



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

July 6, 1999

Mr. Andrew T. Silfer, P.E.
General Electric Company
100 Woodlawn Ave.
Pittsfield, Mass. 01201

Via Electronic and U.S. Mail

Re: Conditional Approval of General Electric's June 1999 Submittal Titled - "Detailed Work Plan for On-Plant Consolidation Areas, Pittsfield, Massachusetts", by BBL.

Dear Mr. Silfer:

The United State's Environmental Protection Agency (EPA) approves the above-referenced submittal subject to the following modifications:

Geophysical Evaluation of Hill 78 Perimeter: General Electric Company (GE) shall conduct a magnetometer survey around the assumed current edge of the Hill 78 Landfill in order to evaluate the presence of buried metal objects outside the landfill toe. If the geophysical survey indicates anomalies, the Massachusetts Department of Environmental Protection (DEP) and the EPA, shall be consulted to evaluate the appropriate actions to be taken by GE.

Additional Technical Requirements: GE shall respond to the attached comments with an addendum to the Detailed Work Plan. GE's responses shall include additional text, figures (as appropriate), and calculations to address: surface water run off (both during construction and after completion), frost protection, dust control, gas generation, and cap design issues.

Schedule: GE shall propose a detailed schedule which identifies the interrelations between the Allendale School excavation, Building 71 demolition, Hill 78 and Building 71 site preparation.

Note that the EPA is still evaluating Section 2.3 and Tables 1 & 2 which contain ARARs. We will provide our comments in the next few days.

July 6, 1999

Page 2 of 2

Due to the need to initiate consolidation, GE shall consult with the DEP and EPA project managers to address resolution of "time critical" issues. An addendum which addresses the balance of the Agencies comments shall be submitted by August 6, 1999.

If you would like to discuss these comments in greater detail please contact me at (617) 918-1268.

Sincerely,



Michael Nalipinski
Remedial Project Manager

Attachment

cc:	Richard Cavagnero,	EPA
	Bryan Olson,	EPA
	Chet Janowski,	EPA
	John Kilborn,	EPA
	John Ziegler,	DEP
	John Novotny,	GE
	Dawn Veillieux,	WESTON

Comments on Detailed Work Plan for On-Plant Consolidation Areas
July 6, 1999

SIGNIFICANT ISSUES:

1. A geophysical evaluation around the current "perimeter" of Hill 78 prior to determining the "final" footprint of the consolidation area in order to define the exact extent of the existing landfill.
2. The Work Plan Addendum needs to include a contingency to address the NAPL that was detected in well H78B-8R on the south side of Hill 78.
3. Revise to include a section in the Detailed Work Plan text and figures which discusses how surface runoff will be managed. Discuss the interim and final drainage patterns/retention basins as appropriate.
4. The Detailed Work Plan shall include a section which discusses options to temporarily close the Consolidation Areas if the area will be closed for an extended period of time (e.g. greater than 1 month). This would provide protection if the Consolidation Areas close during the winter.

SPECIFIC COMMENTS

1. Page 1-3, 1st full para., line 11: Revise to "...appropriate composite/averaging.. "
2. Page 1-5, last paragraph: "New" consolidation areas include only New York/Merrill Road area. Also, we should stipulate the size constraints of the consolidation area.
3. Page 2-5, Section 2.4.1, item 3: Define the permeability of the GDC that GE is proposing to use.
4. Page 3-1, Pre-Design Activities. The Work Plan Addendum shall include further evaluation of the NAPL discovered at well location H78B-8R. At a minimum, the evaluation of the NAPL should include the following: 1) NAPL bailing/recovery test at well H78B-8R, 2) Appendix IX+3 analysis and physical property analysis (i.e., specific gravity, viscosity, etc.) of NAPL, 3) extent of NAPL through installation of additional wells to till surface.
5. Page 3-2, Section 3.4.1. The purpose of the pre-design soil data is unclear. The data are presented, yet no evaluation of the data is presented. The Work Plan should combine the historical data and new data and provide an evaluation of these data. The objective of the pre-design soil data collection shall include the acquisition of geotechnical parameters which will be required for designing the landfill cap stability, etc. The permeability of the in-situ material at Hill 78 and underneath Building 71 shall be evaluated by using ASTM D-5084 with an appropriately specified confining stress.
6. Page 3-3: Provide a discussion regarding the current groundwater flow direction.
7. Page 4-2, Section 4.3. GE shall perform pre-characterization sampling for the new storm sewer utility corridor in accordance with GE's *Protocols for the Management of Excavation Activities*, updated November 1996.

