

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Dr., S.E., Suite 1066 East, Atlanta, Georgia 30334

Mark Williams, Commissioner

Environmental Protection Division

Judson H. Turner, Director

Land Protection Branch

Keith M. Bentley, 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

April 12, 2013

VIA EMAIL & REGULAR MAIL

Mr. Rob Savarese
Director, Environmental Services
General Chemical Corporation
90 East Halsey Road
Parsippany, New Jersey 07054

Re: January 2013 VRP Application & Plan Comments
General Chemical Site, HSI# 10498
East Point, Georgia
Tax Parcel ID #s 14 013100010176 & 14 013100010184

Dear Mr. Savarese:

The Georgia Environmental Protection Division (EPD) has received the January 11, 2013, Voluntary Remediation Program application that has been submitted pursuant to the Georgia Voluntary Remediation Program Act (the Act) O.C.G.A. 12-8-100, by the GeoSyntec on behalf of General Chemical Corporation (GC). After completing its review of the application, EPD has prepared the following comments:

Schedule

- Semiannual progress reports are to be submitted to EPD. Each progress report must describe all actions taken since the last submittal, and include certification by the professional engineer/geologist specified in the VRP application along with a monthly summary of hours invoiced and description of services provided since the last submittal.
 - October 10 and April 10 through October 10, 2017

In addition to the information required above, the following must be included in the specific progress reports discussed below.

- April 10, 2014, semiannual progress report must demonstrate complete horizontal delineation on the qualifying property and include the proposed site-specific RRS, Point of Demonstration well and associated Point of Exposure; and
- April 10, 2015 semiannual progress report must demonstrate complete horizontal and vertical delineation on all impacted properties; and
- October 10, 2015 semiannual progress report must demonstrate complete horizontal and vertical delineation, finalize the remediation plan and provide a cost estimate for implementation of remediation and associated continuing actions. EPD recommends that participant finalize approval of cleanup standards for all regulated substances prior to this submittal.

- Compliance status report including certifications by no later than:
 - April 10, 2018

General

- 1) For future submittals (e.g. CSR), please revise Figure 1, Tax Plat Map, to include the tax parcel ID number and property owner information for the residential property on the northeast corner of Randall Street and N. Martin Street. In addition, the tax plat map should include utility right of way information as well illustrations of current site structures and site improvements managed by General Chemical and/or Newell Recycling.

Risk Reduction Standards

- 2) Several discrepancies were noted with the development of the Type 1 soil RRS included in Appendix C. Pursuant to the HSRA Rules, the generic Type 1 soil RRS involves calculation of risk to the future adult resident only. A future child resident should be evaluated as part of the requirement of the site-specific Type 2 RRS criteria only. Since compliance to the Type 2 RRS is not being sought, all reference to the child-protective RRS should be omitted from the table. Additionally, although aluminum is non-volatile, the inhalation of dust and soil particulates should still be considered in the inhalation risk calculation. EPD calculated a Type 1 soil RRS of $3.2E+03$ mg/kg based on the non-cancer risk to an adult resident and a Type 4 human health direct exposure risk from soil of $1.02E+04$ mg/kg based on the non-cancer risk to the non-residential receptor. Please make all necessary revisions to the calculations and tables.
- 3) According to Section 5.2 of the January 2013 Application, a “linear regression” analysis of SPLP soil data was utilized to determine the Type 1 and 4 soil RRS for sulfate. Please note that when determining an acceptable soil cleanup value using “linear regression” EPD recommends that the following comments be addressed and the RRS for sulfate be recalculated:
 - a. At least half of the total soil concentration data points used in the SPLP should be at or above the midpoint of the range of total soil concentrations, which was not met for SPLP data provided in Table 1.
 - b. EPD concurs with the application of the 25% safety factor that was used for sulfate RRS. However, EPD recommends that the following equation be used with the SPLP data (Appendix D) to determine the acceptable soil concentration: $C_t = (C_w - b) / m$, where C_t is the acceptable soil concentration, C_w is the target leachate concentration, b is the y-intercept of the linear trend line, and m is the slope of the linear trend line.
 - c. Provide the following information in support of the SPLP data evaluation: a narrative description of the sampling and test methods, laboratory analytical data and pH determinations for the soil and leachate.

