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December 15, 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)
Groundwater Monitoring Well Design and Depths
Revision Number Two

Dear Mr. Klein:

Transmitted herein, for your review and approval is the design for the additional monitoring wells to be installed during the supplemental remedial investigation (SRI) and the proposed additional soil sampling requested in your December 5, 2023 Comment Letter, for the former Steck and Philbin Site located on Old Northport Road, Kings Park, New York 11754. The additional monitoring wells and soil sampling have been designed in accordance with the requirements of Appendix A, Paragraph D2 of the August 14, 2020, Brownfields Cleanup Agreement and the Revised Supplemental Remedial Investigation Work Plan (SRIWP) dated July 12, 2023, as well as the review comments contained in the above-mentioned comment letter.

SECTION 1.0 INTRODUCTION

Kempey Engineering has prepared this addendum to the SRIWP to document the design of the additional monitoring wells to be installed for the purpose of sampling groundwater upgradient of the site for presence of Perfluorooctanoic Acid (PFOA), Perfluorooctanesulfonic Acid (PFOS), and 1,4-dioxane. In addition, this addendum also documents the procedures for the additional horizontal delineation of the PFOA, PFOS, and 1,4-dioxane soil impact at the site. The scope of work is based on the findings of Kempey Engineering's Remedial Investigation Report Revision Number One, dated April 2023, as well as the results of the vertical groundwater delineation performed as part of the SRI and the New York State Department of Environmental Conservation's (NYSDEC) findings 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* (TOGS No. 1.1.1), and the NYSDEC's issuance of Guidance Values for Anticipated Site Use: Commercial Use provided in *Sampling, Analysis and Assessment of Per-and Polyfluoroalkyl Substances*

(PFAS) Under NYSDEC's Part 375 Remedial Programs April 2023 for PFOA, and PFOS and 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) for 1,4-dioxane.

SECTION 2.0 VERTICAL GROUNDWATER PROFILE AND SOIL BORING SAMPLING RESULTS

SECTION 2.1 VERTICAL GROUNDWATER PROFILE RESULTS

Groundwater sampling was performed as part of the SRI in August 2023. These efforts included the installation of the Vertical Groundwater Profile on the site, and the sampling of the Vertical Groundwater Profile at various groundwater elevations between 85-feet below ground surface elevation and 200-feet below ground surface elevation.

Depth Interval (feet below ground surface elevation)	Notes
85-95	Sample collected
95-105	Sample collected
110-120	Sample collected
120-130	Sample collected
130-140	Sample collected
140-150	Formation at this depth did not yield sufficient groundwater recovery for sample collection.
150-160	Formation at this depth did not yield sufficient groundwater recovery for sample collection.
170-180	Formation at this depth did not yield sufficient groundwater recovery for sample collection.
180-190	Sample collected
190-200	Sample collected

Based on geological information for the project area obtained from United States Geological Survey (USGS) reports and other nearby remediation sites, it appears that a layer of clay was encountered which prohibited the recovery of the groundwater samples at the above noted sampling intervals.

The seven groundwater samples recovered from the Vertical Groundwater Profile were analyzed for PFAS by United States Environmental Protection Agency (USEPA) Method 1633 and 1,4-dioxane by USEPA Method 8270-SIM. Sample data was compared to guidance levels provided in TOGS No. 1.1.1. Groundwater sample data is summarized in Figure 11 (attached hereto).

Elevated concentrations of PFOA were detected in the groundwater samples recovered from the 85-to-95-foot groundwater sampling interval, the 95-to-105-foot groundwater sampling interval, the 170-to-180-foot groundwater sampling interval and the 180-to-190-foot groundwater sampling interval above the TOGS No. 1.1.1 guidance value of 6.7 parts per trillion (ppt) for PFOA.

In addition, elevated concentrations of PFOS were detected in the groundwater samples recovered from the 85-to-95-foot groundwater sampling interval, the 95-to-105-foot groundwater sampling interval, the 110-to-120-foot groundwater sampling interval, the 170-to-180-foot groundwater sampling interval and the 180-to-190-foot groundwater sampling interval above the TOGS No. 1.1.1 guidance value of 2.7 ppt for PFOS.

Further, elevated levels of 1,4-dioxane were detected in the groundwater samples recovered from the 85-to-95-foot groundwater sampling interval, the 95-to-105-foot groundwater sampling interval, the 105-to-

115-foot groundwater sampling interval, the 170-to-180-foot groundwater sampling interval, the 180-to-190-foot groundwater sampling interval, and the 190-to-200-foot groundwater sampling interval above the TOGS No. 1.1.1 guidance value of 0.35 parts per billion (ppb) for 1,4-dioxane.

SECTION 2.2 SOIL BORING SAMPLING RESULTS

Soil borings were performed at seven locations to delineate the vertical and horizontal PFOA, PFOS, and 1,4-dioxane impact at the stie. Composite samples were collected from each soil boring as follows:

- One sample was taken from the upper waste pack (the material from the ground surface elevation to approximately half the depth of the waste pack).
- One sample was taken from the lower waste pack (from approximately half the of the depth of the waste pack to the transition to native material).
- One sample was taken from native material (consisting of a sample taken below the waste pack).

The soil sampling was performed as part of the SRI on August 31 and September 1, 5, and 6, 2023. A total of 21-composite-soil-samples were recovered from the seven-soil borings.

Soil samples were analyzed for PFAS by USEPA Method 1633 and 1,4 dioxane by USEPA Method 8270-SIM. Sample data was compared to the Guidance Values for Anticipated Site Use: Commercial Use provided in *Sampling, Analysis and Assessment of Per-and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs April 2023,* and Commercial Soil Cleanup Objectives contained in 6 NYCRR Part 375 SCOs. Soil sample data is summarized in Figure 12 (attached hereto).

The concentrations of PFOA were detected in the soil samples recovered from SB-4 Upper Waste Pack, below the guidance levels provided in the Guidance Values for Anticipated Site Use: Commercial Use.

In addition, concentrations of PFOS were detected in the soil samples recovered from the SB-1 Upper Waste Pack, SB-2 Upper Waste Pack, SB-4 Upper Waste Pack, SB-4 Lower Waste Pack, and SB-4 Native, SB-5 Lower Waste Pack, SB-6 Upper Waste Pack and SB-6 Lower Waste Pack below the Guidance Values for Anticipated Site Use: Commercial Use.

Further, 1,4-Dioxane was not detected in any of the soil samples recovered from the soil borings. In addition, it should be noted that all of the soil samples recovered from the soil borings are below the Commercial Soil Cleanup Objectives contained in 6 NYCRR Part 375 SCOs.

Finally, concentrations of PFOA, PFOS and 1,4-Dioxane were only detected above the Guidance Values for Anticipated Site Use: Unrestricted Use in one of the seven soil borings in the native soil layer, in the sample recovered from SB-4. PFOS was detected in SB-4 above the Guidance Values for Anticipated Site Use: Unrestricted Use, however PFOA and 1,4-dioxane were not detected above the Guidance Values for Anticipated Site Use: Unrestricted Use in this sample.

SECTION 3.0 WORK PLAN

SECTION 3.1 SAMPLING LOCATION

Groundwater Monitoring Well Design

Based upon the laboratory results from the samples taken from the Vertical Groundwater Profile, and observations made during the drilling and sampling of the Vertical Groundwater Profile, there is a possibility that the contamination detected in the deeper groundwater samples may be caused by an upgradient source which may affect final design depths of the remaining monitoring wells to be installed at the site. Based upon this concern, Kempey Engineering proposes to install an upgradient well to determine the levels of PFOA, PFOS, and 1,4-dioxane entering the site from potential upgradient sources.

Kempey Engineering proposes to install Groundwater Monitoring Well Number 15, the upgradient groundwater monitoring well located along the access road parallel to Old Northport Road as the next step in the SRI. Based upon the sample results of the Vertical Groundwater Profile, the new monitoring well will be screened at two elevations to sample areas where the highest concentrations of the contaminants were detected in the Vertical Groundwater Profile: the 90-to-105-foot below ground surface sampling interval and the 170-to-190-foot below ground surface sampling interval. Due to the varied elevation of the site based on the relative elevation of the proposed Groundwater Monitoring Well Number 15 and the Vertical Groundwater Profile, the depth of the sampling screens will correspond to depth of 95-to-110-feet below ground surface elevation and 175-to-195-feet below ground surface elevation.

During the installation of Groundwater Monitoring Well Number 15, lithological data will be collected between 120 feet below ground surface elevation to the terminal depth of the well to delineate the subsurface soil conditions between these depths in order to provide required additional soils data.

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.

Soil Borings

Based upon the results of the soil samples recovered from the seven-soil borings installed during the SRI conducted during August 31 and September 1, 5, and 6 of 2023, the NYSDEC has requested further delineation of the onsite PFOA, and PFOS impacted soils, which will be addressed by the Test Pit sampling described below.

