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**United States Environmental Protection Agency**  
**EPA New England**  
**One Congress Street, Suite 1100**  
**Boston, MA 02114-2023**

Hand Delivered

March 9, 2000

Mr. Andrew T. Silfer, P.E.  
Corporate Environmental Programs  
General Electric Company  
100 Woodlawn Avenue  
Pittsfield, Massachusetts 01201

**RE: Proposal to Address the Presence of DNAPL**  
**Upper ½-Mile Reach Removal Action**  
**General Electric-Housatonic River Site, Pittsfield, Massachusetts**

Dear Mr. Silfer:

On March 6, 2000, EPA received GE's submittal entitled *Results of DNAPL Investigation and Proposal to Address the Presence of DNAPL*. This proposal was briefly discussed at the March 6 weekly ½-Mile coordination meeting with Bill Horne, GE, and representatives of the DEP, USACE, and Natural Resource Trustees. At this meeting I informed GE that the plan was conceptual in nature and lacked the details necessary to allow the government agencies to properly review and approve the submittal. However, EPA concurred with GE's conceptual plan to attempt to excavate sediments down to the depth of the DNAