EA Engineering, P.C. and Its Affiliate
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29 December 2020

Mr. Joshua Haugh
Division of Environmental Remediation
New York State Department of Environmental Conservation
1130 N. Westcott Road
Schenectady, New York 12306-2014

RE: Remedial Investigation/Feasibility Study Letter Work Plan Addendum – FINAL
Phase III Field Investigations
Contract/Work Assignment No: D009806-04
Admiral Cleaners, Watervliet, New York
Site No. 401075

Dear Mr. Haugh:

This Addendum to the Letter Work Plan[1] provides additional detail for the Phase III field investigation activities for the remedial investigation (RI) at the Admiral Cleaners Site (Number [No.] 401075) (Site) in the City of Watervliet, Albany County, New York (Figure 1). EA Engineering, P.C. and its affiliate EA Science and Technology (EA) will complete a supplemental field investigation to sample newly installed bedrock monitoring wells and select overburden groundwater monitoring wells.

Field activities will be completed in accordance with this Addendum and the Letter Work Plan including Attachment A (EA's Generic Field Activities Plan); Attachment B (site-specific Health and Safety Plan [HASP]; and Attachment C (site-specific Quality Assurance Project Plan [QAPP]). Additional tasks and any deviations to the Letter Work Plan,[1] are described in the following sections.

**Remedial Investigation Phase III**

The following is a brief description of the tasks, which are scheduled be completed under Phase III of the RI:

- ***Evaluation of Bedrock Groundwater***—EA will complete one groundwater sampling event of 3 bedrock monitoring wells (installed the week of 30 November 2020) to evaluate groundwater quality with respect to NYSDEC Ambient Water Quality Standards (AWQS). Groundwater samples will be submitted to ALS Environmental and analyzed for target compound list (TCL) volatile organic compounds (VOCs) via United States Environmental Protection Agency (EPA) Method 8260C, TCL SVOCs via EPA Method 8270D, target analyte list (TAL) Metals via EPA Methods 6010C and 7471B (Mercury), pesticides and PCBs via EPA Method 8081B and 8082A, respectively, and emerging contaminants (ECs) PFAS via modified EPA Method 537 and 1,4-dioxane via EPA Method 8270 SIM.

[1] EA. 2018. *Remedial Investigation/Feasibility Study Letter Work Plan.* March

- ***Evaluation of Overburden Groundwater***—EA will complete two sampling events of select overburden monitoring wells. Monitoring wells to be sampled will be those with previous detections of PCE in excess of NYSDEC AWQS. Additionally, EA will attempt to sample MW-13 as it was dry during the previous sampling event. A subset of these wells will be sampled for geochemical parameters, as indicated on **Figure 1**. Geochemical parameters will include major anions via methods ASTM D516, SM 2320B and SM4500, total organic carbon (TOC) via method SM 5310B, and dissolved gasses (methane, ethane, ethene) via EPA Method RSK175. Monitoring wells with previous detections of PCE in excess of NYSDEC AWQS and MW-13 will be sampled for TCL VOCs via EPA Method 8260C, PFAS via EPA Method 537, and 1,4-dioxane via EPA Method 8270 SIM. Overburden monitoring wells will be sampled prior to the Interim Remedial Measure (IRM) Number (No.) 2 and approximately 1 month following IRM No. 2. Sampling for EC will only occur during the event conducted prior to IRM No. 2.

A revised **Table 1** of Attachment C – Quality Assurance Project Plan to the Letter Work Plan[1] is provided with this Addendum. This table is updated to reflect the proposed number of samples and analyses for Phase III as described in this Addendum.

## DECONTAMINATION PROCEDURES AND INVESTIGATION DERIVED WASTE

Non-dedicated equipment and tools used to collect samples for chemical analysis will be decontaminated prior to and between each sample interval in accordance with the Letter Work Plan. Investigation derived waste including personal protective equipment, solids and liquids generated during the well sampling activities will be stored, handled, and disposed of in accordance with the Letter Work Plan.[1]

## HEALTH AND SAFETY CONSIDERATIONS

For locations in the public right-of-way on 19th Street and the alleyway, traffic will be routed around the work area with 36-in. safety cones.

Please feel free to contact me if you have any questions or concerns at (315) 565-6553 or (860) 309-3837.

