08-0181

SDMS 158352

Corporate Environmental Programs
General Electric Company
100 Woodlawn Avenue, Pittsfield, MA 01201

March 16, 2000

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On Scene Coordinator
U.S. Environmental Protection Agency
c/o Weston, Inc.
10 Lyman Street
Pittsfield, MA 01201

Bryan Olson
Project Coordinator
Office of Site Remediation and Restoration
U.S. Environmental Protection Agency
One Congress Street, Suite 1100
Boston, MA 02114-2023

Re: GE-Pittsfield/Housatonic Site Upper ½-Mile Reach Removal Action Response to Questions/Comments on DNAPL Proposal

Dear Mr. Tagliaferro and Mr. Olson:

This letter and attachments have been prepared to respond to the United States Environmental Protection Agency's (USEPA's) questions/comments on the General Electric Company's (GE's) March 3, 2000 submittal entitled *Results of DNAPL Investigation and Proposal to Address the Presence of DNAPL* (DNAPL proposal). USEPA provided preliminary questions/comments on the DNAPL proposal to GE on March 6, 2000. USEPA subsequently provided conditional approval for a portion of the DNAPL proposal (related to sheetpile installation) in a letter dated March 9, 2000. However, USEPA indicated that it had not completed its review of the proposal and that final approval of the proposal would be expedited if GE responded to USEPA's March 6, 2000 questions/comments. Additional comments from the USEPA were provided in a letter dated March 14, 2000. As a result, GE has prepared responses to the March 6 and March 14, 2000 questions/comments. The responses to the USEPA's March 6 questions/comments are provided in Attachment A, while the responses to the USEPA's March 14 comments are provided in Attachment B. In both of these attachments, each question/comment has been reiterated along with GE's response. A sketch of the area is also included (Attachment 3), and a preliminary planning timetable is included as Attachment 4.

(Please note that GE is currently changing out two carbon beds in the Building 64G water treatment plant. The schedule for this carbon changeout may modify the planning timetable by several days.)

We trust those responses will assist the USEPA in expediting final approval of the DNAPL proposal. Please contact me if you have any further comments or questions.

Very truly yours,

Andrew T. Silfer, P.E.
Senior Technical Manager

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Public Information Repositories ECL I-P-IV(A) (1)
GE Internal Repositories

ATTACHMENT 1

March 6, 2000 USEPA Questions/Comments

Question 1: *What is the maximum depth of sediment excavation that can be safely performed based on the proposed sheetpile configuration. If the answer is location specific, then provide safe excavation depths for HRSC-3, 5, 6, 9 and 11.*

Response: As recommended by USEPA in their March 9, 2000 conditional approval letter, a sheetpile design is being prepared that will allow for the excavation to be safely performed to an elevation of 960 feet above mean sea level in the area encompassing boring locations HRSC-3, 5, 6 and 9. With regard to boring location HRSC-11, the maximum depth of excavation will be elevation 965 feet due to the need, for structural stability reasons, to maintain a soil wedge adjacent to the sheetpile wall. For structural stability reasons, the southern side of the excavation will begin a minimum of 6 feet north of the temporary sheetpile, parallel to the river, and 12 feet west of the Cell C upstream cutoff wall.

Question 2: *Is the existing cut-off wall located between Cells C and D going to be removed prior to DNAPL excavation activities?*

Response: GE intends to remove the existing cut-off wall located between Cells C and D prior to initiation of DNAPL excavation activities. The other sections of the original sheetpile walls (on the southern and western ends of Cell C and the southern side of Cell D) will be removed, as determined in the field, to best support the excavation activities and dewatering efforts.

Question 3: *How are the sediments/DNAPL going to be removed? From the top of the bank? From within the cell? Will stockpiling within the cell be performed? Will the material be direct loaded into watertight containers? Provide details on this phase of the operation.*

Response: GE anticipates excavating the DNAPL-impacted sediments by working within Cell C and from the north bank of the river. To excavate in the river, the small excavator (PC-90) will be placed within the cell and will excavate the DNAPL-impacted material to allow for gravity dewatering within the cell. The sediments will then be placed into watertight boxes. An overhead crane will then lift the boxes out of the cell and dump them into lined trucks which will transport the materials to the Building 33X temporary stockpile area. Depending on the available access from the top of the north riverbank, the excavation may also be supported from the bank with the 235 track hoe. If excavation of the DNAPL area is supported by the 235 track hoe from the north bank, then the material will be direct loaded (after appropriate gravity dewatering) into lined trucks.

