

# **KEMPEY ENGINEERING**

**Consultants in Environmental Engineering**

1569 East Beecher Hill Road, Owego, New York 13827

(607) 223-4653

Facsimile (607) 223-1591

**VIA ELECTRONIC MAIL @ [Alexander.Klein@dec.ny.gov](mailto:Alexander.Klein@dec.ny.gov)**

June 16, 2023

Revised July 12, 2023

Mr. Alexander Klein  
Project Manager  
New York State Department of Environmental Conservation Central Office  
Division of Environmental Remediation  
625 Broadway  
Albany, New York 12233

Re: Cox Bros, LLC  
Brownfield Site Cleanup Agreement # C152096  
Former Steck and Philbin Site  
Old Northport Road, Kings Park, New York 11754  
Supplemental Remedial Investigation Work Plan (SRIWP)  
Revision Number One

Dear Mr. Klein:

Transmitted herein, for your review and approval in accordance with the requirements of Appendix A, Paragraph D2 of the August 14, 2020, Brownfields Cleanup Agreement and your review comments contained in your May 23, 2023 Disapproval Letter and June 29, 2023 Comment Letter is our Revised Supplemental Remedial Investigation Work Plan (SRIWP) dated July 6, 2023 for the former Steck and Philbin Site located on Old Northport Road, Kings Park, New York 11754.

The Revised Supplemental Remedial Investigation Work Plan (SRIWP) is provided below.

## SECTION 1.0 INTRODUCTION

Kempey Engineering has prepared this SRIWP to document the procedures for the vertical and areal delineation of the Perfluorooctanoic Acid (PFOA), Perfluorooctanesulfonic Acid (PFOS), and 1,4-Dioxane soil contamination of the site and the vertical delineation and sampling of the deep groundwater for PFOA, PFOS, and 1,4-Dioxane contamination. The scope of work is based on the findings of Kempey Engineering's Remedial Investigation Report Revision Number One, dated April 2023, and the NYSDEC's finding in light of the recent issuance of the 2023 *Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1*, and the NYSDEC's issuance of preliminary 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) for PFOA, PFOS and 1,4-Dioxane.

## SECTION 2.0 BACKGROUND

A Preliminary Site Assessment was performed at the site in 1994 by D & B. The site assessment included a soil vapor study, groundwater sampling, and soil sampling. The soil vapor study indicated the presence of VOCs in excess of 1,000 parts per million along the southeastern and southern portions of the site. In

addition, methane was detected at 100% LEL approximately 100-feet east of Monitoring Well Number MW-1. The groundwater samples from the four monitoring wells installed during the Preliminary Site Assessment indicated levels of benzene and toluene above the standard guidance values in Monitoring Well Number MW-3. In addition, the levels of iron, manganese, and sodium were detected above the standard/guidance levels in all of the monitoring wells, antimony, and chromium were detected above standard/guidance levels in Monitoring Well Number MW-1, lead was detected above the standard/guidance level in Monitoring Well Number MW-2 and chromium, and magnesium were detected above the standard/guidance levels in Monitoring Well Number MW-3. The groundwater sampling did not include sampling for PFOA, PFOS, and 1,4-Dioxane. The report indicated that D & B summarized that there does not appear to be significant groundwater contamination as a result of site operations/activities. The soil sampling indicated the presence of PAH and bis(2-ethylhexyl)phthalate, pesticide 4,4-DDE, the above their respective standards/guidance levels and the metals copper, lead, and zinc were above the Eastern USA Background Levels that D & B used for comparison.

A Test Pit Assessment was conducted in 2008 as part of a due diligence assessment, which dug six test pits on the property, construction and demolition debris was encountered from existing ground surface elevation to a minimum depth of 14 feet below ground surface elevation, for TP-1 to 18 feet below ground surface elevation for TP-3, the deepest test pit. Odors were specifically recorded during excavation but the specifics of the odors were not recorded.

A Phase II Environmental Assessment of the site was conducted in 2018-2019 by Apex Environmental. The Phase II Environmental Assessment test pit sampling and groundwater sampling indicated the presences of Per- and Polyfluoroalkyl substances (PFAS), and 1,4-Dioxane throughout the site's groundwater and the presences of PFAS in the soil recovered from the northeastern corner of the site, the northwestern corner of the site, and the southeastern portion of the site.

