Hanson, David L - DNR

From: Heidi Woelfel <Heidi.Woelfel@gza.com>
Sent: Wednesday, May 3, 2023 2:50 PM
To: Hanson, David L - DNR
Cc: John Osborne
Subject: RE: Bayshore Town Center North Parcels - Notice of results

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Hi Dave,
Below is the process used for the sub-slab vapor sampling at Bayshore Town Center North Parcel:

The first-floor retail areas in Buildings F and O contained vapor points that were installed during building construction. The sub-slab vapor points were sampled to assess the potential for and to evaluate the presence of VOCs below the floor slab and were purged and sampled as follows:

- A short piece of Tygon™ tubing was placed on the barb fitting of the probe and joined to Nylaflow sample tubing at the sub-slab probe.
- Prior to sampling, at least five sample train volumes of air were purged from each sub-slab probe using a calibrated MultiRAE Lite Pumped Portable Multi-Gas meter (MultiRAE) equipped with a 10.6 eV lamp and calibrated to 100 parts per million (ppm) isobutylene. The maximum MultiRAE readings were recorded during purging of the sub-slab vapor probes.
- After purging with the MultiRAE, GZA evaluated for vapor probe leaks using ultra-pure helium as a tracer gas to evaluate the potential for diluting the sub-slab vapor samples with air from above the floor slab. Vapor probe purge air was pre-screened with a gas meter capable of detecting helium at very low levels (less than 100 parts per million by volume [ppmv]) to evaluate background helium conditions in sub-slab vapor. A shroud was placed over the sub-slab probe and helium gas was introduced into the shroud until a helium concentration of approximately 100% (1,000,000 ppmv) by volume was achieved in the shroud. Purge air was then screened for helium with the helium-filled shroud in place to evaluate if leakage through the soil-gas probe and fittings was occurring.
- A shut-in test was performed to ensure no or minimal leakage through connection in the portion of the sample train outside of the shroud. The shut-in test was conducted by using a vacuum pump to exert a vacuum of at least 5 pounds per square inch (psi) on the sample train. The sample train was considered tight and suitable for sampling if it could maintain the 5-psi vacuum for at least one minute. If the sample train could not maintain a vacuum of at least 5 psi for at least one minute, the sampling train was reset (tightened fittings, reset/replace sub-slab probe, etc.) until the shut-in test passed. All probes passed the shut-in test.
- Following purging and system leak testing, sub-slab vapor samples were collected over a period of approximately 30 to 45 minutes using 6-liter SUMMA® canister sampling at a rate of 200 milliliters per minute (ml/min). The initial and final canister vacuums were measured and recorded on the chain-of-custody form. If the initial canister pressure was less than 25 psi, the canister was not used for sampling and was replaced.
- Following sample collection, the SUMMA® canisters were shipped under chain-of-custody protocol to Pace Analytical Services, LLC (Pace) of Mount Juliet, Tennessee for VOC analysis by United States Environmental Protection Agency (USEPA) Method TO-15. The laboratory analytical report for sub-slab samples was previously provided.

Please let me know if you have any questions or need further information.

Thanks,
Heidi

Heidi Woelfel
Senior Project Manager
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From: Hanson, David L - DNR <David.Hanson@wisconsin.gov>
Sent: Wednesday, May 3, 2023 1:57 PM
To: Heidi Woelfel <Heidi.Woelfel@gza.com>
Cc: John Osborne <John.Osborne@gza.com>
Subject: [EXTERNAL] RE: Bayshore Town Center North Parcels - Notice of results

Heidi,

Would you please send me a paragraph describing how the sampling via summa canister was collected and under what conditions they were collected?

Thank you,

David

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Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

David L. Hanson
he/him/his
Phone: (414) 639-4156
david.hanson@wisconsin.gov

From: Heidi Woelfel <Heidi.Woelfel@gza.com>
Sent: Monday, May 1, 2023 8:22 AM
To: Hanson, David L - DNR <David.Hanson@wisconsin.gov>
Cc: John Osborne <John.Osborne@gza.com>
Subject: RE: Bayshore Town Center North Parcels - Notice of results

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Hi Dave
The Pace analytical report for Bayshore Town Center North Parcels is attached.

Thanks,
Heidi

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From: Hanson, David L - DNR <David.Hanson@wisconsin.gov>
Sent: Monday, May 1, 2023 8:09 AM
To: Heidi Woelfel <Heidi.Woelfel@gza.com>
Cc: John Osborne <John.Osborne@gza.com>
Subject: [EXTERNAL] RE: Bayshore Town Center North Parcels - Notice of results

Heidi,

Thank you for sending these sampling results. Please send the lab sheets from Pace Labs as they were not attached to the email.

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David L. Hanson
he/him/his
Phone: (414) 639-4156
david.hanson@wisconsin.gov

From: Heidi Woelfel <Heidi.Woelfel@gza.com>
Sent: Friday, April 28, 2023 5:54 PM
To: Hanson, David L - DNR <David.Hanson@wisconsin.gov>
Cc: John Osborne <John.Osborne@gza.com>
Subject: Bayshore Town Center North Parcels - Notice of results

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Good Afternoon David,
We are following up on the discussion John Osborne had with you a few weeks ago regarding our development of a thorough and efficient approach to assessing vapor intrusion potential across the central portion of the Bayshore Town Center (Site). As you recall, to date, GZA conducted VI assessments of the following:

1. On the western portion of the Site at Building N with combined retail, parking garage with upper floor of residential uses:
2. On the eastern portion of the Site where residential development is underway; and
3. With the Target retail store where vapor mitigation is presently installed, and our Commissioning Report and Operation and Maintenance Plan will be issued soon.

For the central portion of the Site, essentially between Target and Building N, GZA proposed to conduct in-field gas chromatography screening of subslab monitoring points installed at the time of construction. GZA conducted this initial screening on March 30, 2023 at 14 subslab sampling points that were accessible and were located in the central area of the Site also coinciding with historic fill areas. A NovaTest GC 300 portable volatile organic compound (VOC) monitor calibrated to trichloroethene (TCE) was used at the select sampling points. Based on our work with this instrument, the reliable detection limit of the instrument is generally in the single digit ppb by volume range. Each point was connected to the GC via tubing and vapor samples were analyzed over a minute. The results of the GC testing identified most locations within detection limit range for TCE concentrations. Two isolated locations; however, indicated elevated TCE detection between 700 and 1,000 ug/m3, in Buildings F and O, respectively. To verify the accuracy of field GC, GZA selected 2 locations exhibiting a range of TCE concentration and collected laboratory samples in 1L summa canisters for TO-15 analysis by Pace labs in Mount Juliet, Tennessee. The result of the TO-15 analysis for the elevated TCE detection in Building F (F-1) was 1,070 ug/m3. A second location with a field GC response of 39 ug/m3 from Building O (O-2) was laboratory verified with a TO-15 result for TCE for O-2 of 96 ug/m3. The attached figure shows the subslab locations across the Site and provides the GC data and laboratory confirmation results. The mobile GC results and the Pace analytical report, along with Form 4400-249 (Site Investigation Sample Results Notification) are attached for your review.

Based on combined field GC screening and confirmatory laboratory analysis, two locations exceed the Vapor Risk Screening Level (VRSL) for TCE for large and small commercial buildings. As a result of this screening effort, a more expansive work plan for paired indoor-air and sub-slab sampling across the central portion of the Site is being prepared for review by the WDNR in the next month.

Please let me or John Osborne, know if you have any questions.

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