

Hnat, John J - DNR

From: Rob Hoverman <RHoverman@enviroforensics.com>
Sent: Wednesday, September 25, 2013 9:27 AM
To: Hnat, John J - DNR
Cc: William. Mulligan (wmulligan@dkattorneys.com); Michael K. Scott (mscott@dkattorneys.com); Jeffrey Carnahan; Brian Kappen
Subject: BRRTS 02-41-552089_Shorewood Queensway
Attachments: BRRTS 02-41-552089_6107 Shorewood Queensway - Aunt Peg's Site Visit Memo_09252013.pdf

Mr. Hnat,

Please find a brief memo attached regarding a recent visit to the Aunt Peg's property as it pertains to the Shorewood Queensway project. I understand you are on vacation until October 1st. Upon your return, EnviroForensics, counsel for Shorewood, and potentially Terracon representing Aunt Peg's would like to meet and discuss conditions at the Aunt Peg's property. Please let us know a time at your earliest convenience to meet.

I look forward to working with you on this matter.

Sincerely,

Rob Hoverman, LPG

Senior Project Manager

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MEMORANDUM

TO: J. Hnat, WDNR

FROM: Rob Hoverman, LPG, Senior Project Manager

CC: William Mulligan, Davis & Kuelthau, S.C.
Michael Scott, Davis & Kuelthau, S.C.

DATE: September 25, 2013

SUBJECT: Shorewood Queensway – Aunt Peg’s Site Building Assessment

This memorandum presents EnviroForensics’ technical summary regarding an on-site meeting Wednesday September 4, 2013 with representatives of Terracon on behalf of Aunt Peg’s. The objective of the meeting was to assess the performance of the SSDS and to discuss potential needs for additional sampling. Present at the site for EnviroForensics were Rob Hoverman, Senior Project Manager and Kyle Heimstead, Field Geologist. For Terracon, Scott Hodgson, Project Geologist and Paul Lenaker, Senior Staff Geologist were present.

The on-site activities included the following:

- General sub-slab depressurization system (SSDS) diagnostics (collecting pressure and flow readings);
- Sub-slab point screening with a photo-ionization detector (PID);
- Ambient air screening with the PID; and
- General assessment of the building doors, windows, heating and cooling systems, and construction aspects.

SSDS EVALUATION

A handheld electronic manometer was used to collect negative pressure readings from the sub-slab pressure testing points in 4312 and 4316 N. Oakland. Address locations, hereafter, will be referred to as the numerical unit only, i.e., 4312 N. Oakland will be referred to as 4312. The general layout of the SSDS and pressure test points are shown on the attached Figure 1. Pressure readings were also collected from each suction point on the SSDS. The pressure readings were between -0.071 and -2.1 inches of water. This indicates the SSDS is operating as designed to

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MEMORANDUM

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create adequate negative pressures beneath the slab, which are dispersed via the sub-slab preferential pathways created along perimeter drain tile. A summary of the pressure readings is provided in the following table.

4312 Basement	inches of water	4316 Basement	inches of water
SS-1	-0.210	SS-2	-0.291
SS-3	-1.180	SS-6	-1.883
SS-4	-1.884	SS-7	-0.477
SS-5	-0.103	SS-8	-0.071
4312 Suction Point	-2.100	4316 Suction Point	-2.1

A flow measurement from the SSDS indicated the system was discharging approximately 35 cubic feet per minute.

PID SCREENING

The PID readings were collected using ppbRAE 3000, which is a handheld volatile organic compound (VOC) sensor with a lower range of 1 part per billion (ppb) and an upper range of 10,000 parts per million (ppm). The PID readings were collected from each of the pressure testing points, identified floor drains, and indoor air. The PID readings from sub-slab pressure test points indicated the presence of VOCs in sub-slab vapor nearest to the Shorewood Queensway source, but dissipating northward away from the Site. The attached Figure 1 provides locations of the pressure test points. The following table summarizes the PID readings.

4312 Basement	PID in ppb	4316 Basement	PID in ppb	4320 Basement	PID in ppb
SS-1	49,820	SS-2	0	SS-Peg-3	0
SS-3	4,722	SS-6	0	Ambient	0
SS-4	580	SS-7	0		
SS-5	1158	SS-8	0		
Ambient Range	1009 - 1326	Ambient	860		

Indoor air measurements in the basement of 4312 indicated the presence of background VOCs, which is likely attributable to nail polish, nail polish removers, and hair care products stored in the basement. The background screening in the remaining basement areas, floor drains, or open sewer sink connections did not identify any detectable concentrations.



BUILDING ASSESSMENT

Additional time was spent evaluating the Aunt Peg's buildings to determine if the building construction methods provided secondary pathways. Floor drains were identified in the basements of 4312, 4316, and 4320. PID screening in 4312 indicated the floor drain was emitting less VOC than the ambient conditions in the basement. The floor drain in 4316 screened similar to background conditions in the basement. The open floor drains in 4320 did not screen any detectable VOCs with the PID.

Water lines were identified in the basements of 4312-4316, which penetrated the common basement wall with the basement below 4320. A photograph of a typical wall penetration is presented in Attachment 1. Additional sewer utilities where vapors may have migrated from the sub-surface to the indoor air of the basements were not identified. Floor drains and sewers below 4320 appeared to have been recently repaired and replaced and the concrete flooring was in an acceptable condition.