A separate staging area at Building 33X will be used for the DNAPL-impacted materials.

Question 4: *Is the DNAPL going to be separated from the sediments? By what means? How is the material going to be disposed of? Note that the disposal of DNAPL in the OPCA is prohibited.*

Response: Free-phase DNAPL that is collected from the excavation area will be separately managed and will be subject to off-site disposal consistent with the procedures currently in place

for this material. The DNAPL-impacted materials that will be excavated will be stockpiled within Building 33X. Water that drains from the stockpiled material will be treated at the Building 64G groundwater treatment facility and DNAPL that drains from the material will be collected and appropriately disposed of off-site. Following gravity dewatering, if the DNAPL-impacted materials pass the paint filter test and free-phase DNAPL is not present, then they will be subject to disposal at the Building 71 On-Plant Consolidation Area (OPCA). Otherwise, the DNAPL-impacted materials will be subject to off-site disposal.

Question 5: *How is the cell going to be dewatered? Will all water, which will likely be mixed with DNAPL, be sent directly to 64G or will a portable treatment system be mobilized to reduce the amount of oil/contamination transported to 64G? The base of the excavation needs to be in as dry a condition as possible to allow for visual inspection. Any standing water mixed with residual contamination will likely make visual inspection impractical.*

Response: GE anticipates installing a sump and, if necessary, a water collection trench along the base of the source control sheetpiling at elevation 960 prior to initiating excavation activities in order to establish a "dry" excavation area. Two to four two-inch pumps may also be installed at certain locations in a well screen at elevation 962 initially and lowered to 960 as required. The intent of these pumps will be to lower the groundwater table within the DNAPL area prior to beginning excavation or as excavation progresses. GE will maintain the sump and trench and will conduct excavation activities in a manner that will, to the greatest extent practical, provide a "dry" excavation and allow for visual inspection. The excavation sump(s) will be constructed to allow pumping of water while minimizing DNAPL mixing.

In addition to pumping water from the excavation to the six-inch sump for treatment via Building 64G, a specially designed vac truck will be used to pump oil and water into a temporary storage tank(s) with a 20,000 gallon capacity. The oil and any residual sediment will be removed and disposed of properly. The water will be treated at the Building 64G groundwater treatment facility. DNAPL will continue to be collected, separately managed, and subject to appropriate off-site disposal.

Question 6: *What contingency is in place should "boils" be encountered? Not only would "boils" make complete removal of the DNAPL difficult, they may make visual inspections unsafe and impractical.*

Response: The contingency plan to address potential "boils" within the excavation area is highly dependent on the location of the "boil" and when it is encountered during the excavation phase of the project, if at all. If "boils" become evident in the early phase of the excavation, the area may need to be evacuated and another excavation approach attempted. A "boil" becoming evident after all excavation activities have been completed may be addressed through a modified restoration approach. MTI will have various sized gravel and stone available at the site if its use becomes necessary. The structural stability of the sheetpiling surrounding the excavation area and worker safety are very important issues that will guide the decisions of how "boils" will be addressed. Ultimately, if "boils" do occur, they will be addressed in the field through consultation between GE and USEPA.

Question 7: *Has there been any comparison of the isolation material (backfill) as compared to the existing sediments. The concern is that the existing sediments may contain a higher percentage of silts, clays and TOC, and therefore may be a more effective cap than the isolation material.*

Response: The existing materials that have been impacted by DNAPL have been classified as fine to medium sands and the TOC would be anticipated to be relatively low. The materials currently approved for use as isolation layer material would also be classified as fine to medium sand. As an additional precautionary measure, GE proposes to utilize the isolation layer material from the Pittsfield Sand and Gravel source (which was initially approved for use by the USEPA and used in Cells A and B) in this area. The materials from that source were even finer grained than materials from the source that was used in the remainder of Cell C.

