

# Georgia Department of Natural Resources

2 Martin Luther King, Jr. Dr., S.E., Suite 1462 East, Atlanta, Georgia 30334

## Reply To:

Response and Remediation Program  
2 Martin Luther King, Jr. Drive, S.E.  
Suite 1462, East Tower  
Atlanta, Georgia 30334-9000  
Office 404-657-8600 Fax 404-657-0807

Mark Williams, Commissioner  
Environmental Protection Division  
Judson H. Turner, Director  
Land Protection Branch  
Mark Smith, Branch Chief

March 30, 2012

**COPY**

CSI Realty, LLC  
c/o Mr. Tom Watters  
P.O. Box 5695  
Rome, Georgia 30162

Re: Voluntary Remediation Plan Application, December 2011  
Color Spectrum, HSI Site No. 10831  
Lafayette, Walker County, Georgia  
Tax Parcel ID: 1023 087

Dear Mr. Watters:

The Georgia Environmental Protection Division (EPD) has reviewed the December 29, 2011, Voluntary Remediation Plan Application submitted pursuant to the Georgia Voluntary Remediation Program Act (the Act). EPD has the following comments on the Conceptual Site Model (CSM):

### **Groundwater:**

1. The potentiometric map suggests that there are two directions that the contaminants of concern (COC) could move from the areas of highest contamination, so having two points of demonstration (PODs) makes sense. However, the two wells identified for that role, TW-1 and MW-2, are not appropriate. It is not clear that TW-1 is downgradient of the contamination near MW-5 and MW-7, on the northern side of the nose formed by the potentiometric contours shown in Figure 8. TW-1 is slightly upgradient of TW-4 and therefore not in the expected travel path of the COC. Further, TW-1 is a temporary well of 1-inch diameter. Point of demonstration wells must be permanent and of a diameter of at least 2 inches and must be in the direct line that the contaminant is expected to take. Also, MW-2 does not appear to be directly in the expected line of travel of the COCs on the southern side of the nose. Analysis of the potentiometric map indicates that contamination from near MW-10 may pass between MW-1 and MW-2. Therefore, two additional permanent monitoring wells are needed to serve as PODs. One well should be placed along the fence approximately mid-way between MW-1 and MW-2. The other well should be placed along the fence approximately 110 feet north of MW-2. A particle-tracking model could be used to predict the expected path of contaminants and the PODs located accordingly.
2. BIOCHLOR modeling should be performed separately for each of the contaminant migration pathways described in Comment #1. By implementing the model separately for each direction, the difference in distance from the source to the well and in hydraulic gradient can be included in the model.
3. The Point of Exposure (POE) for this site should not be a hypothetical point 1000 feet from the site. There is a stream east of the site referred to in the narrative as an unnamed tributary of Towns Creek, and this stream is mentioned as a likely discharge point of

impacted groundwater. Its nearest edge that is in the contaminant migration pathway is the most appropriate location for the POE. It may be appropriate to include initial mixing of contaminated groundwater with clean water flowing in the stream to estimate an acceptable groundwater concentration at the POE. Verified low stream flow should be used in these calculations. The concentration of contaminants in groundwater discharging to the stream is acceptable if it results in contaminant concentrations in the stream that are below In-Stream Water Quality Standards (ISWQS). As with the POD, the site needs 2 POEs because the contaminant can move in two directions. Further, because both migration pathways discharge to the stream, their effect on in-stream water quality will be additive, and this must be accounted for in the calculation of the acceptable groundwater discharge concentration at the downstream POE.

4. The narrative refers to a "demonstration period" of 12 months in Section 3.1, but since the model has not yet been run, it is not possible to project that the contaminant will reach the POD in 12 months or limit the monitoring period to that timeframe. Instead, calibrate and run the model using historical information about the source to predict when the contaminant will reach the POE and the POD and at what concentrations. The question of whether the site needs further corrective action and the timeframe of monitoring can then be addressed based on model predictions.
5. If degradation is used in the groundwater model, it will be necessary to justify the decay rates, by completing a period of monitoring of natural attenuation parameters. See guidance on this topic at (<http://www.clu-in.org/download/remed/protocol.pdf>) and <http://www.gaepd.org/Documents/hsraguideCAPlan.html>.
6. The hydraulic gradient calculation given in Section 2.1.4.2 is based on groundwater elevation at only two wells. Gradient should be calculated based on three wells that form a triangle. For the contamination near MW-10, use wells on the southeastern side of the nose formed by the potentiometric lines. For contamination near MW-5, use wells in the north side of the nose.
7. No sampling logs are included in the VRP application for sampling events conducted during August and November of 2011. Sampling logs must be provided for all sampling events.
8. A footnote on Table 3 discusses the groundwater sample for lead from MW-11, which was noted to be highly turbid due to slow recharge of the well. Lead was not detected in a filtered sample collected from the same well. Because the lead concentration observed at MW-11 for the 10/07/09 sampling event found lead above the Type 1 RRS, re-sample MW-11 for lead. Filtered samples are not acceptable for confirming compliance with RRS, therefore every effort should be made to collect a non-turbid sample.

**Risk Reduction Standards:**

9. Vapor intrusion: The exposure duration (ED) and the non-carcinogenic averaging time (ATnc) should be the same. The ATnc must be revised to 25 years.
10. Toxicity factors: The toxicity factors for tetrachloroethene have been recently updated. Revise accordingly:  
$$\text{UFR: } 2.6.E-07 (\text{ug/m}^3)^{-1}$$
$$\text{RFCi: } 4.0E-02 \text{ mg/mg}^3$$
11. The Type 1 RRS for arsenic of 0.01 mg/L provided on Table 3 is acceptable for the site; however, the maximum concentration of <0.05 mg/L is greater than the Type 1 RRS. A Type 4 RRS was not calculated. The Type 4 RRS for arsenic would be 1.93E-03 mg/L, which is more conservative than the Type 1 RRS. Detection limits need to be lowered to below or equal to the Type 1 RRS.

**Other Comments:**

12. Pursuant to Item #6 of the current VRP Application Form and Checklist, a signed and sealed Georgia Professional Engineer (PE)/Professional Geologist (PG) Certification statement, along with the supporting documentation referenced in the statement – including a **monthly summary of hours** – must be provided with each future submittal.

CSI Realty, LLC must 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 CSI Realty, LLC. However, failure of EPD to respond to a submittal within any timeframe does not relieve CSI Realty, LLC from complying with the provisions, purposes, standards and policies of the Act.

If you have any questions, please contact Jessica McCarron of the Response and Remediation Program at (404) 657-0485.

Sincerely,



David Brownlee  
Acting Program Manager  
Response and Remediation Program

cc: Justin Vickery, EPS

File: 10831  
S:\RDRIVE\JMcCarron\HSI\Color Spectrum\VRP\vrp application comments letter mar2011.doc