Georgia Department of Natural Resources
Environmental Protection Division-Land Protection Branch
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(404) 657-8600; Fax (404) 657-0807
Judson H. Turner, Director

February 26, 2016

MSC Naples, LLC
c/o Glenn Howell
4000 Blue Ridge Road, Suite 100
Raleigh, North Carolina 27612

VIA FIRST CLASS MAIL AND EMAIL

Re: Supplemental Comments on Voluntary Investigation and Remediation Plan
Corners Shopping Center, HSI Site Number 10326
2745 Sandy Plains Road
Marietta, Georgia; Cobb County
Tax Parcel ID Nos. 16055700530, 16055700120, and 16055700200

Dear Mr. Howell:

The Georgia Environmental Protection Division (EPD) has completed its review of the Voluntary Investigation and Remediation Plan (VIRP), received by EPD on August 3, 2015, and submitted pursuant to the Georgia Voluntary Remediation Program Act (the Act), O.C.G.A. 12-8-100, et seq. In our letter of February 26, 2016, we notified MSC Naples, LLC, that the application has been approved. EPD also is providing the additional comments below, which should be addressed in accordance with the Act:

1) Please designate a point of exposure (POE) and an associated point-of-demonstration (POD) well to establish site-specific cleanup standards for groundwater, pursuant to Sections 12-8-108(3) and 12-8-108(4) of The Act. The POD should demonstrate that groundwater concentrations are protective of the downgradient POE.

2) Based on data from MW-19, MW-27, and MW-28, EPD contends that groundwater on several downgradient residential properties, which are not enrolled in the VRP as qualifying properties, are possibly impacted by a release above residential risk reduction standards (RRSs). Therefore, EPD cannot concur that the groundwater pathway is incomplete as the Act applies to those properties. Accordingly:

    a) Sufficient data should be collected from each downgradient property to certify compliance with an applicable RRS.

    b) If data indicates that certain properties do not meet an applicable RRS, then those properties may be brought into the VRP as additional qualifying properties, with institutional controls (uniform environmental covenants) subsequently placed on them to render the groundwater pathway incomplete. If those downgradient residential properties are not brought into the VRP, then the HSRA Rules will apply. Groundwater beneath those properties would then have to be remediated to applicable RRSs, effectively making those properties the POEs for the site.

c) In the first semiannual report, provide a tax map specifying the tax-identification numbers and property owners for all properties impacted or possibly impacted by contamination from the Corners Shopping Center release.

3) Using the most current groundwater data point of 250 ug/L for PCE (Table 2, Well DVEW-7), which was defined as the maximum detected concentration, the estimated indoor vapor risk and hazards exceed the target cancer risk of 1E-05 and HQ of 1. Therefore, further evaluation of the vapor-intrusion pathway for downgradient residences will be necessary. Further evaluation could include use of a more advanced VI model, residence-specific groundwater concentration estimates, soil-gas samples, etc.

4) In the first semiannual report, provide a table of delineation standards. Pursuant to the instructions on the VIRP Application Form, the VIRP should include a table of delineation standards; no table was included.

5) Section 6.1, regarding vapor intrusion/indoor air inhalation for a commercial/industrial worker, states that in order to be consistent with HSRA, the target cancer risk is 1E-05 for Class A and Class B carcinogens, and 1E-04 for Class C and Class D carcinogens. However, this applies only to the Type 3 RRS criteria and not to the site-specific Type 4 RRS criteria. Please revise accordingly.

6) Section 6.2, regarding vapor intrusion/indoor air inhalation for an off-site resident, states that to be consistent with HSRA, the target cancer risk was set to 1E-06 for carcinogens. However, the HSRA target cancer risk for carcinogens is 1E-05. The calculations may be revised accordingly.

7) Type 2 through 4 RRSs are not applicable for delineation under the VRP (refer to Section 12-8-108 of the Act). Accordingly, PCE in groundwater has not been delineated to the north or west. Horizontal delineation of contamination must be complete within 24 months of the property's acceptance into the VRP.

8) The Biochlor groundwater contaminant fate-and-transport model, as presented in Appendix B, is insufficient to demonstrate that a downgradient POE will be protected. The model must demonstrate that Type 1 or 2 RRSs will never be exceeded in groundwater at the POE. Site-specific constituents of concern shall be measured at a POD well located between the source of contamination and the POE, to demonstrate that concentrations at the POE will never exceed the Type 1 or Type 2 RRSs for those substances. This approach assures protection of the POE. EPD requires the following when a Biochlor model is submitted:

d) A model run spanning a timeframe from the estimated year of release to at least 30 years into the future from the current year.

e) A detailed narrative describing calibration procedures, including tables, graphs, and figures where necessary.

f) The Biochlor input data sheet used to generate the model output.

g) Model output graphs for groundwater flow and contaminant transport simulations and calibrations, along with tabulated field data where such data is included in the graphs.

h) Tables summarizing input for the groundwater and contaminant transport simulations, including hydraulic conductivity, hydraulic gradient, effective porosity, dispersion coefficients, fractional organic carbon, in-plume decay rates, source decay rates, source concentrations, and source dimensions. Reference the sources for each model input.

i) A discussion of how source area and in-plume decay rates were estimated. The calculated decay rates from Table 2 in Appendix B may be high due to ongoing oxidation from historical ISCO events on site. An excellent discussion of how to calculate in-plume and source decay rates can be found in the *EPA Groundwater Issues* paper entitled "Calculation and Use of First Order Rate Constants for Monitored Natural Attenuation."

j) A sensitivity analysis on the Biochlor model and present the results in tabular format along with an explanatory narrative. When using literature values or when uncertainty otherwise exists regarding Biochlor input parameters, a sensitivity analysis should be conducted on the input values. This type of analysis can tell the user how much the model output will vary with variation in certain input parameters. Sensitivity analyses are commonly run on the first-order-decay coefficients and common retardation factors. A detailed explanation of sensitivity analyses is presented in Appendix A.6 of the Biochlor User's Manual, Version 1.0, dated January 2000.

k) Based upon a revised Biochlor model run, prepare a site plat showing the maximum predicted downgradient concentrations on individual properties. The plat could possibly aid in determining which downgradient properties will need covenants restricting groundwater use.

MSC Naples, LLC will need to address these comments 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 MSC Naples, LLC. However, failure of EPD to respond to a submittal within any timeframe does not relieve MSC Naples, LLC from complying with the provisions, purposes, standards, and policies of the Act.

If you have any questions, please contact Allan Nix at (404) 657-3935.

Sincerely,

David Brownlee
Unit Coordinator
Response and Remediation Program

cc: Keith Cole, Ramboll Environ (kcole@environcorp.com)

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