February 17, 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
VP Site No. V00306-3
Scope for Sub-Slab Vapor and Indoor Air Sampling
Scarsdale Metro Restaurant

Dear Mr. Filkins:

HDR provides this scope of work to perform sub-slab vapor and indoor air sampling within the Scarsdale Metro Restaurant Building (878 Scarsdale Avenue) 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 Metro Restaurant 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.*

Sub-Slab Vapor and Indoor Air Sampling

The Metro Restaurant Building is located to the south of the Site south of Popham Road on Scarsdale Avenue. The building is approximately 50 ft by 50 ft in size. The proposed sampling locations are shown on Figure 2. Access will need to be provided by the property owner(s) to conduct the proposed sampling. A site visit was conducted on 9 February 2010. The basement of this building is a partial basement under the eastern portion of the building. It appears that the front portion of the building (western section) is supported on grade beams. The open portion of the basement is used for food storage and food preparation and is quite crowded with shelving, counters and food prep equipment. There were no noticeable sumps in the basement. A total of two (2) sub-slab vapor samples and one (1) indoor air sample will be collected from within the basement area of the building as follows:

- One sub-slab vapor sample will be collected from a location in the northern section of the basement inside the entrance to the boiler room
- One sub-slab vapor sample will be collected from a location in the southern section of the basement in the main area by the ice machine
- One indoor air sample will be collected in the center area of the basement.

The sample locations were selected based on a request from the tenant to select the sample locations such that they would not be in the way of the food preparation activities. These sample locations have

been selected to provide an assessment of vapor conditions within the building. The restaurant owner requested that we conduct the sub-slab sample port installation activities and the sampling activities on a Monday or Tuesday as they are the slowest days for the restaurant.

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 1-1/8 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.

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 flowrate of <0.2 L/min to purge a minimum of three volumes of air from the core hole through the floor or the soil vapor implant area. After purging, the tubing will be connected to a laboratory-supplied Summa Canister (6-L capacity). Vacuum on the canister will be recorded, and the valve on the canister will be opened to collect the sub-slab vapor. The flow control valve on the Summa canister will be set by the laboratory to collect the sample over a 4-5 hour period (~20 ml/min).

The indoor air sample will be collected using laboratory-supplied Summa Canisters (6-L capacity) following the procedures listed in the NYSDOH October 2006 Guidance. The vacuum on each canister will be recorded, and the valve on the canister will be opened to collect the indoor air. The flow control valve on the Summa canister will be set by the laboratory to collect the sample over a 4-5 hour period (~20 ml/min).

During the sampling, the vacuum on each canister will be periodically recorded. At the end of the targeted 4-5 hour sampling period, but before the vacuum on the canister is completely exhausted, the canister valve will be closed. The final vacuum reading will be recorded, the tubing will be disconnected, and the canister will be prepared for shipment.

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 each sample location will be taken during sampling. Samples will be shipped via overnight courier under proper chain-of-custody to a NYSDOH-certified laboratory for VOC analyses (chlorinated solvents only) by EPA T0-15. Based on a 4-5 hour sample collection the practical quantitation limit is less than 1 $\mu g/m^3$. Analytical results of the sub-slab vapor and indoor air sampling investigation will be summarized 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 regulators.

