

# Georgia Department of Natural Resources

## Environmental Protection Division

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Judson H. Turner, Director

Land Protection Branch

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### VIA EMAIL AND FIRST-CLASS MAIL

April 16, 2014

Carpenter Technology Corporation  
c/o Sean McGowan  
105 West Bern Street  
Redding, Pennsylvania 19612

**COPY**

Re: Supplemental Comments on Revised Voluntary Remediation Program Application of December 2013  
General Time Corporation, HSI Site No. 10355  
100 Newton Bridge Road, Athens, Georgia; Clarke County  
Tax Parcel ID No. 112 003

Dear Mr. McGowan:

The Georgia Environmental Protection Division (EPD) has reviewed the December 2013 Revised Voluntary Investigation and Remediation Plan (VIRP), submitted pursuant to the Georgia Voluntary Remediation Program Act (the Act) as an application for the site's entry into the Voluntary Remediation Program (VRP).

### Cleanup Standards:

- 1) Where applicable, risk reduction standard (RRS) values other than Type 1 for groundwater will have to be calculated for all regulated substances that have been released on site. Type 1 groundwater RRS values for regulated substances can be found in Table 1, Appendix III, of the Georgia DNR Rules for Hazardous Site Response (Chapter 391-3-19). Other RRS values must be approved by EPD prior to their being used as target remedial values on a site. To date, EPD has approved the following RRS values for use on the General Time site:

Approved Risk Reduction Standards  
General Time Corporation  
HSI Site Number 10355

COC	GROUNDWATER (mg/L)			SOIL (mg/kg)			
	Type 2	Type 3	Type 4	Type 1	Type 2	Type 3	Type 4
Cis-1,2-DCE	--	--	--	7	--	--	--
TCE	--	--	--	0.5	--	--	--
Trans-1,2-DCE	0.03	--	0.20	10	--	--	--

We are providing the following Comments 2 and 3 based upon RRS values and calculations presented in the March 30, 2012, Response to EPD Comments. The constituents of concern (COCs) upon which we base our comments are trichloroethylene (TCE), cis-1,2-dichloroethylene (DCE), and trans-1,2-DCE.

- 2) Please note that soil Type 2 calculations must also include an evaluation of the potential leachability to groundwater (see section 391-3-19-.07(7)(c)1 of the Rules for Hazardous

*C: Allen*

Sites Response). Soil concentrations that will be protective of underlying groundwater should be calculated using an EPA-recognized or otherwise peer-reviewed vadose-zone model. The Soil Screening Level (SSL) Partitioning Equation for Migration to Groundwater (Equation 10 from the US EPA *Soil Screening Guidance: User's Guide*, 1996) is one such model that would be acceptable to EPD.

Please provide soil-to-groundwater leaching values for review. The lower of the leachability and human health risk value will determine the overall soil Type 2 RRS. The values in the table provided in response to comment 6 are incorrect for trans-1,2-DCE and TCE. The reason for this discrepancy is that the volatilization factors (VF) used in the RAGS equations 6 and 7 are incorrect (see comment 3 below). The table will also need to incorporate the derived leachability values. Please revise.

- 3) The method by which the VF values were derived was correct, but the overall VF values were incorrect due to an incorrect soil organic carbon fraction ( $f_{oc}$ ) value. The correct value for  $f_{oc}$  is 0.02 (see Appendix III, Table 3 of the Rules). Please revise the VF values, and incorporate the correct VF terms in the soil RAGS equations 6 and 7. Please revise the human health risk-based values for soils.

When calculating RRS values, please obtain toxicity factors from the latest version of the EPA Region 3 screening levels generic Summary Table. Where necessary, obtain input values for specific physical and chemical properties of a substance from the EPA Region 3 generic Chemical Specific Parameters table. Both tables can be accessed on the Internet at:

[http://www.epa.gov/reg3hwmd/risk/human/rb-concentration table/Generic Tables/index.htm](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm)

- 4) Please specify sampling points for a proposed semiannual monitoring program, including both groundwater-monitoring wells and surface water. Regarding surface water:
  - a) During a visit to the site on January 7, 2013, EPD observed that the MW-11 well cluster is located in an area of slow-moving and standing surface water, within a possible wetlands setting. Accordingly, propose two surface-water-sampling points at the closest possible locations to the MW-11 wells, just outside of the riparian zone.
  - b) Propose one surface-water-sampling point at a location in the northern tributary, west of the MW-11 wells.
  - c) Propose one surface-water-sampling point in the southern tributary, southeast of the former General Time facility.
- 5) Neither a point of exposure nor an associated point of demonstration was specified in the VIRP. Under the Act, a point of exposure is defined as the nearest of the following locations:
  - The closest existing downgradient drinking-water-supply well; or,
  - The likely nearest future location of a downgradient drinking-water-supply well where public supply water is not currently available and is not likely to be made available within the foreseeable future; or
  - The hypothetical point of drinking-water exposure located at a distance 1,000 feet downgradient from the delineated site contamination.

Due to the geographical extent of the plume and the presence of the Oconee River east of the site, a point of potential drinking-water exposure cannot be determined using the above criteria. However, regulation of contaminant discharge into the waters of the state is necessary to protect human health and the environment. Specifically:

- a) The TCE concentration at well MW-9I was 1,110 ug/L in December 2011. MW-9I is about 1,200 feet west of the Oconee River. No groundwater data is available between MW-9I and the river. Installation of one or more wells east of MW-9I should be proposed in the revised VIRP to better assess contaminant migration. Groundwater TCE concentrations at the river can then be projected using a fate-and-transport model.
  - b) Surface water needs to be protected against excessive contaminant discharge from groundwater. Surface-water monitoring, as specified in Comment 3 above, along with a long-term plan to protect surface water, will be required.
- 6) Regarding potential vapor-intrusion pathways:
- a) Please provide a plan for evaluating the potential vapor-intrusion pathway in downgradient buildings that overlie the dissolved contaminant plume. EPD does not necessarily agree that clean groundwater overlies contaminated groundwater at those locations. Preferably, the plan should include a "multiple lines of evidence" approach.
  - b) If the former General Time manufacturing building remains unoccupied, an evaluation of potential vapor intrusion there will not be necessary. However, if the building is not evaluated for potential vapor intrusion, a covenant restricting future use of the building will be required prior to removing the site from the VRP.
- 7) Regarding the MW-11 well cluster:
- a) EPD contends that groundwater contamination at the MW-11 well cluster is associated with former operations at General Time, for the following reasons:
    - i) TCE is the groundwater contaminant present in the highest concentrations in the MW-11 wells. TCE is also the groundwater contaminant exhibiting the highest concentrations on the General Time site.
    - ii) The MW-11 wells are in a downgradient direction from the General Time site
    - iii) No alternative source of the TCE in groundwater at the MW-11 wells has been positively identified.Accordingly, groundwater contamination at the MW-11 wells will have to be addressed within the context of remedial activities on the General Time site.
  - b) Please provide GPS coordinates, obtained in the field, for the MW-11 well cluster.
- 8) Please provide a figure that includes property lines, facility names and/or names of property owners, and parcel tax identification numbers for all properties adjoining the former General Time facility. Also, include all properties lying between General Time and the Oconee River.

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

If you have any questions, please contact Allan Nix at (404) 657-8600.

Sincerely,



David Brownlee  
Unit Coordinator  
Response and Remediation Program

c: Mark Miesfeldt, Haley & Aldrich (via email)

File: HSI No. 10355