FINAL SUPPLEMENTAL PCB AIR MONITORING PROGRAM

Friedrichsohn Cooperage Site – Waterford, New York

March 15, 2021

The New York State Department of Environmental Conservation (NYSDEC) approved remedial design for the Friedrichsohn Cooperate Site located in Waterford, New York (NYSDEC Site No. 546045) included a Community Air Monitoring Program (CAMP). The approved CAMP included real time, continuous monitoring for particulates, as well as organic vapors during intrusive construction activities associated with the proposed remediation. However, to address concerns expressed by the Town, and in an abundance of caution, additional air monitoring for polychlorinated biphenyls (PCBs) will be performed as part of the air monitoring activities. More specifically, the following monitoring is proposed for the project:

1. **Methodology & Laboratory Certification:** All PCB air samples will be collected utilizing *USEPA Air Method, Toxic Organics – 10A (TO-10A): Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using Low Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD).* The samples will be analyzed by a New York State Department of Health (NYSDOH) certified laboratory via SW-846 Method 8082. Under the TO-10A methodology, CHA will use a personal air sampling pump (SKC Leland Legacy Sample Pump or equivalent) to draw approximately five liters per minute (l/min) of ambient air through a laboratory supplied polyurethane foam (PUF) cylinder (and absorbent style filter) for approximately 24 hours at each testing location.

   The PUF cylinder will be placed into the glass sampling cartridge as well as inside a sealed foil bag by the laboratory prior to delivery to the site. Additionally, the foil bag with the glass cylinder and PUF media will be place inside an aluminum tube to protect the glass and PUF from damage during shipment. To setup the setup each sample, CHA will first don a new pair of nitrile gloves. The PUF sampler inside the foil bag will be removed from the aluminum protective tubing and then removed from the foil bag. The glass cylinder will then be connected to the air sampling pump by way of laboratory-supplied flexible tubing. The pump will then be turned on and the start time will be recorded. Following the approximately 24-hour sampling period, the pump will be turned off and the glass cartridge with the PUF sampler will be placed backed into the original foil bag and then into the protective tube. CHA will record the stop time for each sample as well as total volume of air sampled for each PUF. Given that the limited life of the batteries in the air samplers, new instruments will be deployed when the next set of PUF samples are started. CHA will maintain additional instruments on-site so that they can be rotated in and out of operation (e.g. one set of instruments collecting samples while another set is being charged).

   Following collection, all PUF samples will be placed on ice within an insulated cooler or ice chest to cool the samples to a temperature of 4°C ± 2°C during shipment to the analytical laboratory. On a daily basis, the collected samples will be relinquished to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory or a professional courier service that will deliver the samples to the laboratory following standard chain-of-custody protocols. The samples will be analyzed following extraction on an expedited basis. Specifically, CHA will request to receive that analytical results on a 48-hour turnaround time (TAT) from the time the lab receives the samples from the courier. Thus, CHA anticipates receipt of the analytical results approximately 60 hours following delivery to the laboratory, but CHA will require the laboratory to submit the results via an e-mail no more than 72-hours following collection.

2. **Background Sampling:** Approximately one week prior to commencing with the excavation of PCB-contaminated sediment or soil, CHA will conduct background monitoring. For this task, CHA

will setup one air pump with a PUF cylinder at a representative background location and allow it to run for approximately 24 hours. Specifically, CHA will coordinate with the New York State Canal Corporation (NYSCC) to place the sample collection system on State property at a position approximately 2,000 feet (0.35± miles) north of the project limits. If this location is not accessible, CHA will collect the background samples from a residential property located in Waterford, New York, and approximately one-half mile from the project site. Exact run times for each PUF cylinder will be documented in the field to facilitate calculation of the total volume of air sampled. This work will be completed for five days prior to disturbing the PCB-contaminated materials, thus resulting in the collection of five PUF samples to establish background concentrations. The samples will be collected from a height of approximately five feet above the ground surface, which represents an average breathing zone level. The sampling assembly will be pointed downward so that the water is not collected during precipitation events.