Sincerely yours,

EA SCIENCE AND TECHNOLOGY

Emily Cummings

Emily Cummings, EIT
Deputy Project Manager

EA ENGINEERING, P.C.

Donald F. Conan, P.E., P.G.
Program Manager

# Figures

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| 401075-MW-07R | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | **1500 D** |
| PCE | **11000 D** |
| TCE | **1600 D** |
| VC | (< 27) U |

| 401075-MW-02 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | 2.1 |
| PCE | **28** |
| TCE | 1.4 |
| VC | (< 0.13) U |

| 401075-MW-07 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | **160** |
| PCE | **23** |
| TCE | **29** |
| VC | (< 0.13) U |

| 401075-MW-10 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | 2 |
| PCE | 2.8 |
| TCE | 0.39 J |
| VC | (< 0.13) U |

| 401075-MW-11 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | 0.31 J |
| PCE | 0.54 J |
| TCE | (< 0.2) U |
| VC | (< 0.13) U |

| 401075-MW-09 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | **5.6** |
| PCE | **32** |
| TCE | 3.4 |
| VC | (< 0.13) U |

| 401075-MW-03 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | 3.9 |
| PCE | **8.9** |
| TCE | 1.5 |
| VC | (< 0.13) U |

| 401075-MW-01 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | **110 D** |
| PCE | **440 D** |
| TCE | **77 D** |
| VC | (< 1.3) U |

| 401075-MW-04 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | **69** |
| PCE | **9.4** |
| TCE | 2.7 |
| VC | (< 0.13) U |

| 401075-MW-05 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | **740 D** |
| PCE | **51 D** |
| TCE | **26 D** |
| VC | **2.9 JD** |

| 401075-MW-08 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | 0.36 J |
| PCE | 1.5 |
| TCE | (< 0.2) U |
| VC | (< 0.13) U |

| 401075-MW-12 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | (< 0.15) U |
| PCE | 1.9 |
| TCE | (< 0.2) U |
| VC | (< 0.13) U |

| 401075-MW-15 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | (< 0.15) U |
| PCE | 1.8 |
| TCE | (< 0.2) U |
| VC | (< 0.13) U |
| Chloroform | **12** |

| 401075-MW-06 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | **16000 D** |
| PCE | (< 27) U |
| TCE | **180 D** |
| VC | **41 JD** |
| 1,1-DCE | **22 JD** |
| Trans-1,2-DCE | **27 JD** |

| 401075-MW-17 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | (< 0.15) U |
| PCE | (< 0.27) U |
| TCE | (< 0.2) U |
| VC | (< 0.13) U |

| 401075-MW-14 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | 0.47 J |
| PCE | 3.5 |
| TCE | (< 0.2) U |
| VC | (< 0.13) U |

| 401075-MW-16 | |
|---|---|
| **Analyte** | **Result (µg/L)** |
| Cis-1,2-DCE | (< 0.15) U |
| PCE | (< 0.27) U |
| TCE | (< 0.2) U |
| VC | (< 0.13) U |

MW-19

MW-20

MW-18

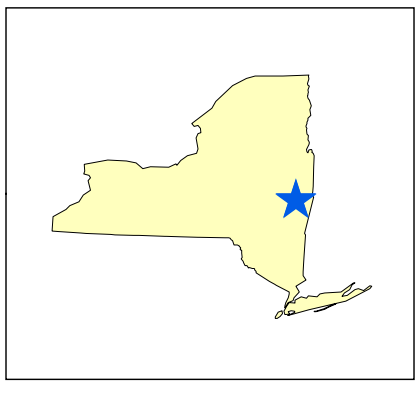
MW-13 (Dry)

19th Street

| Detected Compound | NYSDEC AWQS (µg/L) |
|---|---|
| Cis-1,2-Dichloroethene (Cis-1,2-DCE) | 5 |
| Tetrachloroethene (PCE) | 5 |
| Trichloroethene (TCE) | 5 |
| Vinyl Chloride (VC) | 2 |
| 1,1-Dichloroethene (1,1-DCE) | 5 |
| Trans-1,2-Dichloroethene (Trans-1,2-DCE) | 5 |







