[a]anthracene	1500	ug/Kg		1000	5600	11000

Table 1

SVOC Excavation Area
Summary of cPAHs in Soil Samples

Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-CB4	8270D	50-32-8	Benzo[a]pyrene	**1200**	ug/Kg		1000	1000	1100
SA-CB4	8270D	205-99-2	Benzo[b]fluoranthene	1800	ug/Kg		1000	5600	11000
SA-CB4	8270D	191-24-2	Benzo[g,h,i]perylene	640	ug/Kg		100000	500000	1000000
SA-CB4	8270D	207-08-9	Benzo[k]fluoranthene	580	ug/Kg		800	56000	110000
SA-CB4	8270D	218-01-9	Chrysene	1600	ug/Kg		1000	56000	110000
SA-CB4	8270D	53-70-3	Dibenz(a,h)anthracene	240	ug/Kg		330	560	1100
SA-CB4	8270D	206-44-0	Fluoranthene	3000	ug/Kg		100000	500000	1000000
SA-CB4	8270D	86-73-7	Fluorene	800	ug/Kg		30000	500000	1000000
SA-CB4	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	750	ug/Kg		500	5600	11000
SA-CB4	8270D	91-20-3	Naphthalene	330	ug/Kg	J	12000	500000	1000000
SA-CB4	8270D	85-01-8	Phenanthrene	3000	ug/Kg		100000	500000	1000000
SA-CB4	8270D	129-00-0	Pyrene	4000	ug/Kg		100000	500000	1000000
SA-CB5	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-CB5	8270D	208-96-8	Acenaphthylene	14	ug/Kg	J	100000	500000	1000000
SA-CB5	8270D	120-12-7	Anthracene	ND	ug/Kg		100000	500000	1000000
SA-CB5	8270D	56-55-3	Benzo[a]anthracene	180	ug/Kg		1000	5600	11000
SA-CB5	8270D	50-32-8	Benzo[a]pyrene	200	ug/Kg		1000	1000	1100
SA-CB5	8270D	205-99-2	Benzo[b]fluoranthene	300	ug/Kg		1000	5600	11000
SA-CB5	8270D	191-24-2	Benzo[g,h,i]perylene	160	ug/Kg	J	100000	500000	1000000
SA-CB5	8270D	207-08-9	Benzo[k]fluoranthene	120	ug/Kg		800	56000	110000
SA-CB5	8270D	218-01-9	Chrysene	230	ug/Kg	J	1000	56000	110000
SA-CB5	8270D	53-70-3	Dibenz(a,h)anthracene	44	ug/Kg		330	560	1100
SA-CB5	8270D	206-44-0	Fluoranthene	250	ug/Kg	J	100000	500000	1000000
SA-CB5	8270D	86-73-7	Fluorene	8.7	ug/Kg	J	30000	500000	1000000
SA-CB5	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	160	ug/Kg		500	5600	11000
SA-CB5	8270D	91-20-3	Naphthalene	11	ug/Kg	J	12000	500000	1000000
SA-CB5	8270D	85-01-8	Phenanthrene	120	ug/Kg	J	100000	500000	1000000
SA-CB5	8270D	129-00-0	Pyrene	290	ug/Kg	J	100000	500000	1000000
SA-CB6	8270D	83-32-9	Acenaphthene	58	ug/Kg	J	20000	500000	1000000
SA-CB6	8270D	208-96-8	Acenaphthylene	240	ug/Kg	J	100000	500000	1000000
SA-CB6	8270D	120-12-7	Anthracene	310	ug/Kg	J	100000	500000	1000000
SA-CB6	8270D	56-55-3	Benzo[a]anthracene	1300	ug/Kg		1000	5600	11000
SA-CB6	8270D	50-32-8	Benzo[a]pyrene	**1300**	ug/Kg		1000	1000	1100
SA-CB6	8270D	205-99-2	Benzo[b]fluoranthene	2000	ug/Kg		1000	5600	11000
SA-CB6	8270D	191-24-2	Benzo[g,h,i]perylene	810	ug/Kg		100000	500000	1000000
SA-CB6	8270D	207-08-9	Benzo[k]fluoranthene	670	ug/Kg		800	56000	110000
SA-CB6	8270D	218-01-9	Chrysene	1700	ug/Kg		1000	56000	110000
SA-CB6	8270D	53-70-3	Dibenz(a,h)anthracene	280	ug/Kg		330	560	1100
SA-CB6	8270D	206-44-0	Fluoranthene	2600	ug/Kg		100000	500000	1000000
SA-CB6	8270D	86-73-7	Fluorene	150	ug/Kg	J	30000	500000	1000000
SA-CB6	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	880	ug/Kg		500	5600	11000
SA-CB6	8270D	91-20-3	Naphthalene	160	ug/Kg	J	12000	500000	1000000
SA-CB6	8270D	85-01-8	Phenanthrene	1700	ug/Kg		100000	500000	1000000
SA-CB6	8270D	129-00-0	Pyrene	2400	ug/Kg		100000	500000	1000000
SA-CB7	8270D	83-32-9	Acenaphthene	95	ug/Kg	J	20000	500000	1000000
SA-CB7	8270D	208-96-8	Acenaphthylene	420	ug/Kg		100000	500000	1000000
SA-CB7	8270D	120-12-7	Anthracene	730	ug/Kg		100000	500000	1000000
SA-CB7	8270D	56-55-3	Benzo[a]anthracene	3200	ug/Kg		1000	5600	11000
SA-CB7	8270D	50-32-8	Benzo[a]pyrene	**3100**	ug/Kg		1000	1000	1100
SA-CB7	8270D	205-99-2	Benzo[b]fluoranthene	4700	ug/Kg		1000	5600	11000
SA-CB7	8270D	191-24-2	Benzo[g,h,i]perylene	1600	ug/Kg		100000	500000	1000000
SA-CB7	8270D	207-08-9	Benzo[k]fluoranthene	1500	ug/Kg		800	56000	110000
SA-CB7	8270D	218-01-9	Chrysene	3500	ug/Kg		1000	56000	110000
SA-CB7	8270D	53-70-3	Dibenz(a,h)anthracene	630	ug/Kg		330	560	1100
SA-CB7	8270D	206-44-0	Fluoranthene	6000	ug/Kg		100000	500000	1000000
SA-CB7	8270D	86-73-7	Fluorene	250	ug/Kg	J	30000	500000	1000000
SA-CB7	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	2000	ug/Kg		500	5600	11000
SA-CB7	8270D	91-20-3	Naphthalene	150	ug/Kg	J	12000	500000	1000000
SA-CB7	8270D	85-01-8	Phenanthrene	3200	ug/Kg		100000	500000	1000000
SA-CB7	8270D	129-00-0	Pyrene	5500	ug/Kg		100000	500000	1000000
SA-CB8	8270D	83-32-9	Acenaphthene	30	ug/Kg	J	20000	500000	1000000
SA-CB8	8270D	208-96-8	Acenaphthylene	25	ug/Kg	J	100000	500000	1000000
SA-CB8	8270D	120-12-7	Anthracene	73	ug/Kg	J	100000	500000	1000000
SA-CB8	8270D	56-55-3	Benzo[a]anthracene	240	ug/Kg		1000	5600	11000
SA-CB8	8270D	50-32-8	Benzo[a]pyrene	290	ug/Kg		1000	1000	1100
SA-CB8	8270D	205-99-2	Benzo[b]fluoranthene	450	ug/Kg		1000	5600	11000

