WORK PLAN MEMORANDUM

TO: JOHN YENSAN
FROM: DAN FORLASTRO
SUBJECT: FOCUSED SOIL INVESTIGATION – BUFFALO COLOR AREA C
DATE: MAY 2, 2014
CC: A. MADDEN, R. GALLOWAY, T. PERKINS

Introduction

AMEC Environment and Infrastructure, Inc. (AMEC) has prepared this Work Plan for South Buffalo Development LLC (SBD) for a limited soil investigation at the Former Buffalo Color Corporation (BCC) Area C Site (Site). The limited soil investigation will be conducted to investigate two areas of the Site where constituents in shallow soils may be acting as active source areas for volatile organic compounds (VOCs) in groundwater based on recent groundwater quality data. A figure is attached that illustrates total VOC Concentrations in groundwater during a monitoring event completed in the fourth quarter of 2013. There are two areas where total VOC concentrations (predominately chlorobenzene, 1,2,4-trichlorobenzene, and 1,3-dichlorobenzene) are greater than 1,000 micrograms per liter (ug/L). AMEC will oversee excavation of a total of six test pits (TP-1 through TP-6 illustrated on the attached figure) and, should evidence of VOC impact be identified, collect soil samples to evaluate soil quality in these areas relative to the Site related Constituents of Concern (COCs). The following sections describe the methods AMEC will employ during the investigation.

Test Pit Installation and Soil VOC Screening

A total of six test pits will be excavated in the locations illustrated in the attached figure. Test pits TP-1 through TP-4 will be excavated in the vicinity of monitoring well RFI-20. The groundwater sample collected from this well in the fourth quarter of 2013 had a total VOC concentration of 8,261 ug/L; the concentration of chlorobenze was 8,200 ug/L and the concentration of benzene was 61 ug/L. Test pits TP-5 and TP-6 will be located to the northwest (upgradient) of monitoring well RFI-31, which had a total VOC concentration of 1,232 ug/L in the fourth quarter of 2013. The COCs in this sample were reported as follows: 1,2,4-trichlorobenzene 350ug/L, 1,3-dichlorobenzene 730 ug/L, and chlorobenzene 120 ug/L.

It is expected that the test pit activities will not cause ground disturbance that will result in soil or sediment migration from the Site, and each test pit will be backfilled with the excavated materials as soon as the subsurface evaluation is completed, i.e., there will be no stockpiled material for a sustained time period or overnight. However, a supply of silt fence and hay bales will be readily available in the event that erosion controls are required. At each test pit location, topsoil and vegetation will be carefully removed in order not to damage the underlying demarcation fabric, which will be replaced once the test pit is backfilled.

AMEC Environment & Infrastructure, Inc.
800 N. Bell Avenue, Suite 200
Pittsburgh, Pennsylvania
USA 15106
Tel (412) 279-6661
Fax (412) 279-8567
www.amec.com

The test pits will be excavated with a backhoe or small excavator operated by OSC; an AMEC geologist will oversee the operation and visually log and screen the soils for VOCs as the test pits are excavated. A photoionization detector (PID) will be used to screen the work area for VOCs and the work area will be visually monitored for dust. Sustained VOC measurements above 5 ppm at the work area will require ceasing work activities and evaluating the work procedures or modifying PPE for the workers. OSC will have dust control measures available for mobilization, e.g., a water truck, if dust generation becomes excessive. OSC will prepare a Job Hazard Assessment (JHA) for the test pit task to supplement its Health and Safety Plan that has been implemented at the Buffalo Color Sites for remedial activities.

The PID will also be used to screen representative samples of the excavated soil as it is removed from the test pit. Quart size Ziploc bags will be filled with soils from the excavations that exhibit staining, unusual odor or other evidence of potential VOC impact. A headspace analysis (using the PID) will be conducted on each of the samples collected. Should VOCs be detected, the sample with the highest PID reading from each test pit will be submitted for laboratory testing. The analytical methods are discussed below. Saturated soils will not be submitted for laboratory analysis.

Each test pit will be advanced either to the first continuous saturated interval or to the excavator's limit. The excavated soil will be temporarily stockpiled adjacent to the individual test pits. Upon completion of test pit excavation, OSC will apply granular Oxygen Release Compound (ORC-A) at the base of each test pit as was conducted during previous Area C remediation activities. The test pits will then be backfilled with the previously excavated soil and compacted to the extent practical based on the limits of the equipment available. At the discretion of the overseeing AMEC geologist, on-site SBD representative, or on-site Honeywell representative, excavated material deemed unsuitable for return to the excavation as backfill will be sampled for characterization and offsite disposal. Should offsite disposal of excavated material be required, clean soil fill will be imported to complete the test pit backfilling. Once the primary backfilling is completed, the demarcation fabric will be replaced, the topsoil spread, raked, and seeded, and a biodegradable erosion matting will be placed over the disturbed areas. OSC will conduct inspections weekly and after rain events, and perform any necessary repairs to the seeded areas, until vegetation is re-established.

Soil Sampling and Analysis

Representative soil samples will be submitted for laboratory analysis based on the results of the head space screening. The samples will be submitted to the TestAmerica, Inc. Laboratory in Buffalo, New York for the analysis of the following VOCs that have been identified as the COCs for the Site based on the groundwater plume: 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, benzene, and chlorobenzene. The samples will be analyzed by USEPA Method 8260B. A standard turn-around time will be requested for the analysis.

Reporting

Upon receipt of the analytical laboratory report, AMEC will prepare a technical memorandum for SBD that summarizes and evaluates the analytical data as well as any recommendations for additional actions. Test pit logs will also be included in the memorandum.

DRAWN BY: NEL 2-7-2014 APPROVED BY: ELR

LEGEND

PS-04 (1.2) Monitoring Well Location with Total VOC Concentration ug/L

Total VOC Concentrations > 0 to < 10 ug/L (Dashed where inferred)

Total VOC Concentrations > 10 to < 500 ug/L (Dashed where inferred)

Total VOC Concentrations > 500 ug/L (Dashed where inferred)

Property Boundary

TP-1 Proposed Test Pit

RFI-21D NOT SAMPLED OR MEASURED AS PART OF OM&M

RFI-21D (NS)

RFI-20 (8,261.0)

PS-05 (214.1)

PS-06 (0.0)

TP-1

TP-2

TP-3

TP-4

TP-5

TP-6

RFI-31 (1,232.0)

MW-C01 (3.6)

MW-C04 (429.9)

PS-04 (0.0)

LEE STREET

100 0 100

SCALE: 1"=100'

SOUTH BUFFALO DEVELOPMENT
BUFFALO, NEW YORK

Project No.: 3410110843

amec

Environment & Infrastructure - Pittsburgh
800 North Bell Avenue
Carnegie, Pennsylvania 15106

FOURTH QUARTER 2013
GROUNDWATER
MONITORING EVENT
TOTAL VOC CONCENTRATIONS
BUFFALO COLOR AREA - C
Figure: 2

2

P:\PROJECTS\South Buffalo Development\3410090701\CADD\FINAL\GW Monitoring - Qtrly Rpts\Area C 2013.dwg Wed, 30 Apr 2014 - 1:59pm nancy.lagattuta