

From: Killian, Paul <pkillian@geiconsultants.com>
Sent: Wednesday, April 15, 2020 5:35 PM
To: Schultz, Josie M - DNR
Cc: qefnez@yahoo.com; Matthew Bookter
Subject: Innovative Properties - Emergency Action Vapor Mitigation System
Attachments: Memo - Innovative Properties.pdf; P_Vapor Mitigation_Military Ave_Workplan.pdf

Follow Up Flag: Follow up
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Josie

Attached is a copy of our proposed approach for implementing emergency response vapor mitigation at the Innovative Properties site on Military Avenue, Green Bay. Also attached as a supporting document is a memo summarizing site observations and recommended response action based on our site visit earlier this month.

We are prepared to initiate site work beginning Monday April 20, 2020.

Please review and contact us if the proposed approach is inconsistent with WDNR expectations.

Thank you

GEI50

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Memo



To: Mr. Matthew Bookter, Bank First
From: Paul Killian, P.E., GEI Consultants
C: Mr. Qefli Nezeri, Innovative Properties
Date: April 9, 2020

Re: Site Visit and Conceptual Vapor Mitigation Approach
Innovative Properties – Ninth and Military, Green Bay

GEI personnel (Paul Killian, Paul Garvey and Kyle Sandmire) completed a site visit of the Innovative Properties property located at the northeast corner of Ninth Street and Military Avenue in Green Bay on April 10, 2020. We were accompanied by representatives of Environmental Services Plus (ESP) a specialty environmental remediation contractor and Mr. Jerry Brule, building manager for Innovative properties. The purpose of the site visit was to review site conditions relative to results of sub-slab and indoor air samples previously collected by GEI on behalf of Innovative Properties and an approach for sub-slab vapor mitigation from which ESP can prepare a cost estimate and schedule for completing installation of a vapor mitigation system.

A general overview of our review of the environmental monitoring history.

- A release of dry-cleaning solvents occurred on, or prior to, 1999, reportedly originated from the One-Hour Martinizing tenant space.
- Groundwater monitoring from 1999 through 2014 indicates groundwater quality has generally improved although monitoring wells located along the east side of the building (Monitoring Wells 1,3 and 6) still showing chlorinated solvents at concentrations exceeding groundwater quality standards.
- Contaminant concentrations in the monitoring well directly east of the On-Hour Martinizing space are 1,000 times higher than any other monitored location.
- Groundwater quality has not been documented since 2014.

Significant observations and recommendations include the following:

1. **North Basement.** This is the portion of the basement typically occupied by employees of Jim's Music and used for equipment/instrument storage and repair. Indoor air samples collected from the North basement exceed vapor screening action levels. No sub-slab samples could be collected because the water table was directly below the floor slab and no unsaturated zone was present from which to sample. There are two subgrade sumps in this area of the basement:
 - a. The northwest sump is covered and was difficult to access but it appears it collects foundation drainage. Water that accumulates in this sump is pumped to the sanitary sewer. This sump is not vented, which is not typical. Discharge to the sanitary sewer from a foundation drain sump is also not typical. It is possible that the discharge was modified as part of previous environmental response efforts. The vapor sample previously collected from this sump indicated very high chlorinated concentrations.
 - b. The southeast sump appears to be a sanitary ejector pit and also discharges to the sanitary sewer. This pit is relatively deep (about 4 or 5 feet deep) and was essentially dry. We suspect that it receives sanitary discharge from the sink and toilet located south of this sump, in the South Basement (see below).

Recommended Response Action (North Basement):

- a. Investigate the potential for lowering the float control in the northwest sump to allow further drawdown of the water table.
- b. Seal both sumps with an air-tight cover.
- c. Install a vent pipe on the northwest sump where no vent pipe currently exists.
- d. Install a power blower in both vent pipes to maintain a vacuum in the sumps.

Potential Future Response Actions (North Basement)

- a. The southeast sump could potentially be used to collect groundwater and allow sub-slab venting in the North Basement. To accomplish this, any sanitary discharge to this sump would need to be decommissioned.
- b. Seal the floor with a watertight sealant.