Table 1

SVOC Excavation Area
Summary of cPAHs in Soil Samples

Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-CB8	8270D	191-24-2	Benzo[g,h,i]perylene	230	ug/Kg	J	100000	500000	1000000
SA-CB8	8270D	207-08-9	Benzo[k]fluoranthene	170	ug/Kg		800	56000	110000
SA-CB8	8270D	218-01-9	Chrysene	270	ug/Kg	J	1000	56000	110000
SA-CB8	8270D	53-70-3	Dibenz(a,h)anthracene	79	ug/Kg		330	560	1100
SA-CB8	8270D	206-44-0	Fluoranthene	310	ug/Kg	J	100000	500000	1000000
SA-CB8	8270D	86-73-7	Fluorene	59	ug/Kg	J	30000	500000	1000000
SA-CB8	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	250	ug/Kg		500	5600	11000
SA-CB8	8270D	91-20-3	Naphthalene	360	ug/Kg	J	12000	500000	1000000
SA-CB8	8270D	85-01-8	Phenanthrene	370	ug/Kg	J	100000	500000	1000000
SA-CB8	8270D	129-00-0	Pyrene	400	ug/Kg	J	100000	500000	1000000
SA-CB9	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-CB9	8270D	208-96-8	Acenaphthylene	ND	ug/Kg		100000	500000	1000000
SA-CB9	8270D	120-12-7	Anthracene	ND	ug/Kg		100000	500000	1000000
SA-CB9	8270D	56-55-3	Benzo[a]anthracene	ND	ug/Kg		1000	5600	11000
SA-CB9	8270D	50-32-8	Benzo[a]pyrene	57	ug/Kg		1000	1000	1100
SA-CB9	8270D	205-99-2	Benzo[b]fluoranthene	98	ug/Kg		1000	5600	11000
SA-CB9	8270D	191-24-2	Benzo[g,h,i]perylene	52	ug/Kg	J	100000	500000	1000000
SA-CB9	8270D	207-08-9	Benzo[k]fluoranthene	32	ug/Kg	J	800	56000	110000
SA-CB9	8270D	218-01-9	Chrysene	72	ug/Kg	J	1000	56000	110000
SA-CB9	8270D	53-70-3	Dibenz(a,h)anthracene	ND	ug/Kg		330	560	1100
SA-CB9	8270D	206-44-0	Fluoranthene	52	ug/Kg	J	100000	500000	1000000
SA-CB9	8270D	86-73-7	Fluorene	ND	ug/Kg		30000	500000	1000000
SA-CB9	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	47	ug/Kg		500	5600	11000
SA-CB9	8270D	91-20-3	Naphthalene	ND	ug/Kg		12000	500000	1000000
SA-CB9	8270D	85-01-8	Phenanthrene	27	ug/Kg	J	100000	500000	1000000
SA-CB9	8270D	129-00-0	Pyrene	69	ug/Kg	J	100000	500000	1000000
SA-SW1	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW1	8270D	208-96-8	Acenaphthylene	ND	ug/Kg		100000	500000	1000000
SA-SW1	8270D	120-12-7	Anthracene	ND	ug/Kg		100000	500000	1000000
SA-SW1	8270D	56-55-3	Benzo[a]anthracene	98	ug/Kg		1000	5600	11000
SA-SW1	8270D	50-32-8	Benzo[a]pyrene	92	ug/Kg		1000	1000	1100
SA-SW1	8270D	205-99-2	Benzo[b]fluoranthene	140	ug/Kg		1000	5600	11000
SA-SW1	8270D	191-24-2	Benzo[g,h,i]perylene	76	ug/Kg	J	100000	500000	1000000
SA-SW1	8270D	207-08-9	Benzo[k]fluoranthene	47	ug/Kg		800	56000	110000
SA-SW1	8270D	218-01-9	Chrysene	140	ug/Kg	J	1000	56000	110000
SA-SW1	8270D	53-70-3	Dibenz(a,h)anthracene	26	ug/Kg	J	330	560	1100
SA-SW1	8270D	206-44-0	Fluoranthene	160	ug/Kg	J	100000	500000	1000000
SA-SW1	8270D	86-73-7	Fluorene	13	ug/Kg	J	30000	500000	1000000
SA-SW1	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	61	ug/Kg		500	5600	11000
SA-SW1	8270D	91-20-3	Naphthalene	78	ug/Kg	J	12000	500000	1000000
SA-SW1	8270D	85-01-8	Phenanthrene	180	ug/Kg	J	100000	500000	1000000
SA-SW1	8270D	129-00-0	Pyrene	170	ug/Kg	J	100000	500000	1000000
SA-SW10	8270D	83-32-9	Acenaphthene	82	ug/Kg	J	20000	500000	1000000
SA-SW10	8270D	208-96-8	Acenaphthylene	42	ug/Kg	J	100000	500000	1000000
SA-SW10	8270D	120-12-7	Anthracene	230	ug/Kg	J	100000	500000	1000000
SA-SW10	8270D	56-55-3	Benzo[a]anthracene	530	ug/Kg		1000	5600	11000
SA-SW10	8270D	50-32-8	Benzo[a]pyrene	610	ug/Kg		1000	1000	1100
SA-SW10	8270D	205-99-2	Benzo[b]fluoranthene	820	ug/Kg		1000	5600	11000
SA-SW10	8270D	191-24-2	Benzo[g,h,i]perylene	390	ug/Kg		100000	500000	1000000
SA-SW10	8270D	207-08-9	Benzo[k]fluoranthene	260	ug/Kg		800	56000	110000
SA-SW10	8270D	218-01-9	Chrysene	640	ug/Kg		1000	56000	110000
SA-SW10	8270D	53-70-3	Dibenz(a,h)anthracene	85	ug/Kg		330	560	1100
SA-SW10	8270D	206-44-0	Fluoranthene	940	ug/Kg		100000	500000	1000000
SA-SW10	8270D	86-73-7	Fluorene	98	ug/Kg	J	30000	500000	1000000
SA-SW10	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	360	ug/Kg		500	5600	11000
SA-SW10	8270D	91-20-3	Naphthalene	140	ug/Kg	J	12000	500000	1000000
SA-SW10	8270D	85-01-8	Phenanthrene	790	ug/Kg		100000	500000	1000000
SA-SW10	8270D	129-00-0	Pyrene	940	ug/Kg		100000	500000	1000000
SA-SW11	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW11	8270D	208-96-8	Acenaphthylene	46	ug/Kg	J	100000	500000	1000000
SA-SW11	8270D	120-12-7	Anthracene	93	ug/Kg	J	100000	500000	1000000
SA-SW11	8270D	56-55-3	Benzo[a]anthracene	370	ug/Kg		1000	5600	11000
SA-SW11	8270D	50-32-8	Benzo[a]pyrene	470	ug/Kg		1000	1000	1100
SA-SW11	8270D	205-99-2	Benzo[b]fluoranthene	690	ug/Kg		1000	5600	11000
SA-SW11	8270D	191-24-2	Benzo[g,h,i]perylene	490	ug/Kg		100000	500000	1000000
SA-SW11	8270D	207-08-9	Benzo[k]fluoranthene	160	ug/Kg		800	56000	110000

