

Georgia Department of Natural Resources

Environmental Protection Division-Land Protection Branch

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Richard E. Dunn, Director

June 30, 2016

VIA U.S. MAIL and E-MAIL

YNH Properties, LLC
c/o Mr. Se Hong Yi, Managing Member
3296 Summit Ridge Parkway, Suite 420
Duluth, GA 30096

Subject: Voluntary Investigation and Remediation Plan (VIRP)
Westside Cleaners (former), HSI Site No. 10927
700 Sandtown Road, Marietta, Cobb County, Georgia 30008
(Tax Parcel No. 17 021400790)

Dear Mr. Yi:

The Georgia Environmental Protection Division (EPD) has reviewed the subject submittal pursuant to the Georgia Voluntary Remediation Program Act (the VRP Act) and the Georgia Rules for Hazardous Site Response (the Rules), as applicable, for the subject property parcel (Property), listed on the Georgia Hazardous Site Inventory (HSI) as HSI #10927. Some discrepancies, omissions, and recommended formatting of future submittals were discussed in depth during a meeting between EPD personnel and Mr. Michael Haller, P.G. of Sailors Engineering Associates (SEA), representing YNH Properties, LLC (YNH), on March 4, 2016. EPD has the following comments on the VIRP:

1. Please revise the tax plat provided in Appendix C to clearly outline the boundaries of the Property and the boundaries of the adjacent properties. The properties should be labeled with the county tax parcel ID and property owner name/mailing address of record.
2. Section 1.3 indicates that a "third, smaller building at 690 Sandtown Road is located on the northeastern corner of the subject property". According to Cobb County tax assessor records, the 690 Sandtown address is a separate parcel for which there is no data indicating it has been impacted by the subject release of regulated substances. Therefore, it is not considered to be a qualifying property pursuant to the Act at this time.
3. Regulated Substances Released/Contaminants of Concern (COCs):
 - a. All regulated substances listed in Appendix I of the Rules detected in soil or groundwater at concentrations exceeding naturally-occurring background levels, and regulated degradation products of said substances, even if not yet detected, are considered to be initial constituents/contaminants of concern (COCs).
 - b. As 1,1,2,2-tetrachloroethane (1,1,2,2-PCA) and 1,1,2-trichloroethane (1,1,2-TCA) have been detected in soil at the site; 1,4-dioxane, used as a stabilizer for said substances, should be included as a potential COC. A representative number of soil and groundwater samples should be collected where 1,4-dioxane is most likely to be encountered¹ to determine if it is present requiring further investigation.²

¹ Please see the following websites for further information regarding 1,4-dioxane:

1) https://www.epa.gov/sites/production/files/2014-03/documents/ffrro_factsheet_contaminant_14-sioxane_january2014_final.pdf

2) https://clu-in.org/contaminantfocus/default.focus/sec/1,4-Dioxane/cat/Detection_and_Site_Characterization/

3) https://www.epa.gov/sites/production/files/2015-08/documents/treatment_for_1-4-dioxane_542r06009.pdf

² If US EPA Method 8260 is used to analyze for 1,4-dioxane, it should be conducted utilizing Selected Ion Monitoring (SIM) to achieve practical quantitation limits (PQLs)/detection limits (DLs) low enough for comparison to delineation standards.