Conceptual Site Model

- 4) According to Section 6.2 of the January 2013 Application, the target sections of the storm drains downgradient of the site will be repaired if it is determined that site related impacted groundwater is infiltrating the storm drain system. Please note that according to a 1995 City of East Point Storm Sewer Inspection video of the Martin Street Storm Drain, groundwater infiltration and visual deterioration of the storm sewer has already been confirmed.
- 5) Based on the information provided within the January 2013 Application, and within the public facility files for the HSI Site #10498, the groundwater to surface water pathway can be considered a potentially complete exposure pathway. Therefore, please revise the application to account for this exposure pathway and develop ecological endpoints/cleanup criteria values for in-stream water quality for aluminum and sulfate.
- 6) According to Section 4.0 of the January 2013 Application, a direct groundwater exposure pathway does not exist at the site. EPD does not entirely concur with the conclusion that the exposure pathway for groundwater is incomplete due to Section 12-8-108(5) of the Act stating that cleanup standards for soil must be protective of groundwater criteria at an established point of exposure for groundwater (i.e. hypothetical point of drinking water exposure 1,000-foot downgradient from the delineated site contamination). Therefore, please utilize the calculated Type 1 and 4 groundwater RRS derived for sulfate and aluminum in groundwater for the evaluation of the hypothetical point of exposure (POE) for groundwater and for the derivation of the appropriate soil screening values. While EPD has requested that the groundwater exposure pathway be taken into account when completing the VRP Application, EPD understands that the environmental covenants that are to be placed on the site property, and any additional affected properties, to restrict the groundwater exposure pathway may relieve GC from the requirement to remediate groundwater to an established non-residential standard.

In addition, please provide a specific indication of which monitoring location(s) will be used as the point of demonstration (POD) monitoring location(s) for an established Point of Exposure (POE) or an established hypothetical POE for groundwater.

- 7) According to Section 12-8-108(1) of the Act, evidence of the horizontal and vertical delineation of soil and groundwater contamination to the default residential cleanup standards must be provided. Based on the data provided in the January 2013 Application, additional delineation measures should be conducted at the following areas of the site:
 - a. According to Section 5.1 of the January 2013 Application, 35 mg/L has been proposed as the Type 1 groundwater RRS, based on background groundwater concentrations from upgradient groundwater monitoring well MW-01M. Please provide additional data to support the 35 mg/L background value and associated Type 1 RRS, including but not limited to the analytical data set used to establish local ambient or anthropogenic background conditions not affected by the subject site release (§12-8-108(1)). When compiling the supporting documentation for the site specific background value, please take into consideration the other groundwater wells upgradient and downgradient of the site, technically unaffected by the release, that exhibit aluminum levels less than 1 mg/L, i.e.

OW-01A, EPW-02 & -03.

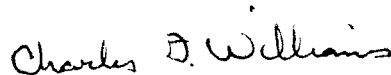
In addition, based on the above listed risk reduction standards comments and the revisions to the Type 1 and 4 RRS for aluminum, please provide the necessary data and make the necessary revisions to the text to illustrate that the concentrations of aluminum have been delineated and remediated to the acceptable levels.

- b. According to the data presented in Figure 4, horizontal delineation for sulfate is needed to the east of the confirmation sidewall sample grid location L5 (9,940 mg/kg). Additionally, please note that while the sulfate concentration at soil location G4 (10,300 mg/kg sulfate) and groundwater location GWC-04V (9,900 mg/L) exceeds the established Type 1 delineation criteria; EPD will not be requiring additional onsite vertical soil and groundwater delineation at these locations at this time.
 - c. According to the data presented in Figures 10 and 11, horizontal groundwater delineation for sulfate is needed to the south of GWC-05, and to the south of GWC-02 well cluster for both sulfate and aluminum.
- 8) Please revise the surface water monitoring plan included in Section 6.4 to include all surface water monitoring locations previously established for the site.

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

Should you have any additional questions or concerns please contact Mr. Kevin Collins of the Response and Remediation Program at (404) 463-0530.

Sincerely,



Charles D. Williams
Program Manager
Response and Remediation Program

c: Bobby Triesch, Newell Recycling, LLC
Brian Jacobson, Geosyntec

File: VRP Application 887983819 – General Chemical Site #10498