

October 25, 2010
File: 147-111388

Mr. Robert Filkins
Senior Engineering Geologist, Remedial Bureau B
Division of Environmental Remediation, NYSDEC
625 Broadway, 12th Floor
Albany NY 12233-7016

Re: Former Mimi Cleaners: 58 Christie Place, Scarsdale, NY
VCP Site No. V00306-3
Scope for Additional Sub-Slab Vapor and Indoor Air Sampling
2 Spencer Place Building

Dear Mr. Filkins:

Henningson, Durham & Richardson Architecture and Engineering, P.C. in association with HDR Engineering, Inc (HDR) provides this scope of work to perform additional sub-slab vapor and indoor air sampling within the 2 Spencer Place Building as part of the off-site delineation of potential contaminated soil gas associated with the Former Mimi Cleaners (Site). Figure 1 shows an aerial photograph with the former Mimi Cleaners and the 2 Spencer Place Building highlighted. This work plan is based on the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006* and discussions with NYSDOH and New York State Department of Conservation (NYSDEC) and the building owner.

Sub-Slab Vapor and Indoor Air Sampling

The 2 Spencer Place Building is located to the southwest of the Site on the south side of Spencer Place at the corner of Spencer Place and East Parkway. The building is approximately 85 ft by 100 ft in size. Initially the owner of the building provided access to the southern portion of the building's basement that was recently vacated by a tenant for sampling. The proposed additional sampling locations are shown on Figure 2. HDR met with the owner of the building and conducted a site visit on 25 May 2010 to look at the vacant portion of the building (approximately the southern third of the building). According to the building owner, the basement of this building is sectioned into storage spaces for the first floor business tenants; each tenant has access to space in the basement via a set of stairs from each of the first floor tenant spaces. According to the building owner there is no common hallway in the basement and there are offices on the second floor of the building. The second floor is accessed via a set of stairs at the front of the building on Spencer Place.

Based on the results of the sampling event, conducted on 1 July 2010, especially the elevated indoor air sample result for perchloroethylene (PCE), the NYSDEC and NYSDOH has requested an additional indoor air and sub-slab vapor sampling event for this building. A total of four (4) sub-slab vapor samples and nine (9) indoor air samples will be collected from within the building as follows:

- Sub-slab vapor samples will be collected from the following four (4) basement locations:
 - Northern-middle section of the vacant basement area (2SP-SS-1). This location was sampled during the initial sampling conducted on 1 July 2010. We are not planning on re-sampling the 2SP-SS-2 sample location.
 - The basement area of the Clothing Store (2SP-SS-3)
 - The basement area of the Dry Cleaning Store (2SP-SS-4)
 - The basement area of the Optometrist (2SP-SS-5).
- Indoor air samples will be collected from the following six (6) first floor locations:
 - The Parkway Café (2SP-IAB-1)
 - The Toy Store (2SP-IAB-2)
 - The Eyecare Center (2SP-IAB-3)
 - The Jewelry Store (2SP-IAB-4)
 - The Clothing Store (2SP-IAB-5)
 - The Optometrist (2SP-IAB-6)
- Indoor air samples will be collected from the following three (3) basement locations:
 - Middle section of the vacant basement area (2SP-IAB-7). This location was sampled during the initial sampling conducted on 1 July 2010.
 - Dry Cleaning Store (2SP-IAB-8)
 - The Optometrist (2SP-IAB-9)

The sub-slab vapor samples will be collected in 6-liter Summa canisters and analyzed by a NYSDOH-certified laboratory with current Environmental Laboratory Approval Program (ELAP) certification for VOC analyses by EPA Method T0-15. The analytical laboratory sample data package will be validated by an independent validating service to document that the data collected is usable and meets the project objectives.

As requested by NYSDOH, the indoor air samples will be collected with organic vapor passive air monitoring badges (e.g. 3M 3500) and analyzed by a NYSDOH-certified laboratory using method NYSDOH 311-9 that is used to detect PCE. For an 8-hour sample interval these badges can detect PCE down to a concentration of approximately $4 \mu\text{g}/\text{m}^3$.

For the sub-slab vapor sample locations, permanent sample ports will be installed. Each sample port will be constructed of a brass tube threaded to a brass coupler. The brass tube will extend below the bottom of the slab so that the brass coupler is flush with the top of the slab. The brass coupler accepts a threaded plug to seal the port when it is not in use. To install the sample port, a 1/2-in. diameter hole

will be drilled through the concrete floor and a 1-1/4 in. bit will be used to countersink the hole deep enough to accept the brass coupler so it is flush with the floor. The probe will then be installed in the hole; a bead of permagum will be placed at the bottom of the coupler where it meets the brass tube to seal the sample port in place, flush with the floor. The annular space around the brass coupler will be filled with cement to permanently seal the sample port in place. A threaded plug (removable with an Allen wrench) will be screwed into the coupler to seal and secure the sample port until the sampling event.

