State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Waukesha Service Center
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Scott Walker, Governor
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July 5, 2018

Phillips Edison & Company
Attn: Tom Meyers
11501 Northlake Drive
Cincinnati, OH 45249

Subject: Site Investigation and Remedial Action Options and Design Report Not Approved – Request for Additional Information
Greentree Cleaners, Greentree Centre, 5131 Douglas Avenue, Unit D, Racine, WI
FID 252138700, BRRTS 02-52-579863

Dear Mr. Meyers:

The Wisconsin Department of Natural Resources (the DNR) received the *Remedial Action Options and Design Report* (*RAOR*) for the above-referenced site on February 16, 2018. The *RAOR* and review fee was submitted on your behalf by Steve Newlin of Apex with a request for DNR review. On November 13, 2017, Apex submitted the October 24, 2017 *Site Investigation Report (SIR)* without requesting DNR review. Based on review of both reports, the DNR has determined that insufficient information has been provided to allow us to determine that the site investigation is complete. Additional actions need to be taken and information provided to the DNR before we can approve the site investigation or the *RAOR*. I have discussed several of the items listed below with your consultant.

Site Investigation History
Greentree Cleaners (Greentree) currently occupies a tenant space within the retail strip mall located at 5055 & 5111-5141 Douglas Ave. Dry cleaning operations have operated at this location since 1991 with Greentree operating from 1996 to present. Two environmental investigations were conducted at the property in 2005. The investigative activities included collection of soil samples below the building floor adjacent to the "dry cleaning plant" (dc machine) and exterior locations and collection of one groundwater sample near the back door. Samples submitted for laboratory analysis of volatile organic compounds (VOCs) detected the chlorinated VOC, tetrachloroethene, a dry cleaning solvent, in the soil samples collected near the dc machine and outside near the back door. No volatile organic compounds (VOCs) were detected above laboratory reporting limits in the groundwater sample. The DNR granted closure to this case in 2006.

SIR
In 2017, Apex conducted a subsurface environmental assessment at the Greentree tenant space to assess the potential for impacts associated with the continued use of dry cleaning solvents since 2006. The investigation included collection of soil samples from six exterior locations, groundwater samples from eight permanent and three-temporary groundwater monitoring wells and collection of sub-slab vapor samples from eleven locations below the dry cleaner and adjacent spaces in the strip mall. Samples were submitted for laboratory analysis for VOCs. The *SIR* states that soil sampling was not conducted adjacent to the dc machine because a geophysical survey conducted at the property identified electrical conduits throughout the tenant space.

Results of the 2017 soil investigation identified low level methylene chloride (a common laboratory contaminant) in samples from two locations. Naphthalene was detected in soil from two locations reported at concentrations below soil residual contaminant levels (RCLs). No other VOCs were detected above laboratory detection limits in any other soil samples. Chlorinated VOCs were detected in six of the groundwater samples submitted for

laboratory analysis. Groundwater sampled from permanent monitoring well MW-1, located near the back door and the location of the temporary well sampled during the 2005 investigation, contained PCE, trichloroethylene (TCE) and vinyl chloride (VC) at concentrations exceeding their respective Wis. Adm. Code ch. NR 140 groundwater enforcement standards (ES). Water collected from two other permanent wells contained VC at concentrations above the ES. Sub-slab vapor results identified multiple VOCs including chloroform, PCE and TCE in each of the soil gas samples submitted for analysis. Reported concentrations of PCE and TCE in soil gas collected from two sample locations and chloroform at one location, exceeded their respective vapor risk screening levels (VRSL) based on commercial property use.

The SIR provides the following conclusions:

- VOCs detected in soil have been delineated and additional soil investigation is not warranted
- Active remediation to address groundwater contamination is not warranted. Additional groundwater monitoring should be conducted to demonstrate plume stabilization and to demonstrate that natural attenuation of contaminants is occurring
- Additional investigation to delineate the extent and degree of VOCs detected in soil gas is not warranted. A sub-slab depressurization system will/should be installed to mitigate vapor intrusion to indoor air.

RAOR

The *RAOR* proposes sub-slab depressurization (SSDS) to mitigate potential vapor intrusion to indoor air and monitored natural attenuation of groundwater as the remedial options to address these identified pathways of concern at the site. It is DNR's understanding that the SSDS will be designed to address only the area of the building where VRSLs were exceeded. Post-installation verification sampling is proposed to confirm effectiveness of the system and further sub-slab assessment is proposed to be conducted after operation of the SSDS for a period of four months to assess whether sub-slab vapor concentrations have been reduced to below VRSLs.

Quarterly groundwater monitoring is proposed to demonstrate the effectiveness of natural attenuation as an acceptable remedy to address groundwater impacts.

DNR Review Response

SIR: Based on review of information submitted, the DNR cannot approve the SIR as being complete at this time. Additional information and/or clarification of the items listed below must be provided for the DNR to determine that the requirements of Wis. Adm. Code ch. NR 716 have been met.