- c. Please provide a separate table summarizing: 1) potential and known COCs historically detected in soil and/or groundwater at the *site* (see Comment #4), 2) the specific media impacted by them, 3) the historical maximum concentration detected for each substance, and 4) maximum concentration sample location ID number and collection depth. As some remediation has occurred, the maximum concentration of each substance representative of current site conditions should also be identified as appropriate. The maximum concentrations detected above: 1) delineation standards, 2) residential (Type 1/2) RRS, and 3) non-residential (Type 3/4) RRS should be clearly identified.
4. EPD noted that the "site boundary" as shown on Figure 2 refers to the Voluntary Remediation Property (the Property) boundary as defined in §12-8-102(b)(17) the Act. As defined in §391-3-19-02 of the Rules, the "site" (HSI #10927) is the extent of the contamination related to the release at the Property. Please revise references to the Property and the "site" as appropriate in future submittals, including tables and figures as necessary.
5. Please include an up-to-date bulleted narrative that briefly summarizes investigations and remedial actions conducted, arranged by date (specify the dates), at the site from the date of release discovery forward in future submittals.
6. Please separate and summarize soil analytical results on separate figures according to depth interval in future submittals. Data representing surficial soil conditions should be separated from data representing subsurface soil (>2 ft) conditions on figures summarizing soil analytical results. Splitting up depth intervals further may assist in designing future remedial efforts. Note: Pre-remedial soil sampling locations should be shown on figures summarizing post-remedial soil confirmation analytical results (Figure 6) to show the spatial relationship between them. If these locations no longer represent *in-situ* conditions, they should be identified as such using an appropriate notation (e.g., colored shading or text, etc.).
7. The results for all detected regulated substances should be posted on figures summarizing soil results (Figures 3 and 6 and cross-sections, Figure 1) not just the results for PCE.
8. A minimum of two cross-sections, one oriented parallel (provided in the VIRP) and one oriented perpendicular to groundwater flow and intersecting in at least one source area, should be provided as part of the CSM in future submittals. Additional cross-sections may be warranted to fully depict site conditions as contaminant delineation investigations are conducted.
9. EPD prefers that site hydrogeologic characteristics such as effective porosity, hydraulic conductivity, hydraulic gradient, fraction of organic carbon, etc. used in groundwater contaminant fate and transport modeling be acquired through field testing/measurements if feasible to best represent site conditions. If a characteristic is not determined based on field testing, adequate justification for the use of published values (e.g., site stratigraphy on borelogs, etc.) should be provided.
10. Please provide separate tables in future submittals that summarize:
 - a. Top of well casing (TOC) elevations, well screen intervals, depth to water, and groundwater elevations in support of potentiometric surface maps and the water table depicted on cross-sections. EPD prefers that groundwater elevations be reported relative to mean sea level.
 - b. Monitoring well construction details including depth intervals for well screen, sand pack, bentonite seal, and grout seal.
11. Potentiometric surface maps should be updated in every submittal documenting groundwater sampling and/or monitoring well installation activities. Note that although

Figure 5 of the VIRP indicates a southerly groundwater flow direction, groundwater analytical results indicate a more southwesterly flow and additional groundwater monitoring wells will be necessary to establish true groundwater flow direction.

12. Potential Receptors/Exposure Pathways/Exposure Domains: Potential receptors and pathways should be re-evaluated as more information is acquired regarding the extent of contamination at the site. Please provide a scaled map or aerial photograph depicting *all* exposure domains and known points of exposure (POEs), current and future, for all potentially complete contaminant exposure pathways. That figure should identify the nearest active water wells (and their use) and surface water bodies within 1,000 ft of the extent of groundwater contamination in all directions from the limits of the contamination greater than delineation standards, as the presence of dense non-aqueous phase liquid (DNAPL) is suspected.
13. Delineation/Cleanup Criteria and Standards:
 - a. The participant should submit proposed values for soil and groundwater Type 1 through 4 RRS as early as feasible for EPD review and concurrence. These values are necessary to establish appropriate delineation and cleanup standards for soil and groundwater at the "site" and may affect remedial action decisions in the future. Please summarize the values in tabular format along with calculation spreadsheets used to derive them.
 - b. Separate tables summarizing the specific concentration values for proposed delineation standards and *preliminary* cleanup standards for soil and groundwater should also be provided. The criteria [e.g., default residential cleanup standards (Type 1 RRS), background levels, etc.] used for their selection should be clearly identified on the referenced tables.
 - c. The final cleanup standards for impacted non-participating properties is assumed to be the residential (highest values of Type 1/2) RRS unless the owners of said properties agree to the implementation of appropriate engineering and/or institutional controls (e.g., environmental covenant restricting property use or groundwater withdrawal).
14. Proposed Additional Investigative and Corrective Actions:
 - a. Mr. Bijan Rahbar of the Industrial Permitting Unit (IPU) should be contacted prior to any additional injections of fluids into groundwater in the future to determine if an Underground Injection Control (UIC) permit is necessary. The site compliance officer (Ms. Daniels) should be copied on correspondence between you or your consultants and the IPU in the future.
 - b. EPD recommends that delineation investigations be conducted as soon as feasible to allow YNH and its consultant sufficient time to conduct remedial actions as necessary before the 5-year deadline for submittal of a final CSR.
 - c. VRP Progress Reports should include an evaluation of groundwater conditions using the screening protocol recommended in the EPA/600/R-98/128, *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* (September 1998)³ to justify future remedial action choices.⁴
15. Please provide a cost estimate for implementation and completion of the activities proposed in the VIRP, including submittal of a VRP CSR.