Further groundwater sampling was performed as part of the Remedial Investigation in August and September of 2022. These efforts included the installation of four new monitoring well clusters wells on the site, and the sampling of the three intact and identifiable monitoring wells installed during previous environmental investigations. Elevated concentrations of PFOA were detected in all of the groundwater monitoring wells above the guidance levels provided in the *2023 Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1*. In addition, elevated concentrations of PFOS were detected in all of the groundwater monitoring wells above the guidance levels provided in the *2023 Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1* with the exception of Monitoring Wells Numbered MW-12-I and MW-12-D. Further, elevated levels of 1,4-Dioxane were detected in all of the groundwater monitoring wells above the guidance levels provided in the *2023 Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1* with the exception of Monitoring Wells Numbered MW-12-I, and MW-12-D. At the request of the NYSDEC in their February 14, 2023, electronic mail, additional limited groundwater sampling for PFOA, PFOS, and 1,4-Dioxane was conducted in March of 2023. Elevated concentrations of PFOA were detected in all of the groundwater monitoring wells above the guidance levels provided in the *2023 Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1*. In addition, elevated concentrations of PFOS were detected in all of the groundwater monitoring wells above the guidance levels provided in the *2023 Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1* with the exception of Monitoring Wells Numbered MW-12-I and MW-12-D. Further, elevated levels of 1,4-Dioxane were detected in all of the groundwater monitoring wells above the guidance levels provided in the *2023 Addendum to June 1998*

*Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1 with the exception of Monitoring Wells Numbered MW-12-I, and MW-12-D.*

## SECTION 3.0 WORK PLAN

### SECTION 3.1 SAMPLING LOCATION

#### Soil Delineation

Based upon the NYSDEC April 2023 Review Comments on the Remedial Investigation Report, the scope of the investigation has been expanded to include sampling of the onsite soils, in response to the proposed amendment to the Brownfields Cleanup Objectives contained in 6 NYCRR Part 375 6.8 to include Soil Cleanup Objectives (SCOs) for PFOA, PFOS and 1,4-Dioxane in soil. A phased approach will be used to determine the vertical and areal delineation of the PFAS and 1,4-Dioxane contamination in the onsite soil originally identified by the Apex Environmental Phase II Environmental Assessment. Seven soil borings will be installed to a depth below the waste pack, into native material, at an approximate depth of 50 feet below ground surface elevation to fully delineate the extent of the major areas of PFOA, PFOS, and 1,4-Dioxane contamination. The seven soil borings will be taken from the areas that have been identified to have historic high levels (above the preliminary Part 375 SCOs) of PFOA, PFOS, and 1,4-Dioxane contamination as determined from the Apex Phase II Environmental Assessment. Specifically, one soil boring in the northeastern corner of the site in between ATP-30 and ATP-31, a second soil boring in the northwest corner of the site in between ATP-26, and ATP-27, and five soil borings in the southeastern portion of the site, which should fully delineate the extent of the major areas of PFOA, PFOS and 1,4-Dioxane contamination, with the third soil boring in between ATP-3 and ATP-4, a fourth soil boring in between ATP-8 and ATP-9, a fifth soil boring in between ATP-6 and ATP-2, a sixth soil boring in between ATP-6 and ATP-15, and a seventh soil boring in between ATP-10 and ATP-11. The soil borings will be sampled in the upper portion of the waste mass (between ground surface elevation and 25 feet below ground surface elevation), the lower portion of the waste mass (the portion of the waste mass deeper than 25 feet below ground surface elevation), and in the clean material below the waste mass for PFOA, PFOS, and 1,4-Dioxane contamination utilizing a roto-sonic drill rig, with ten foot long six inch diameter override casings, and ten foot long four inch diameter barrel cores (or similar). In addition, the soil borings will be used to characterize the onsite soils to provide relevant soil data and to aid in the development of a potential groundwater treatment system. Soil borings will be conducted as close as possible to the midpoint between the two test pits as site conditions allow due to the slopes of the site and the limits of the drill rig.

