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August 6, 2013

VIA ELECTRONIC AND U.S. MAIL

William Mulligan
Davis & Kuelthau
111 East Kilbourn Avenue
Suite 1400
Milwaukee, WI 53202

FID 241 094 590

Re: BRRTS# 02-41-552089; SHIRDON INC DBA SHOREWOOD QUEENSWAY DRY CLEANERS

Dear Mr. Mulligan:

This responds to your letter dated July 1, 2013 regarding the need for additional vapor intrusion monitoring at the buildings at 4312-4334 Oakland Avenue, Shorewood, Wisconsin.

Your summary of historical events fails to grasp the importance of the current data, which suggest the vapor issues may be getting worse, placing into doubt the safety of residents in untested portions of the property adequacy and effectiveness of the SSDS. The SSDS installation was a first step performed to improve the safety of the buildings, but the data does not confirm the SSDS is adequate to make the indoor spaces safe functioning adequately and as intended. To ensure the SSDS is making matters better and not worse, more testing is required and in more places. Additionally, since compounds other than PCE were detected, those compounds that are the known degradation products of PCE, such as TCE, should be tested, especially since their vapor action levels are far less than that of PCE.

Resampling To Confirm SSDS ?

- VOC scan Completed 5.17.03 Report CF.

We are not in agreement on the technical matters discussed in your letter. The SSDS was installed to address the indoor vapor risks in the buildings, but continued testing was required because there was no determination that the SSDS would be adequate. EnviroForensics' own data show the VOCs are increasing in concentration in the indoor air since the installation of the SSDS. Because concentrations are rising, and because there is no indication how the vapors move within the buildings, it is pertinent to examine areas that previously were not tested or were tested but at that time had low vapor levels. Such examination is part of a proper site

characterization. It also appears pertinent to examine the SSDS installation itself to ensure it is properly sealed.

I attach the recommendations of my client's consultant, Terracon, with regard to additional testing. I suggest that you ask EnviroForensics to review and respond to Terracon's letter report. Upon completion of EnviroForensics' review, please contact me to discuss how your client intends to proceed, so we can decide whether we need to meet with Mr. Hnat to discuss the matter.

Very Truly Yours,

William P. Scott/sv

William P. Scott

WPS/ms

cc: John Hnat, Wisconsin Department of Natural Resources
Lenny Gartenberg, Aunt Peg's Oakland Ave., LLC (via email only)
Scott Hodgson, Terracon (via email only)
Brian Kappen, EnviroForensics (via email only)

Terracon

August 6, 2013

Aunt Pegs Oakland Ave, LLC
c/o Mr. Lenny Gartenberg (electronic)
11315 West 121st Terrace
Overland Park, Kansas 66213

Telephone: 913.645.4450
E-mail: lennyg@kc.rr.com

RE: Vapor Intrusion Data Review and Suggested Sampling Plan
Aunt Pegs
4312 North Oakland Avenue
Shorewood, Wisconsin
Terracon Project No. 58117010

Dear Mr. Gartenberg:

At your request, Terracon Consultants, Inc. (Terracon) has prepared this letter to provide a summary of our findings after site reconnaissance and review of air sampling and subslab depressurization system (SSDS) data at the Aunt Pegs site in Shorewood, Wisconsin. The Aunt Pegs site is a strip mall with upper story apartments adjacent (north) to the Shorewood Queensway Dry Cleaners located at 4300 North Oakland Avenue, Shorewood Wisconsin, which is an active Wisconsin Department of Natural Resources (WDNR) Environmental Repair Program site (BRRTS #02-41-552089). Queensway is responsible for investigating and remediating chlorinated solvent related soil, groundwater, and vapors that have adversely impacted the Aunt Pegs property. Enviroforensics is the consultant for Queensway.

Terracon performed a site reconnaissance on July 1, 2013 and reviewed the following documents from Enviroforensics:

- May 2011 Draft Vapor Intrusion (VI) Data
- Vapor Intrusion Assessment Status Report dated June 14, 2011
- October 2011 Subslab plus Indoor Air Results
- Indoor Air Lab Report (October 2011)
- Work Plan for SSDS Installation dated October 1, 2012
- SSDS Installation Summary Report dated January 29, 2013
- SSDS Performance Monitoring Report 1 dated February 21, 2013
- SSDS Performance Monitoring Report 2 dated May 17, 2013

Overall, based on our data review and observations it appears that mechanisms for vapor transport were not investigated thoroughly during the vapor intrusion assessment and are not

well understood. Our primary concerns identified during our review include the following:

- Although the current tetrachloroethene (PCE) residential Vapor Action Level is 42 micrograms per cubic meter (µg/m^3), the PCE VAL at the time of sampling indoor air at the apartments and common hallway in October 2011 was 4.1 µg/m^3, but they never performed followup sampling even though the common hallway sample had 16.5 µg/m^3 PCE. No explanation or data was presented to identify why there was detection in the second floor common hallway since radiant heat is used rather than an HVAC system and apartments are cooled via window air conditioners. We are concerned that the hallway may be connected to other areas that do have VAL exceedances. Although the PCE detection was less than the current applicable standard, more testing should be performed because there is no indication how the vapors reached that location and therefore there is a legitimate risk that even greater concentrations may have reached the considerable additional residential spaces that were not tested.
- Post-installation SSDS performance testing has indicated an order of magnitude increase in the indoor air concentrations from December 2012 to March 2013. For example, the indoor air sample collected from 4312 had 14 µg/m^3 PCE in December 2012 but had 117 µg/m^3 PCE in March 2013. Samples collected from 4314 and 4316 also showed dramatic increases in the PCE concentration. Enviroforensics did not note this trend or offer an explanation, they simply dismissed it since all results were still below the industrial VAL for PCE. We are concerned about why the increase occurred. And whether the increasing trend will continue such that standards are exceeded. It is possible that the SSDS is drawing vapors into the subslab/indoor air that wouldn't have otherwise migrated there without the negative pressure or it may be possible that higher than normal groundwater conditions influenced conditions through a sump pit(s) or by washing soil thus increasing groundwater contamination etc.
- Enviroforensics has applied industrial VALs to the commercial spaces at Aunt Pegs and a good argument could be made to use those VALs instead of residential based on exposure time-frames; however, since the commercial spaces are connected to residential spaces, it may be more appropriate to apply residential VALs. It is not clear from the information provided that the industrial VALs have been approved for use by WDNR. Many WDNR project managers only allow industrial VALs to be applied to a property that is zoned industrial or only under other specific conditions. WDNR should set the appropriate standard for these mixed-use buildings.

Additional concerns that we have identified include:

- The October 2011 indoor air sampling event included only testing for PCE. In the spirit of protecting the health of the tenants at Aunt Pegs, we believe that testing

for other volatile compounds in addition to PCE is appropriate in the second floor apartments. At a minimum testing should have been done for PCE plus its degradation products, particularly trichloroethene (TCE) and vinyl chloride (VC), since the VALs for TCE (currently 2.1 µg/m^3 for residential) and VC (currently 1.6 µg/m^3 for residential) are much lower than for PCE. TCE has been detected in the SSDS exhaust samples which verifies that TCE is present and therefore the potential presence of PCE degradation products poses a legitimate health concern.

- It appears that indoor air samples have not been collected from the first floor of the middle part of the strip mall (4320 and 4322). We have come across situations where the first or second floors have had higher concentrations than the basement. The first floor in the 4320 and 4322 buildings should be tested, especially since the concentrations in the indoor air following installation of the SSDS have been increasing.
- Although roughly 40 feet from the second story apartments, the SSDS stack only extends to about 4 feet above the top of the first floor in the southern part of Aunt Pegs. This potentially exposes the second story apartments (to the north) to the SSDS exhaust which may be a source of indoor air contamination through open windows and window air conditioners. Indoor versus outdoor air pressures are an important factor in how vapors migrate. This potential exposure amplifies the preceding justifications for more indoor testing at additional locations.
- The exhaust may also coat the building such that during rain events the contamination may be flushed onto the ground from downspouts, which may then contaminate groundwater causing additional vapor intrusion issues.

Many questions remain. How and why was PCE detected in the second floor hallway in the middle part of the building? Why did indoor air concentrations increase from December 2012 to March 2013 with the system running? Has contaminated groundwater entered sump pits in the basement and contributed to the indoor air quality issues? Furthermore, additional mechanisms for vapor intrusion have potentially been introduced via the SSDS system layout. Has the system drawn vapors into the space? What effect has the SSDS system exhaust had on indoor air quality? Although current indoor air concentrations may be below applicable VALS, enough questions remain that we cannot confidently agree that the health of the tenants at Aunt Pegs has been adequately protected. As such, we recommend the following sampling plan as part of the next round of SSDS performance testing in addition to the planned testing:

- Re-sample subslab point SSV-PEG-3 in the basement of 4320 for the TO-15 short list (PCE and degradation products), at a minimum. The sample should be collected over a 24-hour period for direct comparison to residential indoor air samples.
- Collect a 24-hour indoor air sample from the basement of 4320 for the TO-15 short list (PCE and degradation products), at a minimum. The sample should be

collected over a 24-hour period to allow more direct comparison to indoor air samples collected from the apartments.

- Collect a 24-hour indoor air sample from the first floor space at 4320 for the TO-15 short list (PCE and degradation products), at a minimum. The sample should be collected over a 24-hour period to allow more direct comparison to indoor air samples collected from the apartments.
- Collect a 24-hour indoor air sample from the common hallway in the second story above 4320-4322 for the TO-15 short list (PCE and degradation products), at a minimum. The sample should be collected from the same location as October 2011.
- Collect a 24-hour indoor air sample from second story apartment #203 (east-facing windows) above 4320-4322 for the TO-15 short list (PCE and degradation products), at a minimum. The sample should be collected from the same location as October 2011.
- Collect a 24-hour indoor air sample from either second story apartment #201 or #202 (west-facing windows) above 4320-4322 for the TO-15 short list (PCE and degradation products), at a minimum.
- Collect weather data, indoor air pressure data for each space sampled, and outdoor air pressure data at the time of sample collection.
- Re-route the SSDS exhaust to run north along the southern building roofline to the junction with the two-story building, up the corner of the second story, and terminate at least 4 feet above the top of the second story roofline. Re-routing the SSDS exhaust stack may also reduce potential contaminated stormwater runoff by decreasing the building surface area that may have contact with the exhaust.

Based on the results of the above testing, additional testing may be recommended as well as potential changes to the SSDS system. Terracon appreciates the opportunity to provide environmental consulting services to you. If you have questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon

Scott A. Hodgson, P.G.
Senior Project Manager

Blaine R. Schreyer, P.E.
Principal / Office Manager

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Copies to: Bill Scott, Gonzalez Saggio & Harlan LLP (electronic)
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