Table 1

SVOC Excavation Area
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Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-SW11	8270D	218-01-9	Chrysene	520	ug/Kg		1000	56000	110000
SA-SW11	8270D	53-70-3	Dibenz(a,h)anthracene	210	ug/Kg		330	560	1100
SA-SW11	8270D	206-44-0	Fluoranthene	620	ug/Kg		100000	500000	1000000
SA-SW11	8270D	86-73-7	Fluorene	53	ug/Kg	J	30000	500000	1000000
SA-SW11	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	380	ug/Kg		500	5600	11000
SA-SW11	8270D	91-20-3	Naphthalene	410	ug/Kg		12000	500000	1000000
SA-SW11	8270D	85-01-8	Phenanthrene	540	ug/Kg		100000	500000	1000000
SA-SW11	8270D	129-00-0	Pyrene	560	ug/Kg		100000	500000	1000000
SA-SW12	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW12	8270D	208-96-8	Acenaphthylene	25	ug/Kg	J	100000	500000	1000000
SA-SW12	8270D	120-12-7	Anthracene	70	ug/Kg	J	100000	500000	1000000
SA-SW12	8270D	56-55-3	Benzo[a]anthracene	130	ug/Kg		1000	5600	11000
SA-SW12	8270D	50-32-8	Benzo[a]pyrene	150	ug/Kg		1000	1000	1100
SA-SW12	8270D	205-99-2	Benzo[b]fluoranthene	230	ug/Kg		1000	5600	11000
SA-SW12	8270D	191-24-2	Benzo[g,h,i]perylene	230	ug/Kg	J	100000	500000	1000000
SA-SW12	8270D	207-08-9	Benzo[k]fluoranthene	68	ug/Kg		800	56000	110000
SA-SW12	8270D	218-01-9	Chrysene	140	ug/Kg	J	1000	56000	110000
SA-SW12	8270D	53-70-3	Dibenz(a,h)anthracene	61	ug/Kg		330	560	1100
SA-SW12	8270D	206-44-0	Fluoranthene	200	ug/Kg	J	100000	500000	1000000
SA-SW12	8270D	86-73-7	Fluorene	34	ug/Kg	J	30000	500000	1000000
SA-SW12	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	160	ug/Kg		500	5600	11000
SA-SW12	8270D	91-20-3	Naphthalene	44	ug/Kg	J	12000	500000	1000000
SA-SW12	8270D	85-01-8	Phenanthrene	170	ug/Kg	J	100000	500000	1000000
SA-SW12	8270D	129-00-0	Pyrene	210	ug/Kg	J	100000	500000	1000000
SA-SW13	8270D	83-32-9	Acenaphthene	69	ug/Kg	J	20000	500000	1000000
SA-SW13	8270D	208-96-8	Acenaphthylene	60	ug/Kg	J	100000	500000	1000000
SA-SW13	8270D	120-12-7	Anthracene	240	ug/Kg	J	100000	500000	1000000
SA-SW13	8270D	56-55-3	Benzo[a]anthracene	790	ug/Kg		1000	5600	11000
SA-SW13	8270D	50-32-8	Benzo[a]pyrene	650	ug/Kg		1000	1000	1100
SA-SW13	8270D	205-99-2	Benzo[b]fluoranthene	1100	ug/Kg		1000	5600	11000
SA-SW13	8270D	191-24-2	Benzo[g,h,i]perylene	290	ug/Kg	J	100000	500000	1000000
SA-SW13	8270D	207-08-9	Benzo[k]fluoranthene	350	ug/Kg		800	56000	110000
SA-SW13	8270D	218-01-9	Chrysene	870	ug/Kg		1000	56000	110000
SA-SW13	8270D	53-70-3	Dibenz(a,h)anthracene	94	ug/Kg		330	560	1100
SA-SW13	8270D	206-44-0	Fluoranthene	1600	ug/Kg		100000	500000	1000000
SA-SW13	8270D	86-73-7	Fluorene	99	ug/Kg	J	30000	500000	1000000
SA-SW13	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	380	ug/Kg		500	5600	11000
SA-SW13	8270D	91-20-3	Naphthalene	100	ug/Kg	J	12000	500000	1000000
SA-SW13	8270D	85-01-8	Phenanthrene	1100	ug/Kg		100000	500000	1000000
SA-SW13	8270D	129-00-0	Pyrene	1200	ug/Kg		100000	500000	1000000
SA-SW14	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW14	8270D	208-96-8	Acenaphthylene	96	ug/Kg	J	100000	500000	1000000
SA-SW14	8270D	120-12-7	Anthracene	240	ug/Kg	J	100000	500000	1000000
SA-SW14	8270D	56-55-3	Benzo[a]anthracene	570	ug/Kg		1000	5600	11000
SA-SW14	8270D	50-32-8	Benzo[a]pyrene	660	ug/Kg		1000	1000	1100
SA-SW14	8270D	205-99-2	Benzo[b]fluoranthene	1200	ug/Kg		1000	5600	11000
SA-SW14	8270D	191-24-2	Benzo[g,h,i]perylene	420	ug/Kg	J	100000	500000	1000000
SA-SW14	8270D	207-08-9	Benzo[k]fluoranthene	420	ug/Kg		800	56000	110000
SA-SW14	8270D	218-01-9	Chrysene	680	ug/Kg		1000	56000	110000
SA-SW14	8270D	53-70-3	Dibenz(a,h)anthracene	110	ug/Kg		330	560	1100
SA-SW14	8270D	206-44-0	Fluoranthene	1000	ug/Kg		100000	500000	1000000
SA-SW14	8270D	86-73-7	Fluorene	71	ug/Kg	J	30000	500000	1000000
SA-SW14	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	500	ug/Kg		500	5600	11000
SA-SW14	8270D	91-20-3	Naphthalene	920	ug/Kg		12000	500000	1000000
SA-SW14	8270D	85-01-8	Phenanthrene	860	ug/Kg		100000	500000	1000000
SA-SW14	8270D	129-00-0	Pyrene	910	ug/Kg		100000	500000	1000000
SA-SW15	8270D	83-32-9	Acenaphthene	42	ug/Kg	J	20000	500000	1000000
SA-SW15	8270D	208-96-8	Acenaphthylene	130	ug/Kg	J	100000	500000	1000000
SA-SW15	8270D	120-12-7	Anthracene	380	ug/Kg	J	100000	500000	1000000
SA-SW15	8270D	56-55-3	Benzo[a]anthracene	1000	ug/Kg		1000	5600	11000
SA-SW15	8270D	50-32-8	Benzo[a]pyrene	890	ug/Kg		1000	1000	1100
SA-SW15	8270D	205-99-2	Benzo[b]fluoranthene	1600	ug/Kg		1000	5600	11000
SA-SW15	8270D	191-24-2	Benzo[g,h,i]perylene	460	ug/Kg		100000	500000	1000000
SA-SW15	8270D	207-08-9	Benzo[k]fluoranthene	540	ug/Kg		800	56000	110000
SA-SW15	8270D	218-01-9	Chrysene	1100	ug/Kg		1000	56000	110000
SA-SW15	8270D	53-70-3	Dibenz(a,h)anthracene	130	ug/Kg		330	560	1100