Test Pits

Kempey Engineering proposes to install seven (7) additional test pits located through the site to further delineate horizontal extent of the PFOA and PFOS impacted soil at the site. In the December 5, 2023 Comment Letter, the NYSDEC stated that the additional soil samples are not required to be analyzed for 1,4-dioxane. This is due to the non-detections of the contaminant 1,4-dioxane in the soil samples recovered from the August and September 2023 soil sampling event as well as the commercial limit provided in 6 NYCRR Part 375-6.8(b) of 36 PPM. Additionally, the December 5, 2023 Comment Letter indicated that the NYSDEC has approved the use of the proposed test pits to delineate the horizontal extent of the PFOA and PFOS contamination. Proposed test pit locations have been selected to delineate areas of concern identified by the elevated concentration of PFAS identified in soil samples recovered

from the soil borings and test pits as part of the Apex Phase II Investigation and soil borings installed as part of the 2023 SRI. Proposed test pit locations are illustrated in Figure 13 (attached hereto), and are summarized as follows:

- KETP-1 (Kempey Engineering Test Pit) will be located on the southeastern portion of the site between SB-1, SB-2, SB-3, (Apex Soil Borings Number 1, 2, and 3) and ATP-6 (Apex Test Pit-6).
- KETP-2 will be located on the southeastern portion of the property, between SB-1, SB-2, SB-3 and ATP-7 and ATP-8.
- KETP-3 will be located in the center of the site between ATP-11, ATP-15, Apex ATP-16, and ATP-17.
- KETP-4 will be located in the center of the site, to the west of SB-11, SB-12, SB-13, and to the east of ATP-17.
- KETP-5 will be located on the northern portion of the site to the north of Soil SB-11, SB-12, SB-13 and to the south of ATP-22.
- KETP-6 will be located in the northeast corner of site between SB-4, and SB-5 and ATP-30.
- KETP-7 will be located in the northwestern corner of the site between ATP-27, and APT-28 parallel to the ring road between the two test pits.

Test pits will be excavated to the maximum depth reachable by the excavator (approximately 25 feet) and samples will be recovered from the test pits at five-foot intervals from the beginning of the waste mass to the maximum depth of the excavation. The material recovered from the test pit will be screened with a Photoionization Detector (PID) at five-foot intervals as described above. After completion of the sampling, the test pits will be immediately backfilled with the excavated material in accordance with standard open excavation practices to prevent the dangers associated with cave ins, collapses and to limit the potential danger of personal injury and injury to wildlife.

SECTION 3.2 SAMPLE COLLECTION

SECTION 3.2.1 SOIL SAMPLING COLLECTION

The soil sampling will be undertaken utilizing an excavator, which will advance the test pits to the maximum depth reachable by excavator. Soil samples will be collected at five-foot intervals from the beginning of the waste mass to the maximum depth of the excavation, and a composite soil sample will then be collected for laboratory analysis. The material recovered from the test pit will be screened with a PID at five-foot intervals, as described above.

Soil samples will be submitted to Alpha Analytical Laboratories in Mansfield, NJ (NY ELAP # 11627) and analyzed for PFAS Target Analyte List (40 compounds) by USEPA Method 1633. The soil samples results would then be compared against the Guidance Values for Anticipated Site Use: Commercial Use provided in *Sampling, Analysis and Assessment of Per-and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs April 2023* for PFOA, and PFOS. The limit of detection for the soil sample analysis should not exceed 0.5 µg/kg.

Immediately following collection of the soil samples, the soil samples will be placed in a cooler with regular ice to maintain sample integrity (temperature maintained at 4°C ∓ 2°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.

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 a 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 USEPA Method 1633 and 1,4-Dioxane by USEPA Method 8260 SIM. The groundwater samples results would then be compared against TOGS No. 1.1.1. The limit of detection for the groundwater sample analysis should not exceed 2 $^{ng}/_{L}$.

Immediately following collection of the groundwater samples, the groundwater samples will be placed in a cooler with regular ice 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 Remedial Investigation Work Plan (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.

SECTION 8.0 SCHEDULING

Kempey Engineering shall notify the NYSDEC of the work schedule at least two weeks prior to mobilization.

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

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Smithtown Library - Kings Park Building Document Repository

FIGURES

FIGURE NUMBER 9 - PROPOSED GROUNDWATER MONITORING WELL LOCATION PLAN

FIGURE NUMBER 11 - VERTICAL GROUNDWATER PROFILE LABORATORY DATA SUMMARY

FIGURE NUMBER 12 - SOIL BORING LABORATORY DATA SUMMARY

FIGURE NUMBER 13 - TEST PIT LOCATION PLAN