

**A Summary of Major Stakeholder Comments Regarding
Vapor Intrusion (VI) Assessment Work Plan & Report Checklist
NCDEQ Brownfields Redevelopment Section
February 2024**

1) Comment regarding the use of the checklist for both Work Plans and Reports.

The BRS believes a separate checklist is not necessary and can easily transition between documents with some minor tweaks. The BRS is confident that the professionals we work with are more than capable of following their approved work plans and confirming that they did so in the report. The BRS will revise the checklist to include a comment area that can account for variances or other discrepancies between the work plan and report.

2) Comments about how to address the situation if a specific checkbox item is not available or something is unusual about the property.

The BRS recognizes that there is room for revisions to the checklist and will revise it to include a comment area at the end to accommodate these items.

3) Comments regarding review times for Work Plans and Reports.

The BRS realizes that review times need to be as expeditious as possible. We have put several mechanisms in place over the past year (e.g.: Project Initiator role, guidance and checklists) and are seeing the benefits thereof. These mechanisms including our newly hired staff in 2022 combined to yield completion of 55 brownfields projects and amendments which was significantly higher than 2022. We are also developing a comprehensive tracking application with DIT that includes an internal and external dashboard that we believe will be advantageous to all. It should also be recognized that Brownfields are very comprehensive, we are making risk management decisions for the protection of public health and occupancy, which requires a thorough investigation and analysis to comport with our statute. With liability protection and tax incentives there must be commensurate public benefits, fully inclusive of the safe reuse of the property.

4) Comments on Summa canister vacuums and sampling reliability.

The BRS follows the DWM VI Guidance, these criteria are outlined in the checklist. Per that guidance: *“residual vacuum of up to -5 inches mercury must exist in the canister upon completion of the sampling event and laboratories should report the received vacuum. Since the sample is designed to be collected over a specified period of time (i.e., 8 to 24 hours), the residual vacuum ensures that the sample was collected over that time period and ensures that the samples are not damaged or altered during transport. If no vacuum remains, the validity of the data is questionable.”*

5) Comment in regards to Summa canisters being batch or individually certified.

Please make sure you are referring to the appropriate Section of the checklist as this is already addressed in the guidance. Exterior soil gas or sub slab vapor canisters can be batch or individual; however, indoor air canisters are to be individually certified.

6) Comments regarding stabilization times for exterior soil gas and sub slab vapor points.

Through the BRS review of an extensive number of environmental assessment reports, we noted the recurrence of 1,3-butadiene at elevated concentrations. This has been documented to come from DPT installations if the samples are collected too soon after install. BRS has reviewed a number of more recent reports and indeed found sites with elevated concentrations of 1,3-butadiene that were sampled within 24 hours of point installation. To mitigate this and save our Prospective Developers the cost associated with a resample event, we have implemented a common sense approach of “at least 24 hours after installation” to obtain more reliable data of actual site contaminants.

7) Comments regarding alternate gas(es) acceptable for leak testing

The DWM VI Guidance recommends on-site field analysis for leak check compounds using a helium tracer. The BRS has reviewed work plans proposing leak check compounds other than helium such as isopropyl alcohol and isobutylene. The advantage of helium and a portable helium detector is the ability to easily maintain a relatively stable shroud concentration and capability to assess in the field instead of a laboratory, which may require another mobilization. Alternative leak testing methods are more important at sites with high methane concentrations as helium detectors will have false positives.

8) Comment about sub slab data collection if the slab is to be removed.

The BRS has typically found that exterior soil gas concentrations are lower than sub slab concentrations after new slab placement. Therefore, to properly evaluate the risk level at the site, where there are existing slabs, BRS will require sub slab data, particularly for a residential reuse. BRS needs the most reliable, accurate data, given that Brownfields properties are reused and occupied.

9) Comments related to full TO-15 list or reducing the list of compounds for indoor air analysis.

BRS recognizes this can be a site-specific consideration, for instance if we have several assessment reports with consistent contaminants of concern along with sub slab data that would be a situation where a reduced list makes sense. Where there is a limited data set with no trend available then the full list would be appropriate.

10) Comment for duplicate sample requirements

Section 4.8 of the DWM VI Guidance states: *“the investigator should be familiar with sampling procedures, analytical methods, and QA/QC requirements prior to conducting any sampling event”*. Per the EPA Soil Gas Sampling operating procedure dated April 22, 2023 Section 2.4.4, one field split quality control sample per 10 samples. BRS’ position is 1 duplicate per 20 samples per event, with an event being a single day of sample collection.