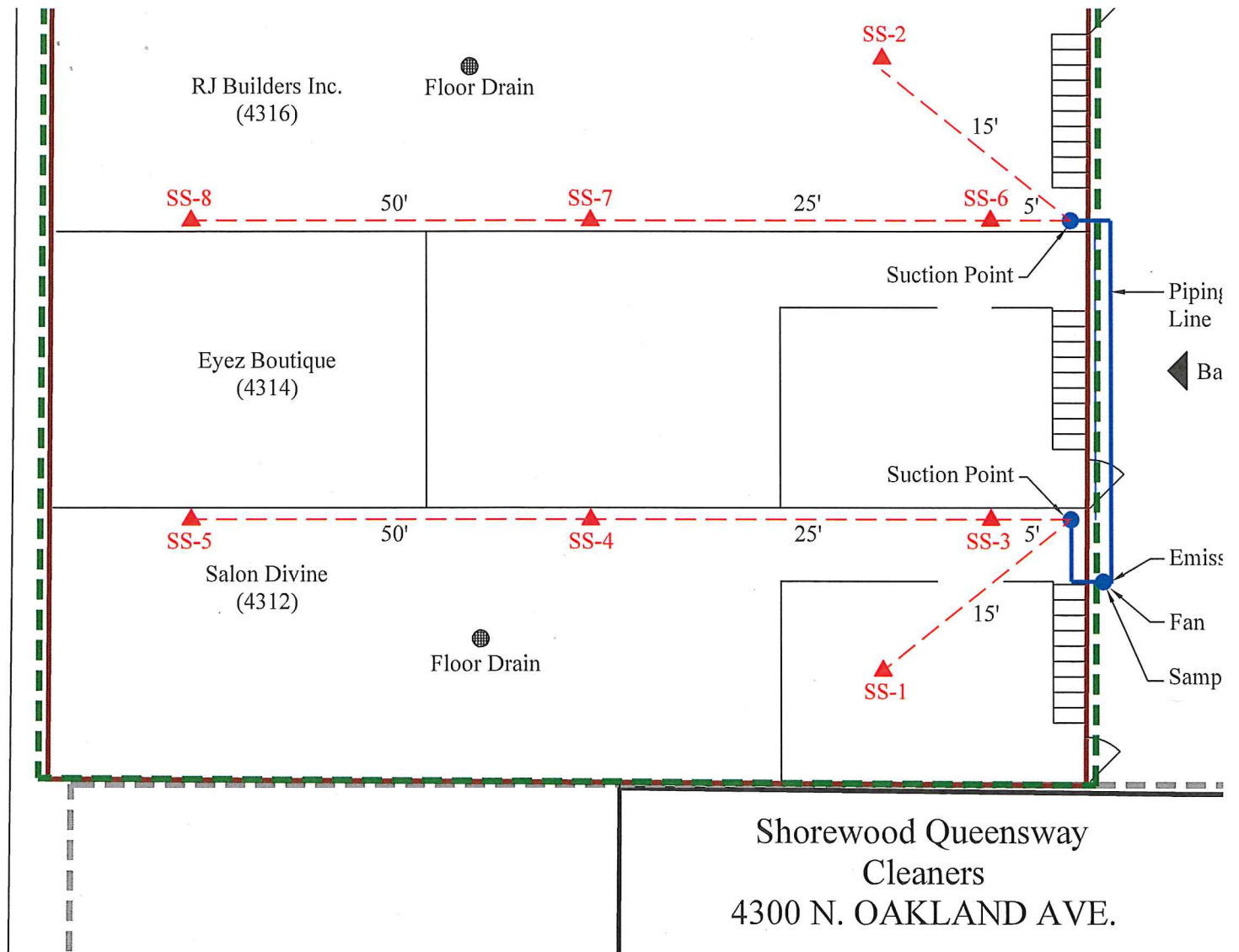
There were historical trash incinerators present in the basements below 4320 and 4332, but currently inoperable. Each incinerator was connected to the first and second floors of the building via small trash chutes. These trash chutes would have been utilized by building occupants to dispose of trash via the chutes that were connected to each floor. Each incinerator chute was secured in the closed position at the time of the assessment. A photograph of an incinerator chute is presented in Attachment 1. While these chutes are a connecting pathway to the basements, the likelihood of these being a migratory pathway for contaminated vapors is limited.

To a lesser extent the basements below 4330 and 4334 were also inspected for potential routes for vapor intrusion. Several floor drains and open sewer connections were identified, but similar to the previously identified floor drains the PID screening did not indicate the presence of VOCs.

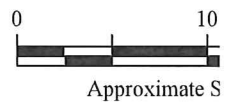
A secondary pathway was identified from the SSDS exhaust to 4312, 4314, and 4316 via fresh air intakes located on the common roof. Each unit had a separate intake, which is connected to the air handlers and furnaces in the basement of each unit. The discharge of the SSDS was located at a similar elevation to each of these intakes, which has the potential to be drawn in by the fresh air intakes. Attachment 1 shows a photograph of a metal fresh air intake on the roof taken from the window in apartment #204.

SUMMARY

The Aunt Peg's building assessment showed the SSDS was operating in an effective manner. However, additional vapor pathways may exist in the building. EnviroForensics proposes that a meeting with the WDNR, EnviroForensics, and Terracon may be the most effective manner to address concerns for the Aunt Peg's property.



● Pressure testing points
 SS-PEG-1 ▲ Sub-slab sample location
 --- Shorewood Queensway property boundary
 - - - Peg's basement area





Water line wall penetrations



Sealed incinerator chute



Fresh air intake