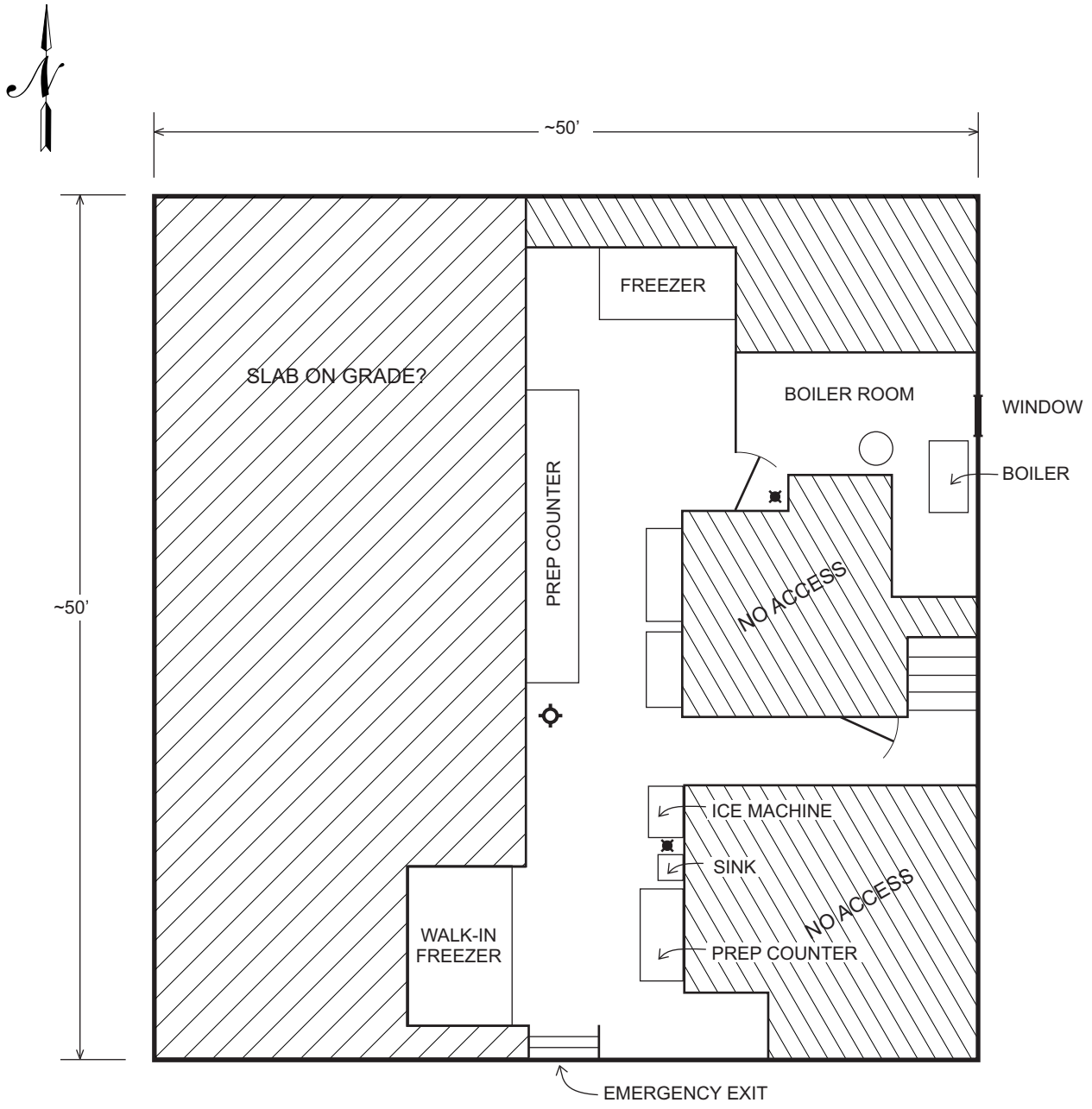
If you have any questions, please feel free to contact me at (845) 735-8300.

Sincerely,

John M. Guzewich
Project Manager

Cc: N. Walz, NYSDOH
S. Russo, Esq. Sive, Paget & Riesel. P.C.
K. Healy, Esq. Bryan Cave LLP

HDR	Henningson, Durham & Richardson Architecture and Engineering, P.C. One Blue Hill Plaza Pearl River, NY 10965	**Location of Scarsdale Metro Restaurant Building and Former Mimi Cleaners** **Former Mimi Dry Cleaners** **Scarsdale, NY**	**Figure 1**



Legend

- Sub-slab vapor sampling location
- Indoor air sampling location

NOT TO SCALE
Dimensions are approximate

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HDR	Henningson, Durham & Richardson Architecture and Engineering, P.C. One Blue Hill Plaza Pearl River, NY 10965	**Sub-Slab and Indoor Air Sample Locations** **Scarsdale Metro Restaurant** **Former Mimi Dry Cleaners** **Scarsdale, NY**	**Figure 2**