Question 8: *Has the compatibility of the HDPE been compared to the constituents in the DNAPL. There may be other synthetic or geocomposites members that may be more resistant to the constituents present in the DNAPL.*

Response: The proposed HDPE liner would not suffer from degradation due to contact with DNAPL. The potential use of the HDPE would be in conjunction with a DNAPL recovery system, if that proves to be necessary.

Comment 1: *Minimum limits of the excavation may need to be expanded.*

Response: The horizontal and vertical limits of excavation will be expanded based on visual observations. As recommended by the USEPA, the maximum vertical limit of excavation will extend to elevation 960 feet (see Attachment 3).

Comment 2: *Downstream location of the proposed cut-off wall may need to be extended 15 feet.*

Response: Per verbal agreement with USEPA, the downstream location of the proposed cut-off wall has been installed 20 feet from the existing Cell C and D divider wall (see Attachment 3).

Comment 3: *Additional excavation of surficial contamination needs to be addressed. All surface areas within the DNAPL cell are currently smeared with DNAPL/sheens.*

Response: In addition to the excavation of the DNAPL-impacted sediment, GE will scrape the surface of the remaining areas of the DNAPL work area to remove surface materials.

ATTACHMENT 2

March 14, 2000 USEPA Comments

Comment 1: *Clearly delineate the vertical and lateral extent of the initial excavation.*

Response: As described above, GE anticipates excavating a sump, and potentially a water collection trench, along the base of the source control sheetpiling to an elevation of 960. The trench would be installed along the finely crosshatched area on Attachment 3. The initial excavation limits are represented by the finely crosshatched area and its intersection with the original boundaries of Cell C. This area would be initially excavated to an elevation of 961 (which would assist in facilitating water collection efforts at the trench/sump). The eastern, western and southern borders of this area would be sloped as shown on Attachment 3. Based on visual observation in the field, the excavation area could expand towards Cell D to the maximum extent illustrated on Attachment 3. If warranted, the finely crosshatched area would be excavated to an elevation of 960 feet.

Comment 2: *Propose a suitable time period for the excavation to remain open in order for the Agencies to monitor and inspect for migration of NAPL into the excavation area. This will be incorporated into the Agencies inspection of the area to determine whether or not additional DNAPL and/or DNAPL impacted materials are remain after the initial excavation.*

Response: For safety reasons, it will be necessary to backfill the excavation area shortly after it has been determined that DNAPL-impacted materials have been removed. The bottom of the excavation at the maximum depth will remain open for up to 60 minutes.

If the maximum limits of excavation are reached and free-phase DNAPL is evident, GE would attempt to install a DNAPL collection system. The details of this potential system will be distributed shortly.

Comment 3: *Propose the sequence of operational events, including in what sequence, if at all, the existing cut-off wall between Cells C and D and the existing centerline sheetpile wall in Cell D, will be removed.*

