



Groundwater & Environmental Services, Inc.

6010 North Bailey Avenue
Amherst, NY 14226

T. 800.287.7857

August 10, 2023

Ms. Krista Manley
Senior Manager
Environmental Projects and Remediation
Buckeye Partners, LLC
6161 Hamilton Boulevard
Allentown, PA 18106

**RE: Revised Proposed Scope of Work: Sub-Slab and Indoor Air Investigation
Buckeye Buffalo Terminal (BETBO)
625 Elk Street, Buffalo, New York 14210**

Dear Ms. Manley:

Groundwater & Environmental Services, Inc. (GES), of Buffalo, New York, has prepared the enclosed revised cost estimate and scope of work (SOW) for a proposed sub-slab and indoor air investigation associated with nuisance odors reported within a restroom facility inside Buckeye's office building at the Buffalo Terminal located at 625 Elk Street in Buffalo, New York (the Site). The proposed sub-slab and indoor air investigation would be conducted in accordance with the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH, 2006, with updates) follow current best practices and the general SOW outlined below.

Proposed Scope of Work

The proposed SOW consists of the following action items and tasks:

- An 811 Dig Safely New York ticket request will be called in prior to the initial Site visit to locate any potential public utility conflicts associated with the interior and exterior of the office building.
- An initial Site visit will be conducted approximately one (1) week prior to the actual sampling event to complete the following:
 - A product inventory survey will be conducted to document potential sources of volatile chemicals present inside the office building that could cause potential air sampling interferences. The NYSDOH questionnaire and guidance will be followed and completed during the survey.
 - A portable, hand-held, ppbRAE 3000® or equivalent meter will be utilized to screen the ambient air, floor cracks, drains, sumps and other potential preferential pathways observed inside the office building for the presence or absence of volatile



odors. In addition, product containers observed inside the office building will be screened with the ppbRAE 3000® or equivalent meter. Meter readings for all areas and items screened will be documented accordingly on the NYSDOH questionnaire.

- The office building would be cleared of any utility conflicts, sketched, photographed and temporary sub-slab sampling points would be installed in the concrete floor ahead of the sampling event. Prior to installing the sub-slab vapor points, the concrete floor will be inspected for surface staining (i.e., visible staining noted on the floor or surface material) and for any penetrations (i.e., cracks, floor drains, utility conduit perforations, sumps, etc.), which will be documented and recorded in the field notes. Any preferential pathways (i.e., pathway from the subsurface to the ambient indoor air) deemed a potential source, the sampling location(s) may be adjusted to favor these locations. The sub-slab vapor point will be advanced using an 0.5-inch outside diameter hammer drill bit to core through the concrete slab. The sub-slab vapor points will be constructed with inert tubing (e.g., polyethylene, nylon, or Teflon), no greater than two (2) inches below the invert elevation of the concrete slab. The remaining space around the tubing will be sealed to the surface with a non-VOC-containing product (e.g., permagum grout, melted beeswax, putty).
- A helium detector will be utilized to test for a positive seal at the sub-slab vapor points. Helium will be used as a compressed gas tracer to test the seal to verify the integrity of the temporary sub-slab vapor points for sampling purposes. Using an enclosure (e.g., bucket, PVC well cap) over the sub-slab vapor point, the atmosphere within the immediate vicinity of the area where the sub-slab vapor point intersects the floor surface will be enriched with helium. One (1) to three (3) implant volumes (i.e., the volume of the sample probe and tube) of air will be purged from the sub-slab vapor point using a GILIAN® personal air sampling system and a flow module (vacuum pump). The purging flow rate will not exceed 0.2 Liters per minute (L/min). The sub-slab sample vapor point will be tested for helium breakthrough before the collection of the sub-slab gas sample.
- A second Site visit will be conducted within 48 hours to set up and complete the following:
 - Soil-gas samples will be collected from the temporary sub-slab vapor points over an 8-hour sampling period using a time weighted 6-liter Summa® canister fitted with an 8-hour flow controller. Certified cleaned Summa® canisters will be provided by NYSDEC-certified Pace Analytical Services, LLC, of Greensburg, Pennsylvania (Pace). The soil-gas samples obtained from the temporary sub-slab vapor points will be collected concurrently with the indoor and outdoor ambient air samples discussed below. The sub-slab vapor point Summa® canister sample will be analyzed for full-listed volatile organic compounds (VOCs) via United States Environmental Protection Agency (U.S. EPA) Method TO-15. The summa cannisters would be shipped under proper chain-of-custody procedures to Pace.
 - GES is proposing three (3) indoor air and one (1) outdoor ambient air sampling locations, and three (3) interior sub-slab vapor and one (1) exterior soil vapor



- sampling points that would be paired at the same physical location inside and outside the office building and collected concurrently.
- One (1) summa canister would be set up to collect an ambient air sample, and the other summa canister would be set up to collect a sub-slab vapor sample concurrently at each paired sampling location. The proposed paired sampling locations are shown on **Attachment 1** and consist of the following proposed indoor and outdoor sampling locations:
 - Interior Office Area (main operations office);
 - Interior Bathroom (where nuisance odors have been detected);
 - Interior Locker Room Area (Buckeye Personnel locker room), and;
 - Exterior of the office building (southeast corner of building). Note: The exterior sub-slab vapor sample location would be set up and established to collect the vapor sample from a sample depth between two (2) and five (5) feet below grade.
 - GES will also collect Quality Assurance/Quality Control (QA/QC) samples that will consist of a field duplicate, matrix spike and matrix spike duplicate in accordance with standard quality control procedures.
 - GES will provide the laboratory analytical reports with a Level IV QA/QC Category B data package and data usability summary report (DUSR) and the tabulated data to Buckeye for their use and interpretation.
 - A Site map depicting the sampling locations and an analytical table comparing the results to current NYSDOH Indoor Air Standards along with the laboratory analytical reports, Level IV QA/QC package and DUSR will be provided to the client. Complete analytical results will also be provided in a table and on a figure for NYSDEC and NYSDOH review.
 - A summary report of the first sampling event will be sent to NYSDEC and NYSDOH for review prior to conducting the second sampling event during the heating season.
- In accordance with the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, the sampling should be conducted during the heat season in order to evaluate worst case conditions. It should be noted that the nuisance odors reported within the restroom facility inside Buckeye's office building have been present during all months of the year. GES plans to conduct the initial proposed sub-slab and indoor air investigation prior to the heating season, and a second sub-slab and indoor air investigation during the heating season. The New York heating season is typically between November 15th and March 31st.



If you have any questions regarding this proposal, please contact Devin T. Shay or Robert N. Sickler at GES at 800-220-3069, extensions 4051 or 4052, respectively.

Sincerely,
Groundwater & Environmental Services, Inc.

A handwritten signature in black ink, appearing to read 'Brandon Mikolin', written over a light gray circular stamp.

Brandon Mikolin on behalf of:

Robert N. Sickler, PG
Project Manager

A handwritten signature in black ink, appearing to read 'Brandon Mikolin', written over a light gray circular stamp.

Brandon Mikolin, PG
Staff Geologist

Attachment 1 – Proposed Sampling Locations

Attachment 1 - Proposed Sampling Locations

**OU-2 EAST
(BCP SITE NO. C915201B)**

Approximate layout of locker room,
bathroom and office space

Proposed Paired Sampling Locations
(3 Indoor Locations and 1 Outdoor Location)

**OU-3
(SITE NO. C915201D)**

North
Not to Scale
(Approx.)

■ = Sample Location (Approx.)

OU-4

