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April 12, 2016

Mr. Michael Townsend
Remedial Project Manager
Superfund Remedial & Site Evaluation Branch
U. S. Environmental Protection Agency, Region 4
Sam Nunn - Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, GA 30303

RE: Annual Groundwater Remedial Action Performance Monitoring Report – 2015
General Electric/Shepherd Farm NPL Site
East Flat Rock, Henderson County, North Carolina
NCD 079 044 426

Dear Mr. Townsend:

The North Carolina Department of Environmental Quality (NC DEQ) Division of Waste Management (DWM) Superfund Section has received the *Annual Groundwater Remedial Action Performance Monitoring Report – 2015* for the General Electric/Shepherd Farm National Priorities List (NPL) Site located in East Flat Rock, North Carolina. The NC DEQ DWM Superfund Section has reviewed this document and offers the following attached comments.

The NC DEQ DWM Superfund Section appreciates the opportunity to comment on this document. If you have any questions or comments, please feel free to contact me at (919) 707-8336 or at david.mattison@ncdenr.gov.

Sincerely,

David B. Mattison
Environmental Engineer

Federal Remediation Branch
Superfund Section
Division of Waste Management
North Carolina Department of Environmental Quality

Attachment

GENERAL ELECTRIC/SHEPHERD FARM NPL SITE Annual Groundwater Remedial Action Performance Monitoring Report – 2015

Section 1.4 Remediation Target Compounds in Groundwater

1. Please delete the phrase “(right?)” at the conclusion of Section 1.4 – *Remediation Target Compounds in Groundwater*.

Section 2.5 Stream Flow

2. Please correct the second sentence of the second paragraph of Section 2.5 – *Stream Flow* to reflect the corrected estimated discharge of Bat Fork Creek per Comment #11 below.

Section 3.1.1 GE Subsite Results

3. Please correct the second sentence of the first bullet item of Section 3.1.1 – *GE Subsite Results* to state “The reported detections ranged between 0.58 J µg/L (**MW-16**) and 542.0 µg/L (MW-14).”

Section 4.2 Sediment Monitoring

4. In accordance with the laboratory analytical reports submitted as Appendix A – *Laboratory Reports and Chain of Custody Forms*, please correct the second bullet item in Section 4.2 – *Sediment Monitoring* to state “PCBs were detected in SED-2 at a total concentration of 0.124 mg/kg **and in SED-3 at an estimated total concentration of 0.0687J mg/kg**, well below its RG.”

Section 5.1.1 Total Volume Measurements

5. The second sentence of the second paragraph of Section 5.1.1 – *Total Volume Measurements* indicates that the total discharge through the Groundwater Remediation System (GRS) in pumping year 2014-2015 was approximately 1 million (M) gallons (gal) less than extracted and treated in pumping year 2013-2014. However, the first bullet item in the section entitled “*GRS Performance Summary*” in Section 6 – *Summary and Conclusions* indicates that the total discharge through the GRS in pumping year 2014-2015 was approximately 0.5 M gal less than extracted and treated in pumping year 2013-2014. Please clarify this discrepancy.

Section 5.2.2 Mass Removal

6. The third sentence of the third paragraph of Section 5.2.2 – *Mass Removal* contradicts the information provided in the second sentence of the first paragraph of Section 5.2.2 – *Mass Removal*. Please correct this discrepancy.

Section 6 Summary and Conclusions

Groundwater, Surface Water, and Sediment Quality Summary

7. In accordance with the laboratory analytical reports submitted as Appendix A – *Laboratory Reports and Chain of Custody Forms*, please correct the first sentence of the second bullet item in this section to state “PCBs were detected in SED-2 **and in SED-3, at concentrations** below its RG (1 mg/kg).”
8. Please correct the sixth bullet item in this section to state “VOCs were not detected in the one residential water supply well sampled in September **2015**, nor in MW-60A, on offsite monitoring well sampled as part of the residential well network.”

Table 2-3 Water Level Measurements

9. The calculated water level elevations given for piezometers BAPZ-1 and BAPZ-2 for September 15, 2015 in Table 2-3 – *Water Level Measurements* do not agree with the water level elevations given for piezometers BAPZ-1 and BAPZ-2 for September 15, 2015 in Figure 2-1 – *GE Subsite Shallow Groundwater Table Elevation on 15 September 2015*, Figure C-8 – *Hydrographs for bunched arrowhead piezometers* located in Appendix C – *Hydrographs and Historical Groundwater Levels*, and Table C-9 – *Summary of Long-Term Bunched Arrowhead Wetland Piezometer Water Level Measurements* located in Appendix C – *Hydrographs and Historical Groundwater Levels*. Please correct these discrepancies.
10. The water elevations calculated for Staff Gauge SG-1 and Staff Gauge SG-2 for September 15, 2015 in Table 2-3 – *Water Level Measurements* are incorrect (e.g., SG-1: 2144.01 ft NGVD-29 – 4.63 ft ≠ 2140.77 ft NGVD-29). Please correct these oversights.

