Georgia Department of Natural Resources
Environmental Protection Division
2 Martin Luther King, Jr. Dr., S.E., Suite 1462 East, Atlanta, Georgia 30334
Judson H. Turner, Director
Land Protection Branch
Keith M. Bentley, Branch Chief
Office 404-657-8600 Fax 404-657-0807

December 17, 2012

FILE COPY

Mr. Richard E. Bowen
c/o Mr. Richard A. Wingate
Hallman & Wingate, LLC
166 Anderson St. SE, Suite 210
Marietta, Georgia 30060

Re: Third Semi-Annual VRP Progress Report (October 19, 2012)
Roswell Cleaners, HSI Site No. 10883
Roswell, Fulton County, Georgia
Tax Parcel ID: 12-1902-0412-061-6

Dear Mr. Bowen:

The Georgia Environmental Protection Division (EPD) has reviewed the third semi-annual progress report prepared by Atlanta Environmental Consultants (AEC) on your behalf. The progress report was submitted pursuant to: 1) the Georgia Voluntary Remediation Program Act (the Act) and 2) the schedule set forth in the April 21, 2011 Voluntary Remediation Program (VRP) application acceptance letter.

The cover letter from AEC states that no other correspondence has been received from EPD, but EPD sent a detailed comment letter dated August 28, 2012 regarding deficiencies in the second progress report in regards to issues with the conceptual site model, groundwater fate and transport modeling, slug testing, and site delineation concentrations. None of these comments were addressed in this third progress report, and it is clear that no further investigation has taken place since the previous report. At this point in time, the Roswell Cleaners VRP site is out of compliance with its schedule under the Act.

As stated in Comment #2 in our August 28, 2012 letter, EPD does not concur that horizontal delineation where access is available has been achieved at the 12-month milestone. Soils in the source area of MW-4 (out the back door/drum loading and unloading), and more importantly, in the area of the dry cleaning machine inside the building, have **not** been investigated, as was indicated to be an action item in past correspondence.

As stated in Comment #4 in our August 28, 2012 letter, groundwater modeling cannot be used to establish delineation. Permanent monitoring wells must be installed and sampled in accordance with established guidance to satisfy delineation requirements. Analytical data from groundwater samples collected at MW-2 in April 2012 resulted in concentrations of regulated substances greater than the proposed delineation standards; therefore, MW-2 cannot be used to demonstrate delineation. Furthermore, it is discussed that "low concentrations of PCE, TCE, DCE, and VC detected in MW-2 are not a result of activities on the Roswell Cleaners site". Since no further soil or groundwater investigation has taken place in between locations MW-4 and MW-2, there is insufficient data to support this conclusion.

EPD requires a face-to-face meeting in our office with all parties involved to discuss bringing the Roswell Cleaners site back into compliance with the VRP requirements. Please contact Jessica McCarron at (404) 657-0485 or via email at jessica.mccarron@gaepd.org to schedule a meeting.

The next semi-annual progress report (24 months after enrollment) is due by April 21, 2013 and must demonstrate complete horizontal delineation where access is **not** available. Responses to the comments in our August 28, 2012 letter must be provided in a response-to-comment narrative format as well as on two (2) electronic copies on CD. All future progress reports must also be submitted with CD copies.

Sincerely,

Charles D. Williams
Program Manager
Response and Remediation Program

Enclosure: Copy of Aug. 28, 2012 EPD Response letter
cc: Peter Kallay, AEC
Richard A. Wingate, Hallman & Wingate LLC
S:\RDRIVE\JMcCarron\HSI\Roswell Cleaners\VRP\3rd VRP ProgRpt comments Dec2012.doc

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Dr., S.E., Suite 1462 East, Atlanta, Georgia 30334
Mark Williams, Commissioner
Environmental Protection Division
Judson H. Turner, Director
Land Protection Branch
Keith M. Bentley, Branch Chief

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

August 28, 2012

COPY

Mr. Richard E. Bowen
c/o Mr. Richard A. Wingate
Hallman & Wingate, LLC
166 Anderson St. SE, Suite 210
Marietta, Georgia 30060

Re: Second Semi-Annual VRP Progress Report (June 13, 2012)
Roswell Cleaners, HSI Site No. 10883
Roswell, Fulton County, Georgia
Tax Parcel ID: 12-1902-0412-061-6

Dear Mr. Bowen:

The Georgia Environmental Protection Division (EPD) has reviewed the second semi-annual progress report prepared by Atlanta Environmental Consultants on your behalf. The progress report was submitted pursuant to: 1) the Georgia Voluntary Remediation Program Act (the Act) and 2) the schedule set forth in the April 21, 2011 Voluntary Remediation Program (VRP) application acceptance letter. EPD notes that this second semi-annual progress report was due on April 21, 2012, but was not received in our office until June 13, 2012. Please ensure that all deadlines established for this site are met in the future.

EPD has noted the following deficiencies:

1) The following items are missing from the subject semi-annual progress report:

   a. An updated milestone schedule, describing implementation of the VIRP during the preceding semi-annual period. A Gantt chart format is preferred for presentation of the updated milestone schedule.

   Pursuant to Item #5 of the current VRP Application Form and Checklist, the above-referenced items must be included in *each* semi-annual status report submitted to the director by the VRP participant. Please ensure that said items are included in all semi-annual progress reports submitted in the future.