It will be necessary to conduct a site visit to the sample locations to determine the proper location of the badges for the indoor air samples and also the additional sub-slab vapor samples. If necessary, to minimize the disturbance to the tenants and the building owner, HDR would be prepared to install the three sub-slab vapor ports during the site visit (there is one sample port already installed in the vacant tenant space [SP-SS-1]). If necessary, HDR would also be able to collect the sub-slab samples through temporary sample ports as was done with the initial sampling event to minimize the disturbance to the tenants and the building owner and the number of visits required to conduct the additional investigation sampling activities.

In accordance with the NYSDOH vapor intrusion guidance document, HDR is proposing to conduct a chemical inventory of each tenant space including a brief interview with the tenants to determine if they are using any chemicals that contain PCE or there was any historical usage of chemicals that may have contained PCE to document what, if any, potential sources of PCE are in the building.

During the installation of the sample ports the openings drilled in the floor will be scanned with a portable photoionization detector (PID) for total VOC concentrations. In addition, HDR will use the PID to take total VOC measurements from any openings that are observed in the floors or walls.

On the day of sampling, at each sub-slab sample location the threaded plug will be removed from the sub-slab vapor probes and a temporary NPT thread to compression fitting coupler will be used to connect the probe to a section of Teflon® tubing outfitted with compression fittings. The tubing and point will be purged and attached to a Summa canister. For the purging process, the tubing will be connected to a personal air sampling pump which will be run at a flow rate of <0.2 L/min to purge a minimum of three volumes of air from the soil vapor implant tube and Teflon® tubing. The purged air from the sub-slab sample port will be collected in a Tedlar® bag so there will be no potential for cross contamination of the ambient air within the basement. After purging, the tubing will be connected to a laboratory-supplied flow control regulator that has been attached to a Summa Canister (6-L capacity). The vacuum reading on the canister will be recorded, and the valve on the canister will be opened to collect the sub-slab vapor. The flow control regulator will be set by the laboratory to collect the sample over a 4-5 hour period (~20 ml/min).

The indoor air samples will be collected with organic vapor passive air monitoring badges (e.g. 3M 3500) in accordance with the NYSDOH October 2006 Guidance document and they will be analyzed for PCE using method NYSDOH 311-9. At each location the badges will be removed from their packaging and hung up in each location in an area where air can pass by the badge freely. Care will be taken to position the badges away from corners and obstructions that could limit the air flow. The badges are designed to collect the sample over an 8-hour interval; at the end of the sample interval the badges will be removed and placed back in their package and sealed.

The field notes and documentation for the sampling will include the following, where applicable:

- sample identification,
- date and time of sample collection,
- sampling depth,
- identity of samplers,
- sampling methods and devices,
- volume of soil vapor extracted,
- canisters vacuum before and after samples collected,
- apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and
- chain of custody protocols and records used to track samples from sampling point to analysis
- photographs of the sample locations.

Samples will be shipped via overnight courier under proper chain-of-custody to the NYSDOH-certified laboratories for analysis. The sub-slab vapor samples will be analyzed by EPA Method T0-15; for this project NYSDEC and NYSDOH have approved the analysis of chlorinated VOCs only. Based on a 4-5 hour sample collection the practical quantitation limit will be less than $1 \mu\text{g}/\text{m}^3$. The indoor air samples will be analyzed by NYSDOH Method 311-9; this method only detects PCE. Analytical results of the sub-slab vapor and indoor air sampling investigation will be summarized by HDR and submitted to NYSDEC and NYSDOH in a data summary report.

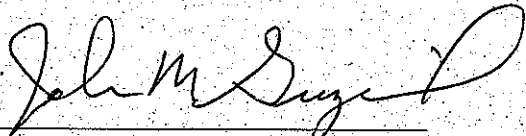
Schedule

HDR is prepared to commence with sample collection once approval of this scope has been received and access to the building has been granted and we can coordinate the delivery of the Summa canisters and flow control regulators. NYSDOH has indicated that they would this sampling event to take place after the heating season which begins on November 15th according to the NYSDOH vapor intrusion guidance document.

If you have any questions, please feel free to contact me at (845) 735-8300.

Very truly yours,

Henningson, Durham & Richardson Architecture and Engineering, P.C.
in association with HDR Engineering Inc.

A handwritten signature in cursive script, appearing to read "John M. Guzewich".