#### Groundwater Delineation

The NYSDEC has requested that due to the potential requirements for the installation of a groundwater treatment system to address the PFOA, PFOS, and 1,4-Dioxane contamination of the onsite groundwater, that additional vertical delineation of the groundwater contamination is required and that additional delineation of the site's groundwater contamination is also required. To aid in designing the additional groundwater monitoring wells, a vertical groundwater profile to delineate the depth of groundwater contamination is to be performed. The vertical groundwater profile will be installed at Well Cluster Number Ten to a depth of 200 feet below ground surface elevation, utilizing a roto-sonic drill rig, with ten foot long six inch diameter override casings, and ten foot long four inch diameter barrel cores (or similar). This profile will be sampled at ten foot intervals from 200 feet below ground surface elevation to the top

of the water table. The sample results will be utilized to determine the depth of the new monitoring wells to be emplaced, and to aid in the design of a potential groundwater treatment system. The location has been selected based on Well Cluster Number Ten being the groundwater monitoring well cluster on the eastern property line with the highest concentration of PFOA, PFOS, and 1,4-Dioxane of the downgradient eastern and northern property boundary wells.

Four new permanent groundwater monitoring wells will be installed at the site, Monitoring Well Number 13, will be located on the northern property line at the midway point between Monitoring Wells Numbered 2, and 7, Monitoring Well Number 14 will be located on the eastern property line to the north of Monitoring Well Cluster Number 10, and to the south of Monitoring Well Number 7, Monitoring Well Number 15 will be located on the southern property line to the west of Monitoring Well Number 1, and Monitoring Well Number 16 will be located in the center of the waste mass, near the center of the site. The depth of the new monitoring wells will be set using the data provided by the vertical profile to be drilled at Monitoring Well Cluster Number 10 as approved by the NYSDEC.

All drill cuttings removed during the installation of the monitoring wells will be stored onsite on poly sheeting for future off-site disposal after being analyzed for contaminants to determine the proper authorized disposal site.

The monitoring well installation will be conducted in accordance with the procedures outlined in Section 3.3.1 of the Remedial Investigation Work Plan Revision (RIWP) Number Four with the exception of the following details.

- The additional monitoring wells will be installed as standard monitoring wells, and if sampling of different depth are required, the monitoring wells be constructed as cluster wells with each monitoring well separated by five feet in place of the nest wells originally specified in the RIWP Revision Number Four due to the difficulties installing the nest wells to the required depths.
- The use of a roto-sonic drill rig utilizing either ten foot long six in diameter override casing and four inch diameter core barrels (or similar) for 2 inch monitoring well installation, and ten foot long ten inch diameter override casings with eight inch core barrels (or similar) to install the 4 inch diameter monitoring well/extraction well in place of the previously utilized rotary drill rig.

## SECTION 3.2 SAMPLE COLLECTION

### SECTION 3.2.1 SOIL SAMPLING COLLECTION

The soil sampling will be undertaken utilizing a roto-sonic drill rig system, which will advance ten foot long/four inch diameter override casing with ten foot long/four inch diameter core barrels (or similar) at the seven soil boring locations for the 21 soil samples delineated above. Soil Samples will be collected utilizing the continuous sampling method using the roto-sonic drill rig, the override casings of the roto-sonic drill rig will prevent downhole sample cross-contamination.

Soil samples will be submitted to Alpha Analytical Laboratories in Mansfield, NJ (NY ELAP # 11627) and analyzed for PFAS Target Analyte List (21 compounds) by EPA Method 1633 and 1,4-Dioxane by Method 8260 SIM and be compared against the preliminary 6 NYCRR Part 375 Soil Cleanup Objectives

(SCOs) for PFOA, PFOS and 1,4-Dioxane.. The limit of detection for the soil sample analysis should not exceed 0.5  $\mu\text{g}/\text{kg}$ ,

Immediately following collection of the soil samples, the soil samples will be placed in a cooler with regular ice in order to maintain sample integrity (temperature maintained at  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ). If necessary, to meet a maximum recommended holding time, the samples are to be either hand delivered at the end of the day's sampling activities to the laboratory or shipped by overnight courier to the laboratory.

All drill cuttings removed during the recovery of soil samples will be stored onsite on poly sheeting for future off-site disposal after being analyzed for contaminants to determine the proper authorized disposal site.

