Georgia Department of Natural Resources
Environmental Protection Division-Land Protection Branch
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Richard E. Dunn, Director

July 29, 2016

VIA EMAIL & REGULAR MAIL

THCG Wrens, LLC
c/o Mr. Curtis L. Michael
400 Plaza drive, P.O. Box 1515
Secaucus, New Jersey 07094-3688

Re: Semi-Annual Groundwater Monitoring Reports (June 2014, January 2015, July 2015, and March 2016)
Draft Biochlor Groundwater Modeling (April 2016, via Email)
Oil Processing Corp., HSI #10245
Wrens, Jefferson County, Georgia

Dear Mr. Michael:

The Georgia Environmental Protection Division (EPD) has received the above referenced documents prepared by Peachtree Environmental for the Former Oil Processing Corporation Site (HSI#10245). After completing a review of these documents, EPD has the following comments which should be addressed in accordance with the Voluntary Remediation Program (the Act):

Semi-Annual Groundwater Monitoring Reports Comments:

1. According to Section 1.3 of the above-mentioned Semi-Annual Groundwater Monitoring Reports, pre-carbon and post-carbon air sampling was conducted on the soil vapor extraction (SVE) systems on June 25, 2012 and February 14, 2013. The reports indicated all constituents were reported below detection limits and that both SVE systems have been shut down. Due to the decreased concentrations of constituents in groundwater and the duration the SVE system has operated, EPD concurs with shutting off the systems; however, please include the detection limits used for the air sampling along with the pre-carbon and post-carbon air sampling analytical data in the next report.

2. The Monitoring Well Purging and Sampling Information forms located in Appendix A of the Semi-Annual Groundwater Monitoring Reports did not include water level data during purging. Documenting water levels is essential to determining the drawdown of the well, which can affect the quality of the sample, particularly for VOC analysis. EPD also notes stability criteria require that turbidity be stabilized or be less than 10 NTUs. Please make all reasonable attempts to achieve these turbidity levels. For all future monitoring events, please include the following information on the Well Purging and Sampling Information Forms in support of the USEPA Region IV Science and Ecosystem Support Division (SESD) Groundwater Sampling Operating Procedure SESDPROC-301-R3 (March 4, 2013):

    a. The placement depth of the pump intake within the well column during groundwater sample purge and collection;
    b. When utilizing low volume/low flow sampling techniques, please record the water level measurements to demonstrate a drawdown of less than 0.3-feet; and
    c. The depth to top and bottom of screen, pump intake, well volume, cumulative volume purged, purging device, purge rate, etc. should also be recorded on well purging records.

3. No groundwater parameter data was recorded for MW-11. EPD understands that approximately 1-foot of LNAPL was observed in the well and that a bailer was used for sampling; however, following the bailing of free product, it is recommended normal groundwater purge and sampling methods be used per the aforementionedUSEPA groundwater sampling SOPs. Also, Section 5.0 of the March 2016 Semi-Annual Report suggests the free product may likely be attributed to the trash, debris, and organics that had been observed in the top five-feet during well installation. EPD recommends the LNAPL observed at MW-11 be analyzed to determine the composition of the free product.

4. EPD agrees that VOC concentrations continue to decrease in groundwater with time. However, EPD disagrees with Section 6.0, which states the constituent plume boundaries are well defined. Exceedences of VOCs continue to be observed in groundwater, particularly at monitoring wells MW-7 and MW-11, located along the southeastern boundary of the site and off-site. Therefore, as a result of the concentrations exceeding the Type 1 RRS at monitoring wells MW-7 (1,2-Dichloroethane at 52µg/L, Benzene at 420 µg/L, and vinyl chloride at 16 µg/L) and MW-11 (vinyl chloride at 2.2 µg/L) during the most recent November 2015 groundwater sampling event, additional horizontal delineation to the southeast is required to fully define the extent of contamination in accordance with Section 12-8-108 of the Act.

5. During a May 4, 2016 meeting between EPD and Peachtree Environmental, Peachtree Environmental suggested that the suspected landfill property where MW-11 is located be purchased and that a Uniform Environmental Covenant (UEC) be enacted for the Subject Property and the down-gradient suspected landfill property. EPD concurs with the proposed implementation of a UEC, which will prohibit the use or extraction of groundwater on the applicable property and use limitations. EPD recommends a draft UEC be submitted for review prior to submittal of the CSR in order to address and revise any issues it may contain.