2. South Basement. This is the unoccupied portion of the basement, part of which extends below the Jim's Music Lesson Area. The south wall of the basement is nearest the contaminant source area. Vapor samples collected from behind the south wall were extremely high. No sub-slab samples could be collected because the water table was directly below the floor slab and no unsaturated zone was present from which to sample. This portion of the basement is wet with groundwater infiltration apparently migrating from the joint between the floor and the walls. There is an internal drainage system installed at the base of the walls which drains into one of the two subgrade sumps present in this area of the basement:

- a. The floor drain sump is a shallow sump installed along the north wall of the south basement. This sump appears to have been installed exclusively to collect water from the interior drainage system. Water from this sump is pumped to the ejector pit. Although still able to convey water, the existing sump pump in this pit has leaking pump seals.
- b. The ejector pit is located near the northeast corner of the south basement. This is a large diameter pit, approximately 4.5 feet deep, that discharges to the sanitary sewer. It is uncertain where the sanitary water present in the sump is coming from. There is a sink and toilet in the south basement but the discharge from these appears to be directed north to the sanitary sump pit in the North Basement. There is a floor drain in the South Basement which may discharge to this ejector pit.

Recommended Response Action (South Basement):

- a. Open the bottom of the floor drain sump to expose it to the subgrade and use it to lower water levels and dry the basement.
- b. Seal both sumps with an air-tight covers.
- c. Install power vents on vents from both sumps.
- d. Seal the air space where the floor beam joins the south wall.
- e. Install horizontal vapor extraction points (2-inch diameter) into the south wall in at least two locations. These will be key extraction points for the vapor mitigation system. The south wall of the South Basement provides access to the contaminant source area and the opportunity to control vapor migration into Jim's Music Lesson Area which is directly above the south wall.

Potential Future Response Actions (South Basement)

- a. Sub-slab drainage piping can be installed below the floor slab of the south basement to improve dewatering and allow sub-slab venting below the floor slab.
- b. Seal the floor with a watertight sealant. This cannot be done until we can dry the basement and control groundwater infiltration.
- c. If the sump and drainage system is effective in drying the area, the South Basement can be useable space.

3. Jim's Retail area. The retail space for Jim's Music is located on the ground floor. Part of the retail space is over the North Basement and the remaining area is slab-on-grade without a basement. At this time, no vapor mitigation is recommended for the retail area. Indoor air quality and sub-slab vapor

concentrations exceed vapor action levels; however, this retail space is the farthest from the contaminant source area. It is our opinion that if we can control vapor migration into the basement areas and control vapor migration from the contaminant source area, conditions in Jim's Retail will improve. It is our opinion that the indoor air quality in the retail area is largely impacted by vapors migrating from the basement and migrating from below the One-Hour Martinizing space.

If sub-slab chlorinated concentrations below the portions of Jim's Retail area without a basement are present after installing vapor mitigation measures in the basement, a dedicated sub-slab venting system can be installed at a later date.

4. **Jim's Lesson Area.** Jim's Lesson Area is directly adjacent to One-Hour Martinizing. A portion of the lesson area is over the South Basement and the remainder of the lesson area is slab-on-grad construction, similar to the other commercial spaces in the building. The ambient air quality in Jim's Lesson Area is similar to the air quality in the South Basement. The active vapor extraction points installed in the south wall of the South Basement, along with the east wall vapor extractions system (see below) is expected to improve air quality in the Lesson Area.
5. **Other Rental Spaces.** There are three other commercial spaces: One-Hour Martinizing, Former Williams Tae Kwon Do, and Edward Jones. One-Hour Martinizing and the adjacent Former Williams Tae Kwon Do space had the highest sup-slab vapor concentrations.

To address these commercial spaces, we are proposing to install vapor extraction points positioned through the east footing wall. Horizontal pipes (2-inch diameter) would be installed below the floor of Jim's Lesson Area, One-Hour Martinizing, Former Williams and Edward Jones. These pipes would be installed from outside the east wall of the structure such that we are not disturbing the inside of the tenant spaces. Each vapor extraction point would have a valve to control pressure and flow from each location. The vapor extraction points would be connected to a blower system to generate a vacuum and collect sub-slab vapors.

The blower system may consist of separate blowers for each extraction point or may consist of a common blower to service the entire system. We propose to test each extraction point following installation to properly design the pressure-flow characteristics of the required blower system. There is a separate room along the east end of the Former Williams Tae Kwon Do space which would work well to house the mechanical system. This is accessible through an exterior door on the east wall of the building such that the system could be monitored and maintained without accessing the main rental space.



Consulting
Engineers and
Scientists

April 15, 2020

VIA EMAIL: mbookter@bankfirstwi.bank

Mr. Matthew Bookter, Vice President Business Banking
Bank First
2747 Manitowoc Road
P.O. Box 28587
Bellevue, WI 54311-6630

**Re: Proposal for a Vapor Mitigation System and Groundwater Sampling
1233 South Military Avenue
Green Bay, Wisconsin**

Dear Mr. Bookter,

GEI Consultants Inc. (GEI) is pleased to provide this proposal to install an emergency action vapor mitigation system at the property owned by Innovative Properties and located at 1233 South Military Avenue in Green Bay, Wisconsin. Results of sub-slab vapor, and ambient air, monitoring recently completed confirmed the presence of chlorinated hydrocarbons at concentrations above the vapor action levels, suggesting there is a potential risk to human health under long-term exposure conditions.