2) Pursuant to Item #5.a. of the current VRP Application Form and Checklist, within the first 12 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern on property where access is available at the time of enrollment. EPD does not concur that horizontal delineation where access is available has been achieved at this 12-month milestone. It has been stated several times in past correspondence that "Active remediation of soils will be considered if it is determined that the proposed remedy [an asphalt cap] is not protective of human health and the environment." However, only one additional soil sample has been collected on site since 2008, and this was from the boring during the installation of groundwater monitoring well MW-5 in April 2012, which is downgradient from the location of the dry cleaning machine. Soils in the source area of MW-4 (out the back door/drum loading and unloading), and more

importantly, in the area of the dry cleaning machine inside the building, have **not** been investigated, as was indicated to be an action item in past correspondence. Also, it is discussed that "low concentrations of PCE, TCE, DCE, and VC detected in MW-2 are not a result of activities on the Roswell Cleaners site." Since no further soil or groundwater investigation has taken place in between locations MW-4 and MW-2, it is difficult to support this assumption.

3) 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. The certification statement was included with the progress report, but the summary of hours was not.

Updated Conceptual Site Model:

4) In accordance with Section 12-8-108(1) of the VRPA, horizontal and vertical delineation in groundwater must be completed. Groundwater modeling cannot be used to establish delineation. Permanent monitoring wells must be installed and sampled in accordance with established guidance to satisfy delineation requirements. Analytical data from groundwater samples collected at MW-2 in April 2012 resulted in concentrations of regulated substances greater than the proposed delineation standards; therefore, MW-2 cannot be used to demonstrate delineation.

5) In accordance with Section 12-8-108(4) of the VRPA, groundwater monitoring must be conducted at a point of demonstration (POD) well to demonstrate that groundwater concentrations are protective of any established downgradient point of exposure.

6) In accordance with Section 12-8-108(7) of the VRPA, fate and transport modeling will be required to show compliance with site-specific cleanup standards.

7) In reference to contamination at MW-2, there is insufficient data to show whether or not off-site sources are contributing to the release.

Groundwater Fate and Transport Modeling:

8) Page 4 of the Conceptual Site Model states Bioscreen was used for groundwater modeling. Documentation of the model was not presented in the submittal. Please note EPD requires the following for groundwater model review:

   a. A summary table of all model input and calibration parameters and their respective sources and/or bibliographical references must be submitted. A summary table must also be submitted for each model run;

   b. Figures and cross-sections necessary to justify model input parameters must be submitted;

   c. A model sensitivity analysis will be required. A summary table of sensitivity analysis parameters will be required showing the input values, the source of the input values, the model output concentrations downgradient of the source, and the percent change in the concentration as the target input parameters are varied (i.e., high or 1.5x baseline, low or 0.5x baseline). To demonstrate the model's sensitivity to each parameter, EPD recommends generating a sensitivity analysis spider diagram by plotting percent change from baseline for all sensitivity parameters on the x-axis and resulting downgradient

concentrations when each parameter is perturbed on the y-axis. The steeper the slope of the line, the more sensitive the model is to that parameter;

d. Paper copies of data input and output model worksheets must be submitted;

e. EPD will require projecting the calibrated model forward in time to estimate the maximum distance the plume is expected to travel. EPD will also require the model to continue being projected forward in time to estimate when the plume retreats. Concentration vs. distance plots should be generated to compare model prediction with field data; and

f. Please note the hydraulic gradient value used for fate and transport modeling must be an average of historical gradient data collected at the site.

Slug Testing:

9) EPD noted an incorrect conversion factor (Eq. 9) was used on the Detailed Calculations page. Eq. 9 converts the hydraulic conductivity value (K) from ft/sec to ft/day. The conversion factor of 1440 min/day was used. The correct conversion factor for ft/sec to ft/day is 86400 sec/day. Please revise.

10) Using the hydraulic conductivities (ft/sec) and other parameter values provided on the Detailed Calculations page, EPD calculates an average seepage velocity of approximately 748 ft/yr, which is not appropriate for the geology of the area. Hydraulic conductivity and seepage velocity must be reevaluated for the site. EPD recommends using an Rc value of 0.083. EPD also noted the boring logs show the borehole diameter is 6.25 inches resulting in an Rw of 0.26'. However, page 5 of the Response to Comments states the borehole diameter is 6.5 inches and the Rw value used was 0.27'.

11) According to page 5 of the Response to Comments, depth to bedrock is unknown therefore effective aquifer thickness was estimated to be 20'. As vertical delineation data are acquired at the site, the hydraulic conductivity and seepage velocity may have to be revised to reflect new site-specific information.

12) The effective porosity value used was 0.35. This value is typically for coarse sand. Based on the boring logs, a more appropriate effective porosity value for Piedmont soils ranges from 0.15-0.20.

Site Delineation Concentrations:

13) The Risk Reduction Standards presented for soil in the text are not RRS, but notification concentrations for regulated substances.

14) The text under "Additional Investigations" on page 3 states: "Completion of horizontal delineation where access is not available is proposed in 24 months." To be clear, horizontal delineation where access is not available should be *completed* within 24 months after enrollment.

Figures/Logs:

15) Units for groundwater analytical results are not indicated on Figure 5.

16) Figure 8a: The PCE iso-concentration line should include concentrations detected at MW-2. A "not detected" dashed line is inappropriate.

17) Figures 9 and 10: The text on the cross-sections is small and difficult to read. Also, the iso-concentration lines are drawn incorrectly.

18) The boring log and well construction diagram for groundwater well MW-5 Bowen must be submitted with the next progress report.

19) Groundwater sampling logs for the April 2012 sampling event and for all future groundwater sampling events must be submitted.

If you have any questions regarding the above comments, please contact Jessica McCarron at (404) 657-0485. The next semi-annual progress report is due by October 21, 2012. Please provide responses to the above comments in a response-to-comment format in said progress report.

Sincerely,

Charles D. Williams

Charles D. Williams
Program Manager
Response and Remediation Program

cc: Peter Kallay, AEC
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