³ The referenced document is available on the worldwide web at:
https://www3.epa.gov/epawaste/hazard/correctiveaction/resources/guidance/rem_eval/protocol.pdf.

⁴ A digital version of the screening protocol is available with the publically available Biochlor Natural Attenuation Decision Support System groundwater contaminant fate and transport modeling software

16. Please number tables in future submittals for easier referencing in communications between EPD and representatives of YNH.
17. Future field investigation procedures should be conducted in accordance with current United States Environmental Protection Agency (EPA) Region 4 field standard operating procedures (SOPs) and/or guidance documents⁵ whenever feasible. Deviation from the referenced EPA SOPs and guidance should be fully documented/justified using field records.
 - a. Dates and times recorded on borelogs, well construction diagrams, and groundwater field sampling logs provided in the VIRP indicate EPD Region 4 guidance (*Design and Installation of Monitoring Wells*, SESDGUID-101-R1, effective January 22, 2013) was not followed for monitoring wells MW-4 and MW-5. If EPA SOPs were followed, the minimum total time to conduct well installation, development, and initial groundwater sampling should have been 80 consecutive hours. It appears that said activities were conducted over less than 48 hrs and 72 hrs, respectively, for MW-4 and MW-5.
 - b. Narratives describing procedures used to collect soil samples and the criteria by which soil samples were selected for laboratory analysis should be provided. Furthermore, odors, staining, or PID/FID readings used to select samples for laboratory analysis should be clearly noted on associated boring logs.
 - c. Groundwater purging and sampling field logs should include all information EPD typically requests as documentation. Several important pieces of information were either missing or incomplete on the field monitoring well purging/sampling records provided in Appendix 5 of the VIRP which were discussed during the March 2016 meeting. In the future, please include the following information on field records submitted with monitoring reports, as necessary depending on the purging method employed:
 - A description of the method used to purge the well and specific method by which the final water samples were withdrawn from the wells (i.e. peristaltic pump/vacuum jug, downhole pump or bailer),
 - Volume of water in the well, and
 - Purge rate, screened interval, depth to water during the purge process, depth to the pump intake during purge process, and the intake depth of the sampling device.

Note: EPD prefers that monitoring wells be purged utilizing procedures described in Section 3.2.1 of the US EPA Region 4 SOP SESDPROC-301-R3 (*eff.* March 6, 2013) whenever feasible. Field personnel should clearly justify any deviations from the referenced procedure in the field records.
18. Please include a discussion of field and laboratory QA/QC procedures used during future soil and/or groundwater sampling activities to evaluate the reliability of reported sample analytical results. Please refer to Section 3.3.3 of the US EPA Region 4 SESD SOP, *Field Sampling Quality Control* (SESDPROC-011-R4, effective February 5, 2013) for recommended field QA/QC samples.
19. Please ensure that the Chain of Custody (COC) forms used to submit environmental samples for analysis are complete in future submittals. One or more important pieces of information were missing from some of the COC forms provided in the VIRP, such as the number of sample containers.
20. Every symbol, acronym, abbreviation, laboratory qualification, and shading/color that

⁵ Current EPA Region 4 field investigation SOP and guidance documents may be accessed online at:
<http://www.epa.gov/quality/quality-system-and-technical-procedures-sesd-field-branches>.

appears on a figure or within the body of a table must be defined either in the associated legend or as a notation as appropriate in future submittals.

21. Non-detections of contaminants should be posted as "<X.XX", where X.XX is the reported detection limit, using the appropriate concentration units, rather than posted as BDL, on all tables and figures summarizing environmental sample analytical results.
22. A plan for evaluating the vapor intrusion pathway should be presented. The plan should include proposed sampling to evaluate the effectiveness of mitigation measures at the former dry cleaner building and the proposed evaluation of other buildings located near subsurface volatile organic compound impacts.
23. Please present the results of waste characterization sampling for the disposal of excavated soil.

The above comments must be addressed to EPD's satisfaction in order to demonstrate compliance with the provisions, purposes, standards, and policies of the Act. EPD may, at its sole discretion, review and comment on documents submitted by YNH. However, failure of EPD to respond to a submittal within any timeframe does not relieve YNH from complying with the provisions, purposes, standards, and policies of the Act. If you have any questions, please contact Carolyn L. Daniels, P.G. of the Response and Remediation Program at (404) 657-8646.

Sincerely,



Jason Metzger
Program Manager
Response and Remediation Program

c: Michael Haller, P.G., Sailors Engineering Associates, Inc. (via email)

File: 245-0486 (VRP)