Table 1

SVOC Excavation Area
Summary of cPAHs in Soil Samples

Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-SW15	8270D	206-44-0	Fluoranthene	2100	ug/Kg		100000	500000	1000000
SA-SW15	8270D	86-73-7	Fluorene	89	ug/Kg	J	30000	500000	1000000
SA-SW15	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	610	ug/Kg		500	5600	11000
SA-SW15	8270D	91-20-3	Naphthalene	890	ug/Kg		12000	500000	1000000
SA-SW15	8270D	85-01-8	Phenanthrene	1400	ug/Kg		100000	500000	1000000
SA-SW15	8270D	129-00-0	Pyrene	1700	ug/Kg		100000	500000	1000000
SA-SW16	8270D	83-32-9	Acenaphthene	47	ug/Kg	J	20000	500000	1000000
SA-SW16	8270D	208-96-8	Acenaphthylene	100	ug/Kg	J	100000	500000	1000000
SA-SW16	8270D	120-12-7	Anthracene	250	ug/Kg	J	100000	500000	1000000
SA-SW16	8270D	56-55-3	Benzo[a]anthracene	1000	ug/Kg		1000	5600	11000
SA-SW16	8270D	50-32-8	Benzo[a]pyrene	**1100**	ug/Kg		1000	1000	1100
SA-SW16	8270D	205-99-2	Benzo[b]fluoranthene	1700	ug/Kg		1000	5600	11000
SA-SW16	8270D	191-24-2	Benzo[g,h,i]perylene	570	ug/Kg		100000	500000	1000000
SA-SW16	8270D	207-08-9	Benzo[k]fluoranthene	590	ug/Kg		800	56000	110000
SA-SW16	8270D	218-01-9	Chrysene	1100	ug/Kg		1000	56000	110000
SA-SW16	8270D	53-70-3	Dibenz(a,h)anthracene	160	ug/Kg		330	560	1100
SA-SW16	8270D	206-44-0	Fluoranthene	1100	ug/Kg		100000	500000	1000000
SA-SW16	8270D	86-73-7	Fluorene	130	ug/Kg	J	30000	500000	1000000
SA-SW16	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	700	ug/Kg		500	5600	11000
SA-SW16	8270D	91-20-3	Naphthalene	830	ug/Kg		12000	500000	1000000
SA-SW16	8270D	85-01-8	Phenanthrene	950	ug/Kg		100000	500000	1000000
SA-SW16	8270D	129-00-0	Pyrene	1000	ug/Kg		100000	500000	1000000
SA-SW17	8270D	83-32-9	Acenaphthene	54	ug/Kg	J	20000	500000	1000000
SA-SW17	8270D	208-96-8	Acenaphthylene	53	ug/Kg	J	100000	500000	1000000
SA-SW17	8270D	120-12-7	Anthracene	110	ug/Kg	J	100000	500000	1000000
SA-SW17	8270D	56-55-3	Benzo[a]anthracene	140	ug/Kg		1000	5600	11000
SA-SW17	8270D	50-32-8	Benzo[a]pyrene	120	ug/Kg		1000	1000	1100
SA-SW17	8270D	205-99-2	Benzo[b]fluoranthene	190	ug/Kg		1000	5600	11000
SA-SW17	8270D	191-24-2	Benzo[g,h,i]perylene	200	ug/Kg	J	100000	500000	1000000
SA-SW17	8270D	207-08-9	Benzo[k]fluoranthene	58	ug/Kg		800	56000	110000
SA-SW17	8270D	218-01-9	Chrysene	190	ug/Kg	J	1000	56000	110000
SA-SW17	8270D	53-70-3	Dibenz(a,h)anthracene	41	ug/Kg	J	330	560	1100
SA-SW17	8270D	206-44-0	Fluoranthene	310	ug/Kg	J	100000	500000	1000000
SA-SW17	8270D	86-73-7	Fluorene	120	ug/Kg	J	30000	500000	1000000
SA-SW17	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	190	ug/Kg		500	5600	11000
SA-SW17	8270D	91-20-3	Naphthalene	750	ug/Kg		12000	500000	1000000
SA-SW17	8270D	85-01-8	Phenanthrene	580	ug/Kg		100000	500000	1000000
SA-SW17	8270D	129-00-0	Pyrene	310	ug/Kg	J	100000	500000	1000000
SA-SW18	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW18	8270D	208-96-8	Acenaphthylene	39	ug/Kg	J	100000	500000	1000000
SA-SW18	8270D	120-12-7	Anthracene	30	ug/Kg	J	100000	500000	1000000
SA-SW18	8270D	56-55-3	Benzo[a]anthracene	ND	ug/Kg		1000	5600	11000
SA-SW18	8270D	50-32-8	Benzo[a]pyrene	62	ug/Kg		1000	1000	1100
SA-SW18	8270D	205-99-2	Benzo[b]fluoranthene	110	ug/Kg		1000	5600	11000
SA-SW18	8270D	191-24-2	Benzo[g,h,i]perylene	150	ug/Kg	J	100000	500000	1000000
SA-SW18	8270D	207-08-9	Benzo[k]fluoranthene	32	ug/Kg	J	800	56000	110000
SA-SW18	8270D	218-01-9	Chrysene	95	ug/Kg	J	1000	56000	110000
SA-SW18	8270D	53-70-3	Dibenz(a,h)anthracene	36	ug/Kg	J	330	560	1100
SA-SW18	8270D	206-44-0	Fluoranthene	140	ug/Kg	J	100000	500000	1000000
SA-SW18	8270D	86-73-7	Fluorene	12	ug/Kg	J	30000	500000	1000000
SA-SW18	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	90	ug/Kg		500	5600	11000
SA-SW18	8270D	91-20-3	Naphthalene	85	ug/Kg	J	12000	500000	1000000
SA-SW18	8270D	85-01-8	Phenanthrene	180	ug/Kg	J	100000	500000	1000000
SA-SW18	8270D	129-00-0	Pyrene	130	ug/Kg	J	100000	500000	1000000
SA-SW2	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW2	8270D	208-96-8	Acenaphthylene	30	ug/Kg	J	100000	500000	1000000
SA-SW2	8270D	120-12-7	Anthracene	30	ug/Kg	J	100000	500000	1000000
SA-SW2	8270D	56-55-3	Benzo[a]anthracene	ND	ug/Kg		1000	5600	11000
SA-SW2	8270D	50-32-8	Benzo[a]pyrene	320	ug/Kg		1000	1000	1100
SA-SW2	8270D	205-99-2	Benzo[b]fluoranthene	ND	ug/Kg		1000	5600	11000
SA-SW2	8270D	191-24-2	Benzo[g,h,i]perylene	140	ug/Kg	J	100000	500000	1000000
SA-SW2	8270D	207-08-9	Benzo[k]fluoranthene	ND	ug/Kg		800	56000	110000
SA-SW2	8270D	218-01-9	Chrysene	390	ug/Kg	J	1000	56000	110000
SA-SW2	8270D	53-70-3	Dibenz(a,h)anthracene	ND	ug/Kg		330	560	1100
SA-SW2	8270D	206-44-0	Fluoranthene	67	ug/Kg	J	100000	500000	1000000
SA-SW2	8270D	86-73-7	Fluorene	31	ug/Kg	J	30000	500000	1000000