8. Page 4-3, Section 4.4: GE shall discuss with the Agencies Project Managers the well abandonment procedures prior to abandoning the Hill 78 wells . Eventually, the Sampling Analysis Plan (May 1994) Appendix I will have to be updated by GE to revise the well abandonment procedures.
9. Page 5-1, Section 5.2.1: The appropriate mail code for Michael Nalipinski is (HBT). Please revise.
10. Page 5-11, Section 5.12: Reevaluate , the diameter of deleterious material allowable in the consolidation area. Typically, the geotextile vendor has size requirements that should also be adhered to. The puncture requirements shall be evaluated using GRI test methods.
11. Page 5-13, Section 5.15: Provide an estimated volume for the leachate storage facility at the Building 71 area. The collected leachate shall be periodically sampled and those results need to be compared to the groundwater analysis.
12. Page 6-2, Section 6.3. The "elevated levels of Appendix IX+3 constituents" is too vague. GE should make this consistent with the Appendix IX+3 data review for Allendale School which specifies a screening evaluation for TCLP (i.e., 20x rule).
13. Page 6-2, Section 6.3. The Work Plan should identify the procedures to be used to ensure consolidation of materials at the proper area (i.e., Hill 78 vs. Bldg 71).
14. Page 6-3, Section 6.3. Question: Is the standard paint filter test based on a specific moisture content or should a standard be identified for moisture content for soils prior to placement? What will the disposition of the materials that exceed the moisture test?
15. Page 6-4, Section 6.7. Wind direction shall be monitored and air monitors shall be placed such that a minimum of one monitor is downwind at all times. The air monitoring program shall also be designed considering the air intakes at the U.S. Generating Facility.
16. Section 6.8: The proposal to allow materials greater than 6-inches in the first lift seems excessive. Puncture calculations shall be provided that substantiate the appropriate particulate size which will not cause damage to the geosynthetic material. Use the GRI method to evaluate.
17. Page 6-6, Section 6.10: Add a paragraph which discusses how dust generated from truck traffic will be addressed.
18. Page 6-6, Section 6.11: Add a paragraph and modify the drawings as appropriate to address the flow of the surface water runoff and location of the retention basins.
19. Page 6-7, Section 6.14. The interim cover will not prevent the infiltration of precipitation. The interim cover should also include a design feature (i.e., 20 mil polyethylene sheeting) to prevent infiltration of precipitation to the degree practicable. See Significant Comment #4.
20. Page 7-1, Section 7.2: The Restoration Activities Section shall be revised to include tasks which address NRD enhancements.
21. Page 8-1, Section 8.1. A submittal date for the "baseline" groundwater investigation and groundwater monitoring program proposal shall be specified.
22. Page 8-1, Section 8.1, 1st para. 2nd sentence: the purpose of the program includes, "to assess what the base line groundwater conditions are at the areas". Also, same sentence add at the end, "...now and in the future, if necessary."

23. Page 8-1, 4th paragraph. Consistent with SOW Attachment H, GW-3 shall be used as a benchmark for consolidation area wells. The groundwater monitoring program proposal shall identify the statistical methods to be used to analyze groundwater data and shall propose when response actions are required to address "statistically significant" increases in groundwater concentrations.
24. Page 8-2, Section 8.2. Any GE proposed response action shall be implemented subject to Agency approval. Include a response to Significant Issue #2 in this Section.
25. Table 1: The EPA will be providing comments relating to the ARARs Tables shortly in a future correspondence.
26. Include a figure (or two) that depicts the overburden and bedrock water table maps. Also, include a figure identifying the till elevation contours beneath the Consolidation Areas.
27. Figure 1: The Site Location Map does not identify the facility per the definition of the CD.
28. Figure 3: Define the thickness of the flexible membrane liner and sub base material. The EPA has recommended a 60 mil. flexible membrane.
29. Figure 7: Identify in the figure and text the inclusion of the Altresco well in the groundwater monitoring program.
30. Figure 9: Define the proposed truck route for depositing material in the consolidation areas.
31. Attachment A, Technical Drawings, A-5: A low permeability soil plug is shown on the northwest side of the Consolidation Area but none is shown for a similar condition at the south end near the Storm Basin shall be included.
32. Attachment A, Technical Drawings, A-5: Leachate pipes are shown which are 6-inch diameter with minimum slopes of 0.5%. No calculations are provided to substantiate pipe sizing or transmissivity of the drainage geocomposite for predicted leachate flows. In addition, pipe strength calculations should be provided for Consolidation Area loading either at a final grade or due to vehicular and equipment loads during construction or operations.
33. Provide calculations to demonstrate that adequate veneer stability exists between the respective interface layers of the components of the final cover systems on the 33% slope. The calculated requirements should be verified using proposed materials by testing in accordance with ASTM D-5321. The tests to evaluate the interface friction requirements may include the Koerner, Hwu, Giroud, Bachus and Bonabarte methods.
34. At this time there is a minimal potential that gas will be generate from the Consolidation Areas but this issue should be evaluated and discussed in the Detailed Work Plan.
35. Groundwater east of Building 71 (along the General Dynamics parking lot) needs to be monitored. GE's groundwater flow maps show an easterly component to groundwater flow. Also, the bedrock monitoring well shall be a component of evaluating the Consolidation Areas impact on groundwater.
36. As previously commented there are not calculations provided to substantiate that the proposed thickness (e.g., min. 2 feet) of the final cover system will provide adequate protection from frost damage of the underlying geosynthetics. The preferred method to evaluate the frost protection issue is the Modified Berggren Equation.