The proposed vapor mitigation system is consistent with site conditions and recommended response action outlined in our memorandum dated April 9, 2020, and includes the following:

North Basement

This is the portion of the basement typically occupied by employees of Jim's Music and used for equipment/instrument storage and repair. Indoor air samples collected from the North basement exceed vapor screening action levels.

Proposed response action:

- a. Investigate the potential for lowering the float control in the northwest sump to allow further drawdown of the water table.
- b. Seal both sumps with an air-tight cover.
- c. Install plumbers plugs to temporarily seal the floor drains.
- d. Install a vent pipe on the northwest sump where no vent pipe currently exists.
- e. Install a power blower in both vent pipes to maintain a vacuum in the sumps.

South Basement

This is the unoccupied portion of the basement, part of which extends below the Jim's Music Lesson Area. The south wall of the basement is nearest the contaminant source area.

Proposed response action includes the following:

- a. Open the bottom of the floor drain sump to expose it to the subgrade and use it to lower water levels and help dry the basement.
- b. Seal both sumps with an air-tight cover.
- c. Install plumbers plugs to temporarily seal the floor drains.
- d. Install power vents on both sumps.
- e. Seal the air space where the floor beam joins the south wall.
- f. Install horizontal vapor extraction points (2-inch diameter) into the south wall in two or three locations.

Jim's Retail

The retail space for Jim's Music is located on the ground floor. Part of the retail space is over the North Basement and the remaining area is slab-on-grade without a basement. At this time, no vapor mitigation is recommended for the retail area. Indoor air quality and sub-slab vapor concentrations exceed vapor action levels; however, this retail space is the farthest from the contaminant source area. It is our opinion that the indoor air quality in the retail area is largely impacted by vapors migrating from the basement and migrating from below the One-Hour Martinizing space. If we can control vapor migration into the basement areas and limit vapor migration from the contaminant source area, conditions in Jim's Retail area should improve.

If sub-slab chlorinated concentrations below the portions of Jim's Retail area without a basement are persistent after installing vapor mitigation measures in the basement, a dedicated sub-slab venting system can be installed at a later date.

Jim's Lesson Area

Jim's Lesson Area is directly adjacent to One-Hour Martinizing. A portion of the lesson area is over the South Basement and the remainder of the lesson area is slab-on-grade construction, similar to the other commercial spaces in the building. The ambient air quality in Jim's Lesson Area is similar to the air quality in the South Basement. The active vapor extraction points installed in the south wall of the South Basement, along with the east wall vapor extractions system (see below), is expected to improve air quality in the Lesson Area.

Other Rental Spaces

There are three other commercial spaces: One-Hour Martinizing, former Williams Tae Kwon Do, and Edward Jones. One-Hour Martinizing and the adjacent former Williams Tae Kwon Do space had the highest sub-slab vapor concentrations.

Proposed response action includes the following:

To address these commercial spaces, we are proposing to install horizontal vapor extraction points positioned through the east footing wall. Horizontal pipes (2-inch diameter) would be

installed at five locations along the east wall, extending below the floor of Jim's Lesson Area, One-Hour Martinizing, former Williams Tae Kwon Do, and Edward Jones. These pipes would be installed from outside the east wall of the structure, such that we are not disturbing the inside of the tenant spaces. Each vapor extraction point would have a valve to control pressure and flow from each location. The vapor extraction points would be connected to a blower system to generate a vacuum and collect sub-slab vapors.

We propose to test each extraction point following installation to properly design the pressure-flow characteristics of the required blower system. At this time, we are proposing separate blowers for each of the retail spaces and a dedicated blower for the south basement wall and each of the sumps (10 total). The blowers for the retail spaces (5 total) will be mounted outside the east wall. However, depending on field testing completed following installation of the extraction points, a common blower to service portions of the system may be more cost effective.

We propose to utilize the separate room along the east end of the former Williams Tae Kwon Do space to house the control system. This is accessible through an exterior door on the east wall of the building, such that the system could be monitored and maintained without accessing the main rental space.