Table 1

SVOC Excavation Area
Summary of cPAHs in Soil Samples

Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-SW2	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	ND	ug/Kg		500	5600	11000
SA-SW2	8270D	91-20-3	Naphthalene	110	ug/Kg	J	12000	500000	1000000
SA-SW2	8270D	85-01-8	Phenanthrene	180	ug/Kg	J	100000	500000	1000000
SA-SW2	8270D	129-00-0	Pyrene	140	ug/Kg	J	100000	500000	1000000
SA-SW3	8270D	83-32-9	Acenaphthene	94	ug/Kg	J	20000	500000	1000000
SA-SW3	8270D	208-96-8	Acenaphthylene	28	ug/Kg	J	100000	500000	1000000
SA-SW3	8270D	120-12-7	Anthracene	290	ug/Kg	J	100000	500000	1000000
SA-SW3	8270D	56-55-3	Benzo[a]anthracene	560	ug/Kg		1000	5600	11000
SA-SW3	8270D	50-32-8	Benzo[a]pyrene	440	ug/Kg		1000	1000	1100
SA-SW3	8270D	205-99-2	Benzo[b]fluoranthene	660	ug/Kg		1000	5600	11000
SA-SW3	8270D	191-24-2	Benzo[g,h,i]perylene	340	ug/Kg	J	100000	500000	1000000
SA-SW3	8270D	207-08-9	Benzo[k]fluoranthene	250	ug/Kg		800	56000	110000
SA-SW3	8270D	218-01-9	Chrysene	590	ug/Kg	J	1000	56000	110000
SA-SW3	8270D	53-70-3	Dibenz(a,h)anthracene	130	ug/Kg		330	560	1100
SA-SW3	8270D	206-44-0	Fluoranthene	910	ug/Kg		100000	500000	1000000
SA-SW3	8270D	86-73-7	Fluorene	160	ug/Kg	J	30000	500000	1000000
SA-SW3	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	350	ug/Kg		500	5600	11000
SA-SW3	8270D	91-20-3	Naphthalene	160	ug/Kg	J	12000	500000	1000000
SA-SW3	8270D	85-01-8	Phenanthrene	1200	ug/Kg		100000	500000	1000000
SA-SW3	8270D	129-00-0	Pyrene	880	ug/Kg		100000	500000	1000000
SA-SW4	8270D	83-32-9	Acenaphthene	100	ug/Kg	J	20000	500000	1000000
SA-SW4	8270D	208-96-8	Acenaphthylene	100	ug/Kg	J	100000	500000	1000000
SA-SW4	8270D	120-12-7	Anthracene	320	ug/Kg	J	100000	500000	1000000
SA-SW4	8270D	56-55-3	Benzo[a]anthracene	1800	ug/Kg		1000	5600	11000
SA-SW4	8270D	50-32-8	Benzo[a]pyrene	**2300**	ug/Kg		1000	1000	1100
SA-SW4	8270D	205-99-2	Benzo[b]fluoranthene	2400	ug/Kg		1000	5600	11000
SA-SW4	8270D	191-24-2	Benzo[g,h,i]perylene	2000	ug/Kg		100000	500000	1000000
SA-SW4	8270D	207-08-9	Benzo[k]fluoranthene	760	ug/Kg		800	56000	110000
SA-SW4	8270D	218-01-9	Chrysene	1800	ug/Kg		1000	56000	110000
SA-SW4	8270D	53-70-3	Dibenz(a,h)anthracene	1100	ug/Kg		330	560	1100
SA-SW4	8270D	206-44-0	Fluoranthene	2200	ug/Kg		100000	500000	1000000
SA-SW4	8270D	86-73-7	Fluorene	120	ug/Kg	J	30000	500000	1000000
SA-SW4	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	1500	ug/Kg		500	5600	11000
SA-SW4	8270D	91-20-3	Naphthalene	210	ug/Kg	J	12000	500000	1000000
SA-SW4	8270D	85-01-8	Phenanthrene	1300	ug/Kg		100000	500000	1000000
SA-SW4	8270D	129-00-0	Pyrene	2200	ug/Kg		100000	500000	1000000
SA-SW5	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW5	8270D	208-96-8	Acenaphthylene	21	ug/Kg	J	100000	500000	1000000
SA-SW5	8270D	120-12-7	Anthracene	44	ug/Kg	J	100000	500000	1000000
SA-SW5	8270D	56-55-3	Benzo[a]anthracene	220	ug/Kg		1000	5600	11000
SA-SW5	8270D	50-32-8	Benzo[a]pyrene	240	ug/Kg		1000	1000	1100
SA-SW5	8270D	205-99-2	Benzo[b]fluoranthene	360	ug/Kg		1000	5600	11000
SA-SW5	8270D	191-24-2	Benzo[g,h,i]perylene	220	ug/Kg	J	100000	500000	1000000
SA-SW5	8270D	207-08-9	Benzo[k]fluoranthene	140	ug/Kg		800	56000	110000
SA-SW5	8270D	218-01-9	Chrysene	250	ug/Kg	J	1000	56000	110000
SA-SW5	8270D	53-70-3	Dibenz(a,h)anthracene	65	ug/Kg		330	560	1100
SA-SW5	8270D	206-44-0	Fluoranthene	320	ug/Kg	J	100000	500000	1000000
SA-SW5	8270D	86-73-7	Fluorene	12	ug/Kg	J	30000	500000	1000000
SA-SW5	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	210	ug/Kg		500	5600	11000
SA-SW5	8270D	91-20-3	Naphthalene	28	ug/Kg	J	12000	500000	1000000
SA-SW5	8270D	85-01-8	Phenanthrene	160	ug/Kg	J	100000	500000	1000000
SA-SW5	8270D	129-00-0	Pyrene	360	ug/Kg		100000	500000	1000000
SA-SW6	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW6	8270D	208-96-8	Acenaphthylene	77	ug/Kg	J	100000	500000	1000000
SA-SW6	8270D	120-12-7	Anthracene	110	ug/Kg	J	100000	500000	1000000
SA-SW6	8270D	56-55-3	Benzo[a]anthracene	410	ug/Kg		1000	5600	11000
SA-SW6	8270D	50-32-8	Benzo[a]pyrene	450	ug/Kg		1000	1000	1100
SA-SW6	8270D	205-99-2	Benzo[b]fluoranthene	650	ug/Kg		1000	5600	11000
SA-SW6	8270D	191-24-2	Benzo[g,h,i]perylene	420	ug/Kg		100000	500000	1000000
SA-SW6	8270D	207-08-9	Benzo[k]fluoranthene	200	ug/Kg		800	56000	110000
SA-SW6	8270D	218-01-9	Chrysene	470	ug/Kg		1000	56000	110000
SA-SW6	8270D	53-70-3	Dibenz(a,h)anthracene	130	ug/Kg		330	560	1100
SA-SW6	8270D	206-44-0	Fluoranthene	500	ug/Kg		100000	500000	1000000
SA-SW6	8270D	86-73-7	Fluorene	27	ug/Kg	J	30000	500000	1000000
SA-SW6	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	350	ug/Kg		500	5600	11000
SA-SW6	8270D	91-20-3	Naphthalene	220	ug/Kg	J	12000	500000	1000000