- Source assessment: The impacts to groundwater identified during Apex's investigation suggest that a new discharge of chlorinated solvents to the environment has occurred since the investigation conducted in 2005. The soil sample results and elevated sub-slab vapor concentrations indicates a potential discharge source below the building. The SIR does not specifically discuss sources/causes/locations of a potentially new discharge(s) or whether there is a continuing contaminant discharge occurring other than to state that an investigation could not be conducted based on potential structural impediments. An investigation of potential sources below the building should be conducted, or justification provided for why an investigation is not feasible. The source investigation should include an evaluation of potential contaminant migration pathways including identification of utilities, floor drains, condition of the dry cleaner floor, chemical storage areas and evidence of spills.

- In Appendix A of the Site Investigation report, Photo No. 15 shows the location of SV-3 and what appears to be a floor trench. Provide a discussion with a map of all floor trenches and floor drains along with the location of the "dry cleaning plant" and chemical storage for this portion of the building. Maps should identify plumbing or other utilities that may be interconnected with the other tenanted portions of the building.

- Provide a site map that identifies the location and depths of the utilities within and around this building. The company that performed the geophysical survey should have provided a map of the utility locations.

- Sub-slab vapor investigation: The SIR concludes that the area presenting a vapor intrusion risk is limited to the locations immediately around the two sample points where VRSLs were exceeded. This conclusion is based on results from one-time vapor sampling events conducted in June, August or September 2017. The DNR vapor intrusion guidance, RR-800 recommends conducting two to three sampling events to evaluate the vapor intrusion risk at a building and that one of the events takes place during the heating season. The DNR will require collection of additional sub-slab vapor samples to confirm the extent of the building that may be at risk from vapor intrusion.

RAOR:

- Vapor intrusion: The DNR previously provided comments to your consultant regarding the proposed approach to mitigating vapor intrusion at the site by installing a SSDS under a portion of the building. The Department's former vapor intrusion expert, Alyssa Sellwood, sent email comments to me on the original plan which were forwarded to the consultant, see attached email. We understand that your consultant discussed the site and plans for installation of the SSDS, however, we have not received a written response to the comments provided in her email or have any other written clarification of what was discussed. One of the main points made in that email is that, SSDS is not considered a remedial action, rather it is considered an interim action to prevent exposure.

- You should be aware that the definition of vapor mitigation system according to Wis. Adm. Code § NR 700.03(66s) is: "Vapor mitigation system" means a system that prevents or reduces the migration of contaminant vapors into a building and does not have the primary purpose of remediating vapor contaminant sources. Therefore, some other remedy should be proposed to address the contamination causing the vapor concern.

- Wis. Adm. Code ch. NR 722 *Standards for Selecting Remedial Actions* contains requirements related to air contaminated from vapor intrusion in Wis. Adm. Code § NR 722.09(2)(d)1. which requires active remedial action to be taken to limit or prevent, to the extent practicable, potential and actual hazardous substance discharges and environmental pollution that may attain or exceed vapor action levels.

- Case closure criteria, described in Wis. Adm. Code §726.05(8), requires that, where vapors were present above the vapor risk screening level: 1. a remedial action has been conducted and reduced the mass and concentration of volatile compounds to the extent practicable; and 2. The vapor exposure pathway has been interrupted or mitigated. Based on these code requirements, the DNR, expects, as described above, that the source of these vapors will be assessed/identified and a remedial action conducted to meet the criteria of case closure unless adequate justification is provided for why active remediation is not needed and/or not practicable.

- Regarding the proposed installation of a SSDS, as described above, additional sub-slab vapor samples should be collected to determine the extent of the building that requires mitigation and the SSDS design adjusted as needed to address areas of the building potentially impacted. Ms. Sellwood's comments related to the SSDS performance verification plan should also be considered and the SSDS plan adjusted as needed to address these comments.

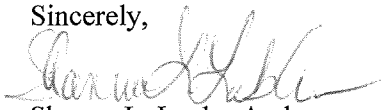
- Groundwater: The DNR agrees that natural attenuation may be an acceptable remediation for groundwater. Quarterly monitoring of the groundwater should be continued until a stable or decreasing plume is identified.

Next Steps

Your environmental consultant should prepare a site investigation work plan to address the additional investigation requirements identified above. Please submit the applicable review fee if you wish to receive DNR review of the work plan. Upon completion of the additional site investigation activities, you should submit a supplemental investigation report prepared in compliance with Wis. Adm. Code ch. NR 716, and a remedial action plan prepared in compliance with Wis. Adm. Code ch. NR 722. Additional fees will not be required for DNR review of the supplemental site investigation report or the revised RAOR if they are submitted together.

The DNR understands after speaking with your consultant that there may have been a misunderstanding regarding the completeness of the site investigation, the vapor intrusion investigation and necessary response to address vapor intrusion concerns. The DNR did discuss the issues raised in this letter with your consultant, however, if you or your consultant would like to meet for further discussion, clarification or direction, please contact me within the next 15 days to arrange a meeting. My phone number is 262-574-2142 or by email at shanna.laubeanderson@wisconsin.gov.

Sincerely,



Shanna L. Laube-Anderson
Remediation and Redevelopment Program
Waukesha Service Center

Cc: Steve Newlin, Apex Companies, LLC, 300 South Wacker Dr., Suite 630, Chicago, WI 60606

Attach:
March 23, 2018 email from Alyssa Sellwood