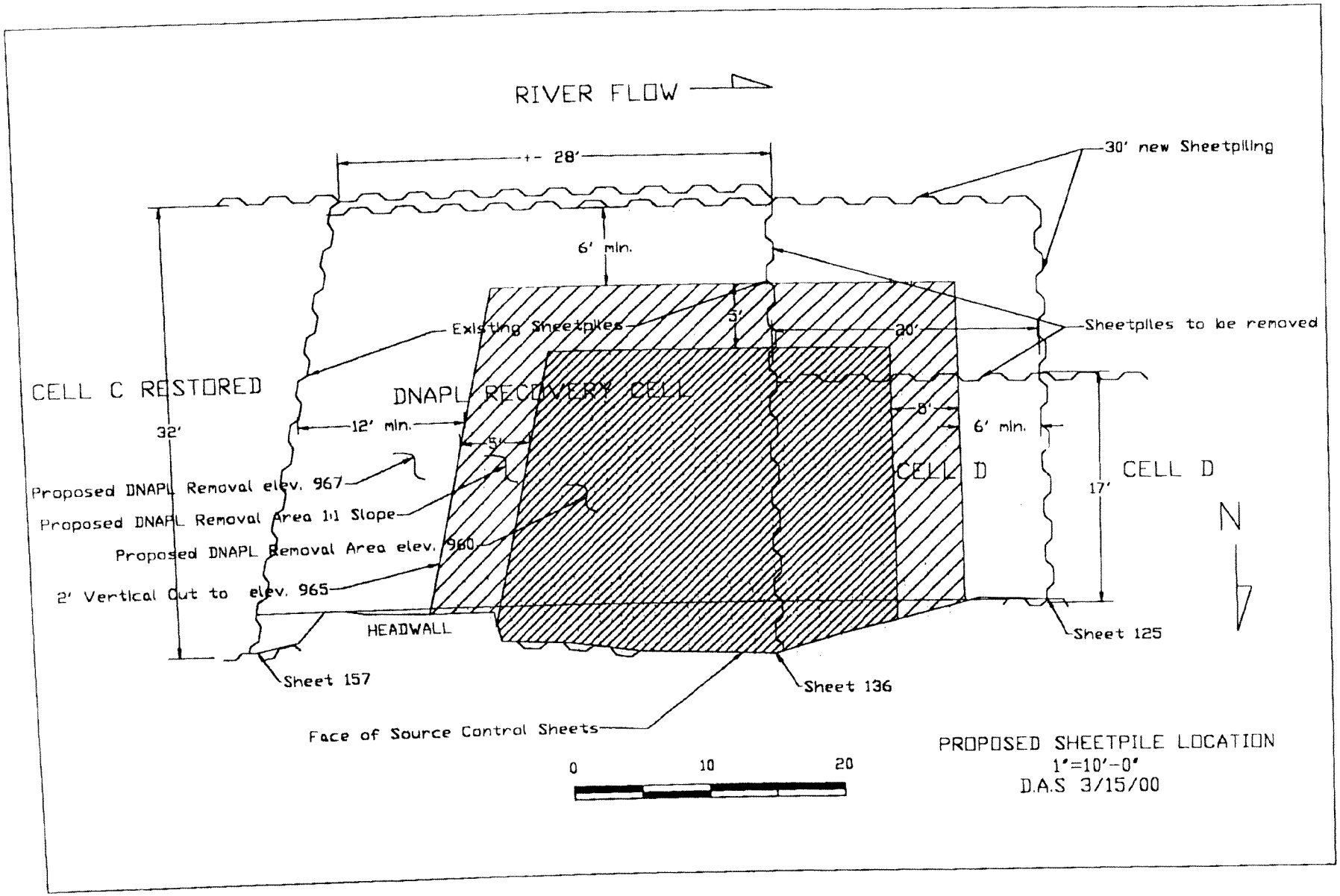
Response: This comment has been addressed above under the Responses to the March 6, 2000 questions/comments. A preliminary planning timetable is included as Attachment 4.

Comment 4: *EPA's contractor, Roy F. Weston, Inc. performed oversight of the investigation program and has prepared boring logs. These logs differ slightly from those submitted by GE/BBL. EPA will review both sets of logs in their review of the final submittal. Weston's boring logs are attached.*

Response: It is difficult to respond to this comment since USEPA was not specific as to how the logs differ. However, it should be noted that preparation of soil boring logs is a relatively subjective activity and a certain amount of variation would be expected. One discrepancy may be related to the interpretation of the recovered sample compared to actual sample depth. GE conservatively assumed that the recovered sample represented the lower portion of the actual sample interval whereas it appears that Weston may have