Table 1

SVOC Excavation Area
Summary of cPAHs in Soil Samples

Client Sample ID	Analysis Method	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
SA-SW6	8270D	85-01-8	Phenanthrene	370	ug/Kg	J	100000	500000	1000000
SA-SW6	8270D	129-00-0	Pyrene	630	ug/Kg		100000	500000	1000000
SA-SW7	8270D	83-32-9	Acenaphthene	49	ug/Kg	J	20000	500000	1000000
SA-SW7	8270D	208-96-8	Acenaphthylene	110	ug/Kg	J	100000	500000	1000000
SA-SW7	8270D	120-12-7	Anthracene	180	ug/Kg	J	100000	500000	1000000
SA-SW7	8270D	56-55-3	Benzo[a]anthracene	740	ug/Kg		1000	5600	11000
SA-SW7	8270D	50-32-8	Benzo[a]pyrene	790	ug/Kg		1000	1000	1100
SA-SW7	8270D	205-99-2	Benzo[b]fluoranthene	1100	ug/Kg		1000	5600	11000
SA-SW7	8270D	191-24-2	Benzo[g,h,i]perylene	700	ug/Kg		100000	500000	1000000
SA-SW7	8270D	207-08-9	Benzo[k]fluoranthene	370	ug/Kg		800	56000	110000
SA-SW7	8270D	218-01-9	Chrysene	860	ug/Kg		1000	56000	110000
SA-SW7	8270D	53-70-3	Dibenz(a,h)anthracene	230	ug/Kg		330	560	1100
SA-SW7	8270D	206-44-0	Fluoranthene	1300	ug/Kg		100000	500000	1000000
SA-SW7	8270D	86-73-7	Fluorene	73	ug/Kg	J	30000	500000	1000000
SA-SW7	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	660	ug/Kg		500	5600	11000
SA-SW7	8270D	91-20-3	Naphthalene	140	ug/Kg	J	12000	500000	1000000
SA-SW7	8270D	85-01-8	Phenanthrene	770	ug/Kg		100000	500000	1000000
SA-SW7	8270D	129-00-0	Pyrene	1200	ug/Kg		100000	500000	1000000
SA-SW8	8270D	83-32-9	Acenaphthene	43	ug/Kg	J	20000	500000	1000000
SA-SW8	8270D	208-96-8	Acenaphthylene	250	ug/Kg	J	100000	500000	1000000
SA-SW8	8270D	120-12-7	Anthracene	190	ug/Kg	J	100000	500000	1000000
SA-SW8	8270D	56-55-3	Benzo[a]anthracene	750	ug/Kg		1000	5600	11000
SA-SW8	8270D	50-32-8	Benzo[a]pyrene	740	ug/Kg		1000	1000	1100
SA-SW8	8270D	205-99-2	Benzo[b]fluoranthene	1300	ug/Kg		1000	5600	11000
SA-SW8	8270D	191-24-2	Benzo[g,h,i]perylene	410	ug/Kg		100000	500000	1000000
SA-SW8	8270D	207-08-9	Benzo[k]fluoranthene	400	ug/Kg		800	56000	110000
SA-SW8	8270D	218-01-9	Chrysene	900	ug/Kg		1000	56000	110000
SA-SW8	8270D	53-70-3	Dibenz(a,h)anthracene	120	ug/Kg		330	560	1100
SA-SW8	8270D	206-44-0	Fluoranthene	2100	ug/Kg		100000	500000	1000000
SA-SW8	8270D	86-73-7	Fluorene	130	ug/Kg	J	30000	500000	1000000
SA-SW8	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	530	ug/Kg		500	5600	11000
SA-SW8	8270D	91-20-3	Naphthalene	790	ug/Kg		12000	500000	1000000
SA-SW8	8270D	85-01-8	Phenanthrene	1300	ug/Kg		100000	500000	1000000
SA-SW8	8270D	129-00-0	Pyrene	1400	ug/Kg		100000	500000	1000000
SA-SW9	8270D	83-32-9	Acenaphthene	ND	ug/Kg		20000	500000	1000000
SA-SW9	8270D	208-96-8	Acenaphthylene	77	ug/Kg	J	100000	500000	1000000
SA-SW9	8270D	120-12-7	Anthracene	90	ug/Kg	J	100000	500000	1000000
SA-SW9	8270D	56-55-3	Benzo[a]anthracene	370	ug/Kg		1000	5600	11000
SA-SW9	8270D	50-32-8	Benzo[a]pyrene	380	ug/Kg		1000	1000	1100
SA-SW9	8270D	205-99-2	Benzo[b]fluoranthene	610	ug/Kg		1000	5600	11000
SA-SW9	8270D	191-24-2	Benzo[g,h,i]perylene	260	ug/Kg	J	100000	500000	1000000
SA-SW9	8270D	207-08-9	Benzo[k]fluoranthene	200	ug/Kg		800	56000	110000
SA-SW9	8270D	218-01-9	Chrysene	510	ug/Kg		1000	56000	110000
SA-SW9	8270D	53-70-3	Dibenz(a,h)anthracene	69	ug/Kg		330	560	1100
SA-SW9	8270D	206-44-0	Fluoranthene	820	ug/Kg		100000	500000	1000000
SA-SW9	8270D	86-73-7	Fluorene	46	ug/Kg	J	30000	500000	1000000
SA-SW9	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	280	ug/Kg		500	5600	11000
SA-SW9	8270D	91-20-3	Naphthalene	73	ug/Kg	J	12000	500000	1000000
SA-SW9	8270D	85-01-8	Phenanthrene	580	ug/Kg		100000	500000	1000000
SA-SW9	8270D	129-00-0	Pyrene	680	ug/Kg		100000	500000	1000000

Table 2

GCM-1 Excavation Area
Summary of Metals in Soil Samples

Client Sample ID	Analysis M	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
GCM1-CB1-5.0	6010C	7440-38-2	Arsenic	8.7	mg/Kg		13	16	16
GCM1-CB1-5.0	6010C	7440-39-3	Barium	57	mg/Kg		350	400	10000
GCM1-CB1-5.0	6010C	7440-43-9	Cadmium	0.49	mg/Kg	J	2.5	9.3	60
GCM1-CB1-5.0	6010C	18540-29-9	Chromium	14.7	mg/Kg		1	400	800
GCM1-CB1-5.0	7471B	7439-97-6	Mercury	0.033	mg/Kg	J	0.18	2.8	5.7
GCM1-CB1-5.0	6010C	7439-92-1	Lead	13.5	mg/Kg		63	1000	3900
GCM1-CB1-5.0	6010C	7782-49-2	Selenium	0.57	mg/Kg	J	3.9	1500	6800
GCM1-CB2-5.0	6010C	7440-38-2	Arsenic	8.6	mg/Kg		13	16	16
GCM1-CB2-5.0	6010C	7440-39-3	Barium	73.2	mg/Kg		350	400	10000
GCM1-CB2-5.0	6010C	7440-43-9	Cadmium	0.34	mg/Kg	J	2.5	9.3	60
GCM1-CB2-5.0	6010C	18540-29-9	Chromium	16.4	mg/Kg		1	400	800
GCM1-CB2-5.0	7471B	7439-97-6	Mercury	0.031	mg/Kg	J	0.18	2.8	5.7
GCM1-CB2-5.0	6010C	7439-92-1	Lead	11.9	mg/Kg		63	1000	3900
GCM1-SW1-1.5-2.0	6010C	7440-38-2	Arsenic	18.2	mg/Kg		13	16	16
GCM1-SW1-1.5-2.0	6010C	7440-39-3	Barium	205	mg/Kg		350	400	10000
GCM1-SW1-1.5-2.0	6010C	7440-43-9	Cadmium	0.87	mg/Kg		2.5	9.3	60
GCM1-SW1-1.5-2.0	6010C	18540-29-9	Chromium	14.3	mg/Kg		1	400	800
GCM1-SW1-1.5-2.0	7471B	7439-97-6	Mercury	0.23	mg/Kg		0.18	2.8	5.7
GCM1-SW1-1.5-2.0	6010C	7439-92-1	Lead	189	mg/Kg		63	1000	3900
GCM1-SW1-1.5-2.0	6010C	7782-49-2	Selenium	2.1	mg/Kg		3.9	1500	6800
GCM1-SW2-2.5-3.0	6010C	7440-38-2	Arsenic	28.9	mg/Kg		13	16	16
GCM1-SW2-2.5-3.0	6010C	7440-39-3	Barium	412	mg/Kg		350	400	10000
GCM1-SW2-2.5-3.0	6010C	7440-43-9	Cadmium	6	mg/Kg		2.5	9.3	60
GCM1-SW2-2.5-3.0	6010C	18540-29-9	Chromium	21.6	mg/Kg		1	400	800
GCM1-SW2-2.5-3.0	7471B	7439-97-6	Mercury	0.29	mg/Kg		0.18	2.8	5.7
GCM1-SW2-2.5-3.0	6010C	7439-92-1	Lead	887	mg/Kg		63	1000	3900
GCM1-SW2-2.5-3.0	6010C	7782-49-2	Selenium	2.5	mg/Kg	J	3.9	1500	6800
GCM1-SW2-2.5-3.0	6010C	7440-22-4	Silver	0.12	mg/Kg	J	2	1500	6800
GCM1-SW3-1.5-2.0	6010C	7440-38-2	Arsenic	65.6	mg/Kg		13	16	16
GCM1-SW3-1.5-2.0	6010C	7440-39-3	Barium	244	mg/Kg		350	400	10000
GCM1-SW3-1.5-2.0	6010C	7440-43-9	Cadmium	0.83	mg/Kg		2.5	9.3	60
GCM1-SW3-1.5-2.0	6010C	18540-29-9	Chromium	14.9	mg/Kg		1	400	800
GCM1-SW3-1.5-2.0	7471B	7439-97-6	Mercury	0.73	mg/Kg		0.18	2.8	5.7
GCM1-SW3-1.5-2.0	6010C	7439-92-1	Lead	289	mg/Kg		63	1000	3900
GCM1-SW3-1.5-2.0	6010C	7782-49-2	Selenium	3	mg/Kg		3.9	1500	6800
GCM1-SW3-1.5-2.0	6010C	7440-22-4	Silver	0.64	mg/Kg	J	2	1500	6800
GCM1-SW4-1.5-2.0	6010C	7440-38-2	Arsenic	43.2	mg/Kg		13	16	16
GCM1-SW4-1.5-2.0	6010C	7440-39-3	Barium	409	mg/Kg		350	400	10000
GCM1-SW4-1.5-2.0	6010C	7440-43-9	Cadmium	1.2	mg/Kg		2.5	9.3	60
GCM1-SW4-1.5-2.0	6010C	18540-29-9	Chromium	15.4	mg/Kg		1	400	800
GCM1-SW4-1.5-2.0	7471B	7439-97-6	Mercury	0.4	mg/Kg		0.18	2.8	5.7
GCM1-SW4-1.5-2.0	6010C	7439-92-1	Lead	274	mg/Kg		63	1000	3900
GCM1-SW4-1.5-2.0	6010C	7782-49-2	Selenium	1.7	mg/Kg	J	3.9	1500	6800