6. During the aforementioned May 4, 2016 meeting, Peachtree Environmental indicated THCG Wrens is considering submitting a Compliance Status Report (CSR) and plans to delist the property as soon as possible. Please note that soil certification is required prior to delisting, including all applicable soil data, data tables, and figures that support the demonstration of compliance with the established criteria.

7. Section 2.0 of the Semi-Annual Groundwater Monitoring Reports states that a preliminary 3-D conceptual site model (CSM) was developed for the Subject Property. Please ensure that the preliminary 3-D CSM that was included as part of the August 2013 VIRP Application, is updated within, or prior to, the final CSR submittal. A projected milestone schedule, to be updated in each semi-annual report, should also be included in each report.

8. Please illustrate the Subject Property boundary on all future applicable figures to better depict groundwater contamination location in reference to property boundaries. Please also label neighboring properties and ecological features in a figure in the next report. In addition, please highlight the suspected release area(s) in all future applicable figures.

Draft Biochlor Groundwater Modeling Comments:

9. The Draft Biochlor Groundwater Modeling report received on April 28, 2016 via email lacks sufficient data for accurate groundwater modeling projections. EPD requests that all future Biochlor groundwater modeling includes the following details:

   (a) The Biochlor input data sheet used to generate the model output to include hydraulic conductivity, hydraulic gradient, effective porosity, dispersion coefficients, fractional organic carbon, in-plume decay rates, source decay rates, source concentrations, and source dimensions. Please reference the sources for each model input;
   (b) A brief explanation of source area and in-plume decay rates calculations. The EPA Groundwater Issues paper entitled *Calculation and Use of First Order Rate Constants for Monitored Natural Attenuation* is a good reference for source area and decay rate calculations;
   (c) Present the results in tabular format along with an explanatory narrative. A sensitivity analysis should be conducted on the input values when literature or uncertain values exists. A detailed explanation of sensitivity analyses is presented in Appendix A.6 of the Biochlor User's Manual, Version 1.0, dated January 2000;
   (d) Model output graphs for groundwater flow and contaminant transport simulations and calibrations, along with tabulated field data that was included in the graphs; and
   (e) A statement summarizing the results of the fate and transport modeling to include answers to the following questions:

      - What is the maximum distance the plume is likely to extend under an MNA scenario?
      - How long will it take for groundwater to meet RRSs?

   Although some of the above-mentioned data was included within the April 2016 Draft Biochlor modeling received via email, EPD requests additional detail and calculations to ensure the modeling is accurately executed.

   In addition, EPD expresses concern with using monitoring well MW-11as the point of demonstration well (POD) due to the free product detected during previous sampling events. It is acceptable to use an impacted well as the POD; however, the groundwater calculations must prove a point of exposure (POE) (i.e. downgradient bog) has not been impacted. If MW-11 continues to be used in the modeling, please ensure the downgradient POE is included within future calculations.

   Discrepancies between the groundwater seepage velocity was also noted when comparing Semi-Annual Monitoring Reports, which varied between 15.7 feet/year (March 2016 Report) and 28.1 ft/year (June 2015 Report), and the Draft Biochlor groundwater modeling reported a seepage velocity of 272.9 feet/year. Please correct the discrepancies and indicate how the groundwater seepage velocity was calculated.

   A revised groundwater contaminant model with the above-noted requested changes may be included in the next report.

EPD requires that THCG Wrens, LLC and the professional engineer/geologist specified in the VRP oversee the implementation of the VRP in accordance with the provisions, purposes, standards, and policies of the Act. EPD may, at its sole discretion, review and comment on documents submitted by THCG Wrens, LLC. However, failure of EPD to respond to a submittal within any timeframe does not relieve THCG Wrens, LLC from complying with the specified schedule and the provisions, purposes, standards and policies of the Act. Should THCG Wrens, LLC fail to comply with the above schedule, EPD may terminate enrollment of the participant and the qualifying property from the voluntary remediation program.

Please include an updated milestone schedule in the next semi-annual progress report, which is to be submitted by December 31, 2016. Should you have any question or concerns regarding this site, please contact Mr. Peter E. Johnson, P.G. of the Response and Remediation Program at (404) 657-0490.

Sincerely,

Kevin Collins
Unit Coordinator
Response and Remediation Program

cc: Denny Dobbs, Peachtree Environmental (via email)

File: HSI# 10245