0 12.5 25 Feet

N

## Legend

- Phase III Wells to Be Sampled
- Phase III Bedrock Wells (Approx. Location)
- Phase I Monitoring Wells
- Phase II Monitoring Wells
- Admiral Cleaners Site Boundary
- Site Location
- Well Sampled for MNA Parameters

| NOTE: |
|---|
| Bold and shaded values indicate that the analyte w as detected greater than the applicable Guidance Values |
| PFOS = Perfluorooctanesulfonic acid |
| PFOA = Perfluorooctanoic acid |
| J = Result is estimated concentration. |
| µg/L = Microgram(s) per liter |
| ng/L = Nanogram(s) per liter |

**Figure 1**
**Remedial Investigation Phase III**
**Monitoring Well Sampling Plan**

Admiral Cleaners
Watervliet, Albany County, NY

Map Date: 12/28/2020
Projection: NAD 1983 State Plane New York East FIPS 3101 Feet

NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation

EA

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# Tables

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**Table 1 Soil Vapor Intrusion Evaluation and Remedial Investigation Analytical Program**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **SOIL SAMPLING** | | | | | | | | |
| | **Sample Matrix** | **VOCs by EPA-8260B** | **SVOCs by EPA-8270C** | **PCBs by EPA-8082** | **PEST by EPA-8081** | **TAL Metals by EPA-6010B** | **Percent Moisture** | |
| **SURFACE SOIL/DEBRIS/FLOOR DRAINS (PHASE I Actual)** | | | | | | | | |
| No. of Samples | Surface Soil | 13 | 13 | 13 | 8 | 13 | 13 | Pesticides for surface soil samples only. |
| Field Duplicate | | 1 | 1 | 1 | 1 | 1 | — | |
| Trip Blank/Rinse Blank | | 1 | — | — | — | — | — | |
| Matrix Spike/Matrix Spike Duplicate | | 2 | 2 | 2 | 2 | 2 | — | |
| **Total No. of Analyses** | | **17** | **16** | **16** | **11** | **16** | **13** | |
| **SUBSURFACE SOIL (PHASE I Actual)** | | | | | | | | |
| No. of Samples | Subsurface Soil | 20 | 17 | 17 | 3 | 17 | 20 | |
| Field Duplicate | | 1 | 1 | 1 | 1 | 1 | — | |
| Trip Blank/Rinse Blank | | 1 | — | — | — | — | — | |
| Matrix Spike/Matrix Spike Duplicate | | 2 | 2 | 2 | 2 | 2 | — | |
| **Total No. of Analyses Phase I** | | **24** | **20** | **20** | **6** | **20** | **20** | |
| **SURFACE SOIL (PHASE II)** | | | | | | | | |
| No. of Samples | Subsurface Soil | 8 | 8 | 8 | 8 | 8 | 8 | |
| Field Duplicate | | 1 | 1 | 1 | 1 | 1 | — | |
| Trip Blank/Rinse Blank | | 1 | — | — | — | — | — | |
| Matrix Spike/Matrix Spike Duplicate | | 2 | 2 | 2 | 2 | 2 | — | |
| **Total No. of Analyses Phase II** | | **12** | **11** | **11** | **11** | **11** | **8** | |
| **SUBSURFACE SOIL (PHASE II)** | | | | | | | | |
| No. of Samples | Subsurface Soil | 11 | No Additional Samples | | | | 11 | |
| Field Duplicate | | 1 | — | — | — | — | — | |
| Trip Blank/Rinse Blank | | 1 | — | — | — | — | — | |
| Matrix Spike/Matrix Spike Duplicate | | 2 | — | — | — | — | — | |
| **Total No. of Analyses Phase II** | | **15** | **0** | **0** | **—** | **0** | **11** | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GROUNDWATER SAMPLING** | | | | | | | | | | | | |
| | **Sample Matrix** | **VOCs by EPA-8260B** | **SVOCs by EPA-8270C** | **PCBs by EPA-8082** | **Pesticides by EPA-8081** | **TAL Metals by EPA-6010B** | | **PFCs by EPA 537** | **1, 4-Dioxane by EPA 8270 SIM** | **Major Anions** | **TOC** | **Dissolved Gases** |
| **GROUNDWATER GRAB SAMPLES (PHASE I ACTUAL)** | | | | | | | | | | | | |
| No. of Samples | Groundwater | 5 | | | | | | | | | | |
| Field Duplicate | | 1 | | | | | | | | | | |
| Trip Blank/Rinse Blank | | 1 | | | | | | | | | | |
| Matrix Spike/Matrix Spike Duplicate | | 2 | | | | | | | | | | |
| **Total No. of Analyses Phase I** | | **9** | | | | | | | | | | |
| **GROUNDWATER (PHASE I ACTUAL)** | | | | | | | | | | | | |
| No. of Samples | Groundwater | 6 | 7 | 5 | 5 | 5 | — | — | — | — | — | — |
| Field Duplicate | | 1 | 1 | 1 | 1 | 1 | — | — | — | — | — | — |
| Trip Blank/Rinse Blank | | 2 | — | — | — | — | — | — | — | — | — | — |
| Matrix Spike/Matrix Spike Duplicate | | 2 | 2 | 2 | 2 | 2 | — | — | — | — | — | — |
| **Total No. of Analyses Phase I** | | **11** | **10** | **8** | **8** | **8** | — | — | — | — | — | — |
| **GROUNDWATER (PHASE II)** | | | | | | | | | | | | |
| No. of Samples | Groundwater | 17 | — | — | — | — | — | 6 | 3 | 3 | 3 | 9 |
| Field Duplicate | | 1 | — | — | — | — | — | 1 | 1 | 0 | 0 | 0 |
| Trip Blank/Rinse Blank | | 2 | — | — | — | — | — | 0 | 1 | 0 | 0 | 0 |
| Matrix Spike/Matrix Spike Duplicate | | 2 | — | — | — | — | — | 2 | 2 | 0 | 0 | 0 |
| **Total No. of Analyses Phase II** | | **22** | — | — | — | — | — | **9** | **7** | **3** | **3** | **9** |
| **GROUNDWATER (PHASE III)** | | | | | | | | | | | | |
| No. of Samples | Groundwater | 14 | 3 | 3 | 3 | 3 | — | 8 | 8 | 5 | 5 | 5 |
| Field Duplicate | | 1 | 1 | 1 | 1 | 1 | — | 1 | 1 | 0 | 0 | 0 |
| Trip Blank/Rinse Blank | | 2 | — | — | — | — | — | — | — | 0 | 0 | 0 |
| Matrix Spike/Matrix Spike Duplicate | | 2 | 2 | 2 | 2 | 2 | — | 2 | 2 | 0 | 0 | 0 |
| **Total No. of Analyses Phase III** | | **19** | **6** | **6** | **6** | **6** | — | **11** | **11** | **5** | **5** | **5** |