1 Meets Unrestricted Use
2 Meets Commercial Use
3 Meets Industrial Use
4 Exceeds Industrial Use

Table 3

GCM-1 Excavation Area
Summary of VOCs in Soil Samples

Client Sample ID	Analysis M	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
GCM1-SW2-2.5-3.0	8260C	110-82-7	Cyclohexane	260	ug/Kg	J	#N/A	#N/A	#N/A
GCM1-SW2-2.5-3.0	8260C	79-20-9	Methyl acetate	1900	ug/Kg	J	#N/A	#N/A	#N/A
GCM1-SW2-2.5-3.0	8260C	108-87-2	Methylcyclohexane	360	ug/Kg	J	#N/A	#N/A	#N/A
GCM1-SW3-1.5-2.0	8260C	110-82-7	Cyclohexane	250	ug/Kg	J	#N/A	#N/A	#N/A
GCM1-SW3-1.5-2.0	8260C	100-41-4	Ethylbenzene	410	ug/Kg	J	1000	390000	780000
GCM1-SW3-1.5-2.0	8260C	98-82-8	Isopropylbenzene	500	ug/Kg	J	#N/A	#N/A	#N/A
GCM1-SW3-1.5-2.0	8260C	79-20-9	Methyl acetate	2300	ug/Kg	J	#N/A	#N/A	#N/A
GCM1-SW3-1.5-2.0	8260C	1330-20-7	Xylenes, Total	1200	ug/Kg	J	260	500000	1000000
GCM1-SW4-1.5-2.0	8260C	100-41-4	Ethylbenzene	900	ug/Kg	J	1000	390000	780000
GCM1-SW4-1.5-2.0	8260C	108-88-3	Toluene	830	ug/Kg	J	700	500000	1000000
GCM1-SW4-1.5-2.0	8260C	1330-20-7	Xylenes, Total	2400	ug/Kg		260	500000	1000000
GCM1-CB1-5.0	8260C	110-82-7	Cyclohexane	640	ug/Kg		#N/A	#N/A	#N/A
GCM1-CB1-5.0	8260C	108-87-2	Methylcyclohexane	2600	ug/Kg		#N/A	#N/A	#N/A
GCM1-SW1-1.5-2.0	8260C	110-82-7	Cyclohexane	4800	ug/Kg		#N/A	#N/A	#N/A
GCM1-SW1-1.5-2.0	8260C	98-82-8	Isopropylbenzene	5100	ug/Kg		#N/A	#N/A	#N/A
GCM1-SW1-1.5-2.0	8260C	108-87-2	Methylcyclohexane	23000	ug/Kg		#N/A	#N/A	#N/A

1 Meets Unrestricted Use
2 Meets Commercial Use
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4 Exceeds Industrial Use