3. **Project Air Monitoring:** When the remedial contractor commences with the proposed excavations of PCB-contaminated materials, CHA will use the same methodology previously described to collect samples at the following frequency:

    a. Three samples on each workday plus QA/QC samples for the duration that work is performed in the area with PCB concentrations above 50 parts per million (ppm). Samples will be collected at selected locations based on recommendations from the NYSDEC Division of Air Resources and the NYSDOH. QA/QC samples for his project will include:

        i. One blind duplicate sample will be collected at a frequency of one sample per every 20 samples collected. The duplicate sample will be collected immediately adjacent to another PCB air monitoring station and sampled for the same duration. The location of the duplicate sample will be recorded by CHA personnel but will not be reported to the laboratory.

        ii. One trip blank sample will be analyzed at a frequency of one sample per every 20 samples collected. The blank will remain on-site during the sampling period but will not be exposed to the site air or connected to a sampling pump.

    b. Upon completion of the removal of the sediments with PCB concentrations above 50 ppm, following discussion with and approval by the NYSDEC, three samples will be collected two times per week for the third and fourth weeks of the remedial excavations [a total of 8 samples assuming four samples per week for two weeks]. The samples will be collected on Tuesdays and Thursdays on a typical week. However, if no intrusive work is conducted on one of those days, CHA will collect the samples on a different day during the same week when intrusive work involving PCB-contaminated materials are being managed.

    c. Provided that the ongoing data suggests there are no exceedances to the action levels or other concerns, a request to the NYSDEC may also be provided to decrease the sampling to three samples collected once a week through the completion of the excavation of PCB-impacted soils.

    The exact locations of the PCB samples will be determined in consultation with NYSDEC and in the field based upon work locations and activities being performed Pursuant to recommendations from NYSDEC Division of Air Resources, the locations will be based on nearby receptors and not the prevailing wind direction.

4. Following receipt of the analytical results from the laboratory, CHA will immediately review the data and compare the results to the site action level of 0.11 micrograms per cubic meter ($\mu g/m^3$). CHA will utilize an internal control level of 0.08 $\mu g/m^3$ to begin implementing measures that will minimize the potential of concentrations exceeding the site action level of 0.11 $\mu g/m^3$ .Should the results exceed the action level, CHA will notify the responsible parties, NYSDEC and the Town

within two hours. If absence of results exceeding this action level, CHA will submit the laboratory reports to the Town one time per week (typically on Tuesdays following receipt of the analytical data for all of the samples collected during the prior week).

5. CHA will recommend additional emission suppression/mitigation efforts to the remedial contractor should an action level of 0.11 micrograms per cubic meter ($\mu g/m^3$) be reached. If the PCB concentrations reach 500 $\mu g/m^3$ (the Occupational Safety and Health Administration's (OSHA's) permissible exposure limit (PEL), work will stop until the Town/NYSDEC have been notified and further mitigation/monitoring measures are reviewed with the remedial contractor and implemented.

Considerations:

- CHA has assumed the analytical results will be incorporated into the Final Engineering Report. No separate report will be generated for the analytical results. However, PDFs of the results will be submitted to the NYSDEC and the Town on a weekly basis. As previously indicated, verbal and/or e-mail notification will be made within two hours to both the Town and the NYSDEC if an exceedance of the action level is detected by the laboratory.
- Construction activities, such as the setup of temporary cofferdams, field offices, fencing, erosion and sediment controls will commence prior the start of the PCB air monitoring activities. Rather, the PCB sampling activities will commence when the remedial contractor begins the excavation and management of the PCB soils and sediments at the site.
- The SKC Leland Legacy Sample Pumps were calibrated by the supplier prior to shipment to verify the flow rate of each was at 5 l/min. and do not vary from the set point by more than ±5 percent. This calibration must be performed annually, but since excavation activities are scheduled to be completed by the end of the year, additional calibration of the flow rates for the instruments is not anticipated to be necessary. That said, should the total air flow through the pump vary by more than 5 percent from the prescribed 7,200 l/day (i.e. less than 6,840 l/day or more than 7,560 l/day), the instruments will be exchanged by the supplier.

  Additionally, the pumps to require routine maintenance, the first such maintenance being required after 2000 hours of use (approximately 83 days assuming 24 hour/day operation). When maintenance is required, CHA will exchange the air pumps with the supplier. CHA will also routinely inspection the low-flow samplers for damaged tubing (e.g. crimps, cracks or obstructions) when setting up and recovering the samples.