### SECTION 3.2.2 GROUNDWATER SAMPLING COLLECTION

Prior to sampling, each well will be purged of a minimum of three casing volumes using a PFAS free disposal bailer and/or a Waterra Hydrolift pump with per-well dedicated tubing set in the middle of the well screen, to ensure representative samples from the formation surrounding the wells and to eliminate standing water in the wells. Groundwater samples will be collected with Waterra Hydrolift pump with per-well dedicated tubing set in the middle of the well screen, or with a PFAS free disposal bailer. Temperature, pH, dissolved oxygen, conductivity, and oxygen reduction potential measurements will be collected and recorded during purging activities and at sample collection. Well sampling logs will be prepared. All groundwater removed during the purging of the monitoring wells will be stored in 55-gallon drums for future off-site disposal after being analyzed for contaminants to determine the proper authorized disposal site.

Groundwater samples will be submitted to Alpha Analytical Laboratories in Mansfield, NJ (NY ELAP # 11627) and analyzed for PFAS by Method 1633 and 1,4-Dioxane by Method 8260 SIM and be compared against the *2023 Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) No. 1.1.1*. The limit of detection for the groundwater sample analysis should not exceed 2  $\text{ng}/\text{L}$ ,

Immediately following collection of the groundwater samples, the groundwater samples will be placed in a cooler with regular ice in order to maintain sample integrity. If necessary, to meet a maximum recommended holding time, the samples are to be either hand delivered at the end of the day's sampling activities to the laboratory or shipped by overnight courier to the laboratory.

### SECTION 4.0 QUALITY ASSURANCE/QUALITY CONTROL

The Quality Assurance and Quality Control procedures are outlined in Section 4.1 of the RIWP Number Four and in the Quality Assurance Project Plan (QAPP) Appendix A of the RIWP Revision Number Four will be followed.

### SECTION 5.0 HEALTH AND SAFETY

The Health and Safety procedures are outlined in Section 4.2 of the RIWP Revision Number Four and in the Health & Safety Plan, Appendix A of the RIWP Revision Number Four will be followed.

SECTION 6.0 COMMUNITY AIR MONITORING PLAN

The Community Air Monitoring procedures are outlined in Section 4.4 of the RIWP Revision Number Four and in the Community Air Monitoring Plan, Appendix A of the RIWP Revision Number Four will be followed.

SECTION 7.0 REPORTING

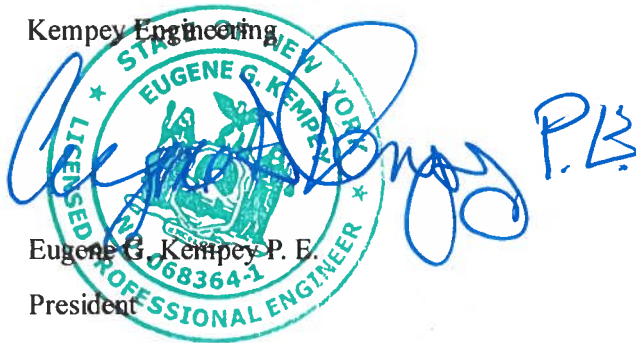
Upon receipt of the laboratory analytical data, Kempey Engineering will share the complied data with the NYSDEC to determine if additional sampling is required to further delineate the soil or groundwater contamination. The results of the soil and groundwater sampling will be incorporated into the revised Remedial Investigation Report to be submitted to the NYSDEC.

Please review our submittal as soon as possible. We would like to thank you in advance for your prompt attention to this matter.

Please contact us if you have any questions or if you require any additional information.

Yours Truly

Kempey Engineering



Eugene G. Kempey P. E.  
President

Electronic Copy:

Anthony C. Perretta, Project Manager NYSDOH  
Kevin Cox, Cox Bros, LLC

Xerox Copy:

Aphrodite Montalvo, Citizen Participation Specialist NYSDEC  
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**FIGURES**

**FIGURE NUMBER 9 - PROPOSED GROUNDWATER  
MONITORING WELL LOCATION PLAN**



**FIGURE NUMBER 10 - PROPOSED SOIL BORING LOCATION PLAN**