Table 4

GCM-1 Excavation Area
Summary of SVOCs in Soil Samples

Client Sample ID	Analysis M	CAS	Analyte	Result	Unit	Flag	Unrestricted Use	Commercial Use	Industrial Use
GCM1-CB1-5.0	8270D	91-57-6	2-Methylnaphthalene	7300	ug/Kg		#N/A	#N/A	#N/A
GCM1-CB1-5.0	8270D	83-32-9	Acenaphthene	620	ug/Kg	J	20000	500000	1000000
GCM1-CB1-5.0	8270D	120-12-7	Anthracene	350	ug/Kg	J	100000	500000	1000000
GCM1-CB1-5.0	8270D	132-64-9	Dibenzofuran	320	ug/Kg	J	7000	350000	1000000
GCM1-CB1-5.0	8270D	206-44-0	Fluoranthene	150	ug/Kg	J	100000	500000	1000000
GCM1-CB1-5.0	8270D	86-73-7	Fluorene	970	ug/Kg	J	30000	500000	1000000
GCM1-CB1-5.0	8270D	85-01-8	Phenanthrene	3700	ug/Kg		100000	500000	1000000
GCM1-CB1-5.0	8270D	129-00-0	Pyrene	410	ug/Kg	J	100000	500000	1000000
GCM1-CB2-5.0	8270D	83-32-9	Acenaphthene	320	ug/Kg	J	20000	500000	1000000
GCM1-CB2-5.0	8270D	86-73-7	Fluorene	410	ug/Kg	J	30000	500000	1000000
GCM1-CB2-5.0	8270D	85-01-8	Phenanthrene	1200	ug/Kg		100000	500000	1000000
GCM1-CB2-5.0	8270D	129-00-0	Pyrene	210	ug/Kg	J	100000	500000	1000000
GCM1-SW1-1.5-2.0	8270D	91-57-6	2-Methylnaphthalene	55000	ug/Kg		#N/A	#N/A	#N/A
GCM1-SW1-1.5-2.0	8270D	83-32-9	Acenaphthene	13000	ug/Kg	J	20000	500000	1000000
GCM1-SW1-1.5-2.0	8270D	206-44-0	Fluoranthene	7700	ug/Kg	J	100000	500000	1000000
GCM1-SW1-1.5-2.0	8270D	86-73-7	Fluorene	11000	ug/Kg	J	30000	500000	1000000
GCM1-SW1-1.5-2.0	8270D	85-01-8	Phenanthrene	20000	ug/Kg	J	100000	500000	1000000
GCM1-SW1-1.5-2.0	8270D	129-00-0	Pyrene	11000	ug/Kg	J	100000	500000	1000000
GCM1-SW2-2.5-3.0	8270D	83-32-9	Acenaphthene	7500	ug/Kg		20000	500000	1000000
GCM1-SW2-2.5-3.0	8270D	120-12-7	Anthracene	3800	ug/Kg		100000	500000	1000000
GCM1-SW2-2.5-3.0	8270D	56-55-3	Benzo[a]anthracene	2200	ug/Kg	J	1000	5600	11000
GCM1-SW2-2.5-3.0	8270D	50-32-8	Benzo[a]pyrene	1800	ug/Kg	J	1000	1000	1100
GCM1-SW2-2.5-3.0	8270D	205-99-2	Benzo[b]fluoranthene	2300	ug/Kg	J	1000	5600	11000
GCM1-SW2-2.5-3.0	8270D	191-24-2	Benzo[g,h,i]perylene	1300	ug/Kg	J	100000	500000	1000000
GCM1-SW2-2.5-3.0	8270D	207-08-9	Benzo[k]fluoranthene	850	ug/Kg	J	800	56000	110000
GCM1-SW2-2.5-3.0	8270D	218-01-9	Chrysene	2400	ug/Kg	J	1000	56000	110000
GCM1-SW2-2.5-3.0	8270D	206-44-0	Fluoranthene	4800	ug/Kg		100000	500000	1000000
GCM1-SW2-2.5-3.0	8270D	86-73-7	Fluorene	10000	ug/Kg		30000	500000	1000000
GCM1-SW2-2.5-3.0	8270D	193-39-5	Indeno[1,2,3-cd]pyrene	1100	ug/Kg	J	500	5600	11000
GCM1-SW2-2.5-3.0	8270D	85-01-8	Phenanthrene	32000	ug/Kg		100000	500000	1000000
GCM1-SW2-2.5-3.0	8270D	129-00-0	Pyrene	7500	ug/Kg		100000	500000	1000000
GCM1-SW3-1.5-2.0	8270D	83-32-9	Acenaphthene	13000	ug/Kg		20000	500000	1000000
GCM1-SW3-1.5-2.0	8270D	120-12-7	Anthracene	8500	ug/Kg		100000	500000	1000000
GCM1-SW3-1.5-2.0	8270D	56-55-3	Benzo[a]anthracene	890	ug/Kg	J	1000	5600	11000
GCM1-SW3-1.5-2.0	8270D	191-24-2	Benzo[g,h,i]perylene	460	ug/Kg	J	100000	500000	1000000
GCM1-SW3-1.5-2.0	8270D	218-01-9	Chrysene	1800	ug/Kg	J	1000	56000	110000
GCM1-SW3-1.5-2.0	8270D	132-64-9	Dibenzofuran	6100	ug/Kg		7000	350000	1000000
GCM1-SW3-1.5-2.0	8270D	206-44-0	Fluoranthene	2300	ug/Kg	J	100000	500000	1000000
GCM1-SW3-1.5-2.0	8270D	86-73-7	Fluorene	19000	ug/Kg		30000	500000	1000000
GCM1-SW3-1.5-2.0	8270D	85-01-8	Phenanthrene	54000	ug/Kg		100000	500000	1000000
GCM1-SW3-1.5-2.0	8270D	129-00-0	Pyrene	7200	ug/Kg		100000	500000	1000000
GCM1-SW4-1.5-2.0	8270D	83-32-9	Acenaphthene	28000	ug/Kg	J	20000	500000	1000000
GCM1-SW4-1.5-2.0	8270D	120-12-7	Anthracene	15000	ug/Kg	J	100000	500000	1000000
GCM1-SW4-1.5-2.0	8270D	56-55-3	Benzo[a]anthracene	6100	ug/Kg	J	1000	5600	11000
GCM1-SW4-1.5-2.0	8270D	206-44-0	Fluoranthene	17000	ug/Kg	J	100000	500000	1000000
GCM1-SW4-1.5-2.0	8270D	86-73-7	Fluorene	45000	ug/Kg	J	30000	500000	1000000
GCM1-SW4-1.5-2.0	8270D	85-01-8	Phenanthrene	120000	ug/Kg		100000	500000	1000000
GCM1-SW4-1.5-2.0	8270D	129-00-0	Pyrene	23000	ug/Kg	J	100000	500000	1000000

1 Meets Unrestricted Use
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NYSDEC's January 4, 2019 Letter

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, NY 14203-2915
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January 4, 2019

Mr. Richard Egan, PE
Wood Engineering PLC
511 Congress St, Suite 200
Portland, Maine 04101

Former Buffalo Terminal Site OU-2 West
BCP Site C915201C
Draft OU-2 RAWP Addendum Comments

Dear Mr. Egan:

The New York State Department of Environmental Conservation (NYSDEC) has reviewed the draft Remedial Action Work Plan (RAWP) addendum for Operable Unit 2 West (OU-2 West) dated December 19, 2018. A summary of the comments are presented below.

Track 4 Remedial Investigation:

1. The soil analysis plan for the extreme northern part of the parcel to assess if the top one foot of soil meets commercial soil cleanup objectives (SCOs) should include the full suite of analytical parameters per DER 10 requirements, not just PAHs and metals. Please revise the analytical plan to include this requirement.

2. The proposed grid for accessing the gravel cover thickness is too widely spaced. A 50' x 50' grid would better characterize the existing gravel cover thickness. Please increase the gravel cover thickness assessment grid as noted.

3. For the sampling and analytical plan for soil below the existing gravel cover area, increase the number of soil samples by five additional samples so as to have a more closely spaced sampling frequency. All sampling to determine if the soil below the gravel cover material meets commercial SCOs must be for the full suite of analytical sampling per DER-10 requirements, not just PAHs and metals. In addition several representative samples of the gravel cover should collected for analysis as the gravel source and any subsequent impacts from ongoing activities since placement is unknown. The analysis for the gravel cover should be the full suite of analytical parameters minus VOCs.

Continued:

If you have any questions regarding the above, please feel free to contact me at 716-851-7220 or by email at eugene.melnyk@dec.ny.gov.

Sincerely,

Eugene W. Melnyk, PE
Project Manager

ec: C. Staniszewski – NYSDEC
S. Farnworth – Wood
P. Neureuter - Krog

NYSDEC's January 4, 2019 Email

Egan, Richard S

From: Melnyk, Eugene W (DEC) <eugene.melnyk@dec.ny.gov>
Sent: Monday, January 07, 2019 4:09 PM
To: Egan, Richard S; Arnie Cubins
Cc: Luttinger, John; Staniszewski, Chad (DEC)
Subject: Follow-up on OU-2 West RAWP addendum questions

Rick:
I conferred with Chad on the following points of our phone conversation;

1. No confirmation sampling will be required if the gravel cover is removed and subgrade is prepared for placement of a one foot thick cover meeting cover requirements.
2. No sampling of the existing soil or cover is required if the existing cover soil material from OU-2 West is to be interred in OU-2 East as part of the ISS or in OU-3 under the site cover.

If you have any questions regarding the above, please contact us.

Sincerely
Gene

Eugene Melnyk, PE
Remediation Engineer, Division of Environmental Remediation

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