Groundwater Assessment

To further evaluate environmental conditions of the property, we propose to collect groundwater samples from the nine (9) groundwater monitoring wells previously installed on the Property (MW-1, PZ-1, MW-2, PZ-2, MW-3, MW-5, MW-6, PZ-6, and MW-7). These groundwater monitoring wells have not been sampled since 2014. Collecting groundwater samples from these wells will allow GEI to evaluate whether current groundwater conditions have significantly changed since 2014 and if there is a continuing source of contamination.

Groundwater will be purged from the groundwater monitoring wells and groundwater samples from each well will be collected for laboratory analysis of volatile organic compounds (VOCs). Purged water will be containerized and stored in a secured location on site pending the analytical test results that will determine the appropriate disposal method.

Following receipt of laboratory analytical results, GEI will provide an email report of the groundwater sampling analytical test results.

Assumptions

To complete the services outlined in this proposal, we have made the following assumptions and understand the following conditions will be provided by the property owner/tenants:

- GEI and the contractor (Environmental Services Plus, Inc [ESP]) will have access to the basement areas during daylight hours, access to the outside of the east wall and access to the storage room part of the former Williams Tae Kwon Do space throughout the duration of construction (approximately 1 week).
- GEI and ESP can access the basement areas via the rear door to avoid disruptions to the retail spaces.
- Owner or owner's representative will provide internal lighting for the project.

- Public utilities will be located by Wisconsin Diggers hotline. Owner will notify GEI and ESP of any private utilities impacting the proposed work. GEI and ESP will not be responsible for damaged utilities that were not identified prior to starting the work.
- GEI anticipates that subsurface conditions, including the presence of granular backfill below floor slabs and behind the south basement wall, will facilitate vapor extraction. If subsurface conditions vary from anticipated conditions, modifications to the proposed vapor mitigation system may be necessary. Significant modifications may require additional cost.
- All sumps located in the basement area currently appear to discharge to the municipal sanitary sewer system. We assume continued discharge to the sanitary sewer system can continue without pretreatment.
- The proposed scope and corresponding cost estimate do not include treatment of the emissions of the vapor extraction system. If total VOCs, or constituent specific compounds, exceed hazardous air emissions limits, treatment may be necessary.

This proposal and corresponding cost estimates are based on our professional judgement and experience and is expected to mitigate ambient air quality over time, such that the tenant spaces can be occupied. However, due to the uncertainty related to the extent of subsurface contamination, we cannot guarantee the performance of the proposed mitigation system.

Project Schedule

We understand the desire to install the vapor mitigation system as soon as practicable. Assuming the proposed approach is acceptable, we are prepared to initiate the site work on Monday, April 20, 2020. We anticipate the work will be completed within one week, although additional time may be necessary to finalize design and the installation of the blower systems.

Fee and Conditions of Service

GEI will complete our services on a time-and-material basis in accordance with the terms and conditions of the attached Standard Professional Services Agreement. The contractor proposal from ESP is also attached. We anticipate you will contract separately with GEI and ESP; however, GEI can subcontract with ESP but will require a 10% mark-up on subcontractor costs.

A summary of our estimated fees associated with these services is provided below:

This cost estimate does not include:

- Subsequent ambient air sampling and vapor discharge sampling which will likely be required following installation of the vapor mitigation system.
- Routine monitoring and maintenance of the vapor mitigation system which will be necessary following installation.

- Environmental sampling and assessment to evaluate vapor intrusion risk to neighboring properties.
- Environmental sampling and reporting as may be required by the Wisconsin Department of Natural Resources (WDNR) to obtain environmental closure of the property.

A separate proposal for subsequent services can be provided following installation of the vapor mitigation system.

Given the challenges created by the ongoing COVID-19 crisis, the performance of the services included in this Proposal as well as the satisfaction of the schedule described herein, are contingent and conditioned upon GEI having the ability to deploy the required resources as well as having access to the required site and data/documents to complete the services. These resources include, but are not limited to GEI staff, subcontract vendors and materials providers. GEI will immediately notify the Client in the event it becomes aware that services will be interrupted or otherwise delayed as discussed herein.

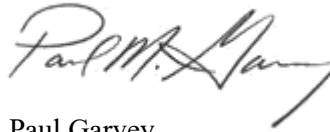
Should you have any questions with regard to the scope of services, fee, or schedule as presented herein, please contact us. We look forward to working with you on this project.

Sincerely,

GEI CONSULTANTS, INC.



Paul Killian, P.E.
Vice President



Paul Garvey
Environmental Scientist

Enclosures:

ESP Proposal dated April 15, 2020
Standard Professional Services Agreement
Fee Schedule

Cc: Mr. Qefli Neziri
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