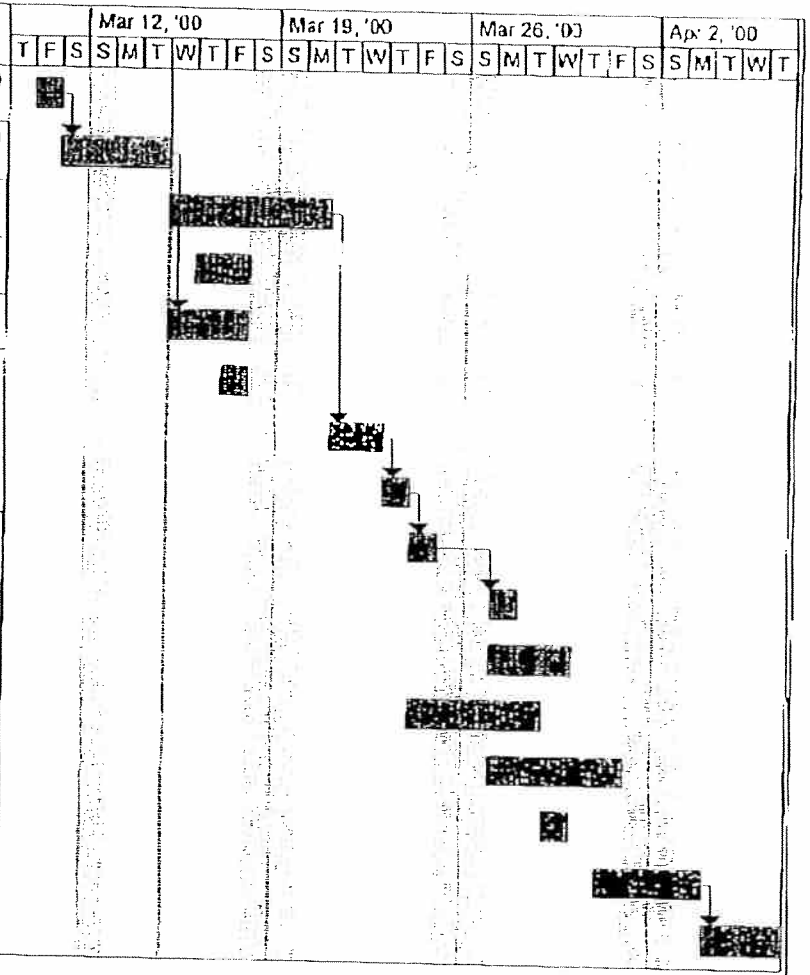
assumed that the recovered sample began at the top of the actual sample interval. For example: In boring HRSC-6 the first sample interval was 0-3 feet and the recovery was 2.2 feet. The upper 0.7-foot portion of this sample indicated the presence of NAPL in a sand and gravel layer. GE added the 0.8 foot difference in the recovered sample to the upper portion of the actual sample interval showing NAPL present to 1.5 feet; Weston's log shows NAPL present in only the upper 0.7 foot portion of the sample. Another discrepancy may be related to the interpretation of staining; GE identified several materials as dark gray or black, whereas Weston identified them as black stained. It should also be noted that for boring HRSC-5, Weston describes LNAPL present in the 1.8-2.8 foot interval (which is consistent with GE's description of 2.2 feet to 3.4 feet, considering sample recovery); however, GE's or Weston's graphical depiction inconsistently indicates LNAPL present from 3.6 to 8 feet.

Attachment 3



Attachment 4

ID	Task Name	Duration	Start	Finish
1	Mobilize Crane and Sheeting Equipment.	1 day	Fri 3/10/00	Fri 3/10/00
2	Sheeting Installation 85L.F.	3 days	Sat 3/11/00	Tue 3/14/00
4	Install Double 14" Water perimeter of pit +-340L.F.	4 days	Wed 3/15/00	Mon 3/20/00
6	Install Sumps & pumps to lower water table (minium of 2-2" electric's and Relocate 6" diesel.)	2 days	Thu 3/16/00	Fri 3/17/00
3	Seal sheeting joints and connections	3 days	Wed 3/15/00	Fri 3/17/00
5	Remove all intermediate Sheeting	1 day	Fri 3/17/00	Fri 3/17/00
7	Lower PC 90 into excavation begin excavation	2 days	Tue 3/21/00	Wed 3/22/00
8	Backfil excavation to Elev. 964	1 day	Thu 3/23/00	Thu 3/23/00
9	Excavate remaining areas & Backfill to 968	1 day	Fri 3/24/00	Fri 3/24/00
10	Remove Walers	1 day	Mon 3/27/00	Mon 3/27/00
11	Form Concrete Headwall	3 days	Mon 3/27/00	Wed 3/29/00
14	Excavate Cell D	3 days	Fri 3/24/00	Tue 3/28/00
13	Grout Source Control Sheets	5 days	Mon 3/27/00	Fri 3/31/00
12	Pour Concrete Headwall	1 day	Wed 3/29/00	Wed 3/29/00
15	Backfill Cell C DNAPL Area	2 days	Fri 3/31/00	Mon 4/3/00
16	BackFill Cell D	3 days	Tue 4/4/00	Thu 4/6/00



Project: DNAPL Removal Cell C and Cell D
Date: Wed 3/15/00

Task
Split
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Split
Rolled Up Milestone
Rolled Up Progress
External Tasks
Project Summary