



November 8, 2021

Subject: Vapor Sampling, BRRTs #: 02-41-552537, Westwood Dry Cleaners, 8731 W. North Ave.,
Wauwatosa BRRTs #: 02-41-552537, FID #: 241836100

Dear Mr. Sin:

The Wisconsin Department of Natural Resources (DNR) held a skype meeting with you and your consultant, Mr. Michael Wan of Hydrodynamic Consultants, Inc. (HCI) on October 26, 2021. The reasons for the Skype meeting were related to concerns regarding the sampling of vapors at the Westwood Dry Cleaners (DC) and adjacent properties: SPA Nails, Super Cuts and the Restaurant to the east. The DNR is concerned with the vapor results that exceeded the vapor action limits (VAL) and vapor risk screening levels (VRSLs) including tetrachloroethylene (PCE) (38,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and trichloroethylene (TCE) ($630 \mu\text{g}/\text{m}^3$) at the DC and PCE ($1,900 \mu\text{g}/\text{m}^3$) and TCE ($80 \mu\text{g}/\text{m}^3$) at the adjacent Restaurant. The DNR noted data collected from 2018-2021 failed quality assurance (QA)/quality control (QC) in all samples as shown by high concentrations of Isopropyl alcohol in every sample. The DNR also noted no indoor air sampling results of the adjacent businesses included in any previous submitted reports to the DNR.

In an e-mail to the DNR on October 26, 2021, HCI stated that they realized the QA/QC failure in the samples as pointed out by the DNR. HCI could not provide a reason to explain the source of the Isopropyl alcohol in the vapor sample test results, except as sampling train failure. HCI suggested a possible remedy of resampling SV-7, 6 and SV-2 in a mutual way of reconciliation of the flawed vapor samples results. The DNR made an evaluation of data and took the HCI suggestions for replacement sampling into account. The DNR, using NR 700 series and the associated guidance documents, request that HCI perform the following scope of work in the following priority sequence:

1. Immediate Action is needed right away at this site. No submittal of a workplan and bidding is required per Ch. NR 169. You are required to:
 - Conduct indoor air sampling with a quick turn over analysis for PCE, TCE, Cis/Trans-1,2-DCE at the Nails SPA, Super Cuts, and Restaurant including the partial basement to evaluate acute exposure of occupants and workers from vapor intrusion per Wis. Admin. Code § NR 708.05
 - Not to use Photoionization detectors (PIDs) as these are not acceptable investigation tools for vapor intrusion. This is due to the fact that the calibration levels of the PID far exceed the concentrations that a VI investigation is evaluating.
2. Interim Action is needed at this site. A detailed cost estimate, schedule and a prior DNR written approval is required for the cost to be DERP- eligible per Ch. NR 169.
 - Design and install a sub-slab depressurization system (SSDS) for the DC due to the presence of soil and groundwater contamination directly beneath the building in accordance with Wis. Admin. Code § NR 708.11(1)(b), ideally within the next four to eight weeks as recommended by the Department of Health Services (DHS). Mitigation will need to include venting the sump in the basement of the Restaurant, sealing cracks throughout the strip mall, etc. Furthermore, the DNR strongly encourages responsible parties to utilize a mitigation contractor certified by the National Radon Proficiency Program (NRPP) to assure best management practices included in the American Association of Radon Scientists & Technologists (AARST) Standards for soil gas mitigation systems are followed for design and installation of a cost-effective and functional mitigation system. NRPP-certified mitigation contractors can be found here: <https://nrpp.info/pro-search/>

HCI must perform a remedial action options evaluation in accordance with Wis. Admin. Code Ch. NR 722 and select a remedial action that is technically and economically feasible to reduce the mass and concentration of the volatile compounds per Wis. Admin. Code § NR 726.05(8)(b)1. Note that a vapor mitigation system is not a remedial action as it does not reduce

the mass or concentration of the contamination. Bidding will be required for the remedial option evaluation and remedial action plan. Only the winning bidder will be DERP-eligible.

3. Additional Site Investigation will be required per Ch. NR 716:

- Sub-slab re-sampling of SV-2, 6 and SV-7. This work will not be DERP eligible for re-imbursement due to high concentrations of Isopropyl alcohol that rendered previous sampling from 2018 to 2021 to fail the QA/AC. A work plan should be submitted for this work.
- Preferential vapor pathways (e.g., sewer laterals from the DC), utilities and adjacent buildings need to be investigated per Wis. Admin. Code § NR 716.11(5)(a). The DNR provides guidance on the investigation of preferential pathways. See *Guidance for Documenting the Investigation of Human-made Preferential Pathways Including Utility Corridors*, (RR-649).
- This work will be further spelled out in a DNR letter requesting additional site investigation. You will need to submit a change order that must be approved by the DNR to do this work.

The DNR will communicate additional deficiencies in the submitted site investigation in a future correspondence. DNR encourages the Consultants to review [ITRC's Vapor Intrusion Mitigation document](#) for public outreach, design, installation and long-term operation, maintenance & monitoring. Also, a firm understanding of Wisconsin's guidance, [RR-800](#), [RR-981](#), and RR-946 which you have received from the DNR is advised. Form [4400-321](#) (open with IE) Vapor Intrusion Inspection Log would be a good start for the photo-documentation of the installation and commissioning of the SSDS.

Please note the DNR is hosting an Issues and Trends Webinar on Vapor Intrusion issues on November 16, 2021. You can register for this free one-hour webinar here: <https://dnr.wisconsin.gov/topic/Brownfields/Training.html>. If you are unable to attend the webinar on November 16th, the recorded webinar will be posted here:

<https://dnr.wisconsin.gov/topic/Brownfields/TrainingLibrary.html>. Additional webinars on vapor intrusion issues in Wisconsin can be found on the Training Library. There are also many vapor intrusion resources for environmental professionals, including information on public health, that can be found on the DNR's website: <https://dnr.wisconsin.gov/topic/Brownfields/Vapor.html>.

If you have any questions concerning this e-mail contact me at 414.208.5874, e-mail Binyoti.Amungwafor@wisconsin.gov

Sincerely,

B. Amungwafor

Binyoti F. Amungwafor
Hydrogeologist
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