| | | | |
|---|---|---|---|
| **SOIL VAPOR AND AMBIENT AIR SAMPLING (ROUND I) Nine Structures & Resample as Needed** | | | |
| | **Sample Matrix** | **VOCs by TO-15** | **VOCs by TO-15SIM** |
| Indoor Air | Soil Vapor | 0 | 14+ 9 |
| Sub-slab Air | | 5 + 3 | 0 |
| Outdoor Air | | 0 | 2 + 2 |
| Soil Vapor Point | | 0 | 0 |
| Subtotal No. of Samples | | 8 | 27 |
| Field Duplicate | | 0 | 2 |
| Matrix Spike/Matrix Spike Duplicate | | 0 | 0 |
| **Total No. of Analyses Phase I** | | **8** | **29** |
| **SOIL VAPOR AND AMBIENT AIR SAMPLING (ROUND II) Up to 18 Structures** | | | |
| Indoor Air | Soil Vapor | 0 | 18 |
| Sub slab Air | | 18 | 0 |
| Outdoor Air | | 0 | 3 |
| Soil Vapor Point | | 0 | 0 |
| Subtotal No. of Samples | | 18 | 0 |
| Field Duplicate | | 1 | 2 |
| Matrix Spike/Matrix Spike Duplicate | | 0 | 0 |
| **Total No. of Analyses Phase I** | | **19** | 0 |
| **Total No. of Air Analyses** | | **27** | **23** |

NOTES:

VOC = Volatile organic compounds
SVOC = Semi-volatile organic compounds
PCB = Polychlorinated biphenyls
PEST = Pesticides
PFC = Perfluorinated chemicals
TAL Metals = Target Analyte List metals including mercury by EPA Method 7470A/7471A, and cyanide by EPA Method 9010B
TOC = Total Organic Carbon
SIM = Selected Ion Monitoring
Dash (—) indicates no sample taken
Laboratory quality control samples will be collected at a rate of 1 per 20 samples per matrix
Rinse Blanks are collected one per analysis per field sampling day

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