John M. Guzewich, Project Manager
Environmental Restoration

Cc: N. Walz, NYSDOH
B. Groden, West-Ex Associates, Inc.
S. Russo, Esq. Sive, Paget & Riesel, P.C.
D. Karp, P&G Realty LLC



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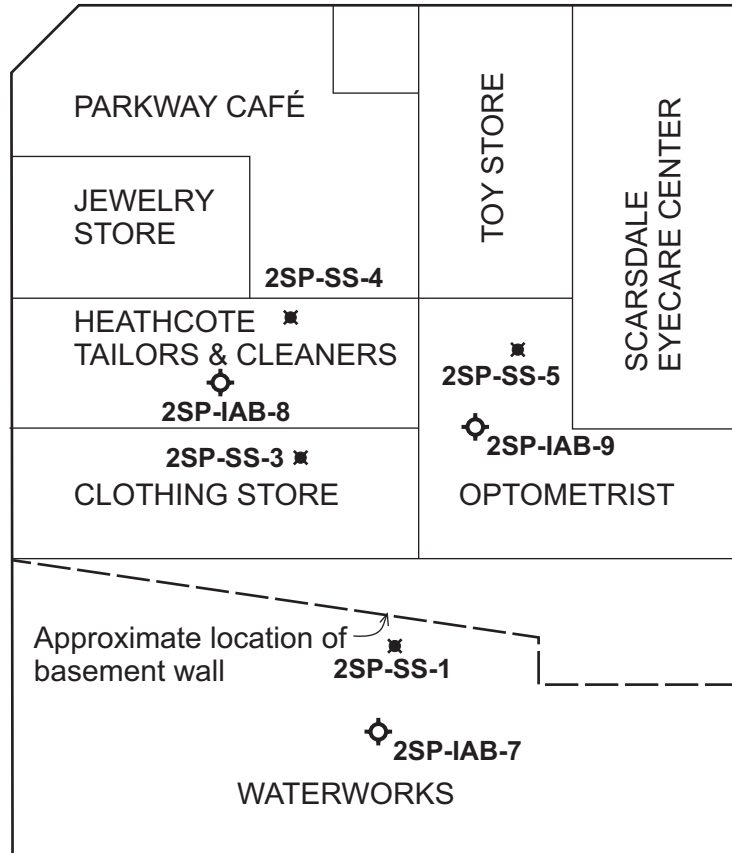
Location of 2 Spencer Place Building and Mimi Cleaners

Former Mimi Dry Cleaners

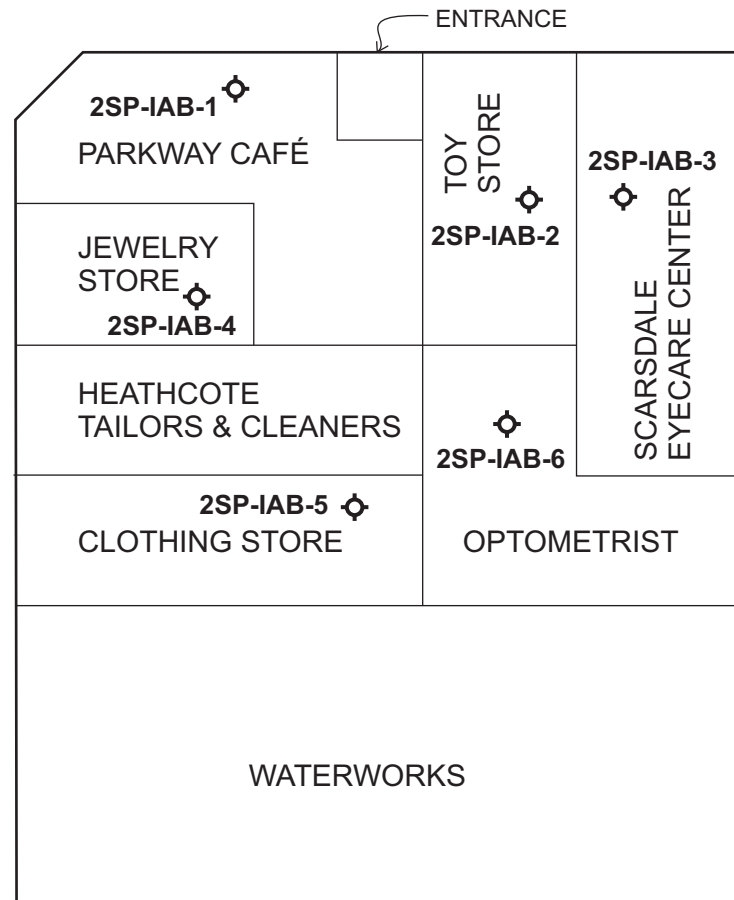
Scarsdale, NY

**Figure
1**

Basement Layout



First Floor Layout



Legend

- ✱ Sub-slab vapor sampling location
- ⊕ Indoor air sampling location
(Diffusion-type badge samplers will be used)

(The exact dimensions and layouts of the 1st floor tenant spaces and basement areas are approximated)

NOT TO SCALE

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Former Mimi Dry Cleaners

2 Spencer Place Building
Proposed Sub-Slab Vapor and Indoor Air Sample Locations

Scarsdale, NY

Figure
2