Table 2-4 Stream Flow Measurements Recorded 14 September 2015

11. The estimated discharges calculated for surface water measurement points SW-3 and SW-6 for September 14, 2015 in Table 2-4 – *Stream Flow Measurements Recorded 14 September 2015* are incorrect (e.g., SW-3: 0.3 ft/s x 0.50 ft x 7.3 ft ≠ 0.92 cfs). Please correct these oversights.

Table 2-5 Summary of Stream Flow Measurements Since GRS Start-Up

12. Table 2-5 – *Summary of Stream Flow Measurements Since GRS Start-Up* reflects the incorrect estimated discharges calculated for surface water measurement points SW-3 and SW-6 for September 14, 2015 as previously mentioned in the above Comment #11. Please correct these oversights.

Table 4-2 Sediment Analytical Results for September 2015

13. In accordance with the laboratory analytical reports submitted as Appendix A – *Laboratory Reports and Chain of Custody Forms*, please correct Table 4-2 – *Sediment Analytical Results for September 2015* to indicate that the sediment sample SED-3 collected in September 2015 contained an estimated 68.7J micrograms per kilogram ($\mu\text{g}/\text{kg}$) total polychlorinated biphenyls (PCBs).

Figure 2-1 GE Subsite Shallow Groundwater Table Elevation on 15 September 2015

14. Please correct Figure 2-1 – *GE Subsite Shallow Groundwater Table Elevation on 15 September 2015* to reflect the groundwater elevation at groundwater monitoring well MW-58 as is indicated on Table 2-3 – *Water Level Measurements*.
15. Please correct Figure 2-1 – *GE Subsite Shallow Groundwater Table Elevation on 15 September 2015* to reflect corrected groundwater elevations at staff gauges SG-1 and SG-2 as previously mentioned in Comment #10.

Figure 2-6 Hydraulic Containment in the Saprolite at the GE & Shepherd Farm Subsites on 15 September 2015

16. Please correct Figure 2-6 – *Hydraulic Containment in the Saprolite at the GE & Shepherd Farm Subsites on 15 September 2015* to reflect the groundwater elevations at groundwater monitoring wells MW-32, MW-37, MW-42, MW-43, and MW-54 as is indicated on Table 2-3 – *Water Level Measurements* and Figure 2-1 – *GE Subsite Shallow Groundwater Table Elevation on 15 September 2015*.

Figure 3-3 Plan View of September 2015 PCE Measurements at the GE Subsite

17. In accordance with the laboratory analytical reports submitted as Appendix A – *Laboratory Reports and Chain of Custody Forms*, please correct Figure 3-3 – *Plan View of September 2015 PCE Measurements at the GE Subsite* to indicate that the groundwater sample collected in September 2015 from monitoring well MW-16 contained an estimated 0.58J micrograms per liter ($\mu\text{g}/\text{L}$) tetrachloroethene (PCE).

Figure 3-4 Vertical Delineation of the PCE Plume – September 2015 Measurements

18. In accordance with the laboratory analytical reports submitted as Appendix A – *Laboratory Reports and Chain of Custody Forms*, please correct Figure 3-4 – *Vertical Delineation of the PCE Plume – September 2015 Measurements* to indicate that the groundwater samples collected in September 2015 from monitoring well MW-16 and monitoring well MW-16A contained an estimated 0.58J $\mu\text{g}/\text{L}$ PCE and 4.9 $\mu\text{g}/\text{L}$ PCE, respectively.

Appendix C Hydrographs and Historical Groundwater Levels

19. Please correct the notes for Figure C-3 – *Hydrographs for monitoring wells MW-10 through MW-18*, Figure C-4 – *Hydrographs for monitoring wells MW-19 through MW-28*, Figure C-5 – *Hydrographs for monitoring wells MW-29 through MW-40*, and Figure C-6 – *Hydrographs for monitoring wells MW-41 through MW-57* to indicate that groundwater monitoring wells MW-11, MW-19, MW-21, MW-28, MW-30, MW-30A, and MW-53, respectively, were abandoned **August 14, 2014**.
20. The groundwater elevation given for recovery well RW-2/2R for September 15, 2015 in Table C-10 – *Summary of Long-Term Recovery Well Water Level Measurements* does not agree with the groundwater elevation given for recovery well RW-2/2R for September 15, 2015 in Table 2-2 – *Recovery Well Water Level Measurements*, Figure 2-1 – *GE Subsite Shallow Groundwater Table Elevation on 15 September 2015*, Figure 2-3 – *GE Subsite Shallow Bedrock Groundwater Table Elevation on 15 September 2015*, Figure 2-6 – *Hydraulic Containment in the Saprolite at the GE & Shepherd Farm Subsites on 15 September 2015*, and Figure C-1 – *Hydrographs for recovery wells*. Please correct this discrepancy.
21. Please supplement Appendix C – *Hydrographs and Historical Groundwater Levels* with the groundwater elevation data collected from staff gauges SG-1 and SG-2.

Appendix H Historical Surface Water and Sediment Results since Groundwater Remediation System Startup

22. In accordance with the laboratory analytical reports submitted as Appendix A – *Laboratory Reports and Chain of Custody Forms*, please correct Table H-2 – *Summary of Sediment Results Since GRS Start Up* to indicate that the sediment sample SED-3 collected in September 2015 contained an estimated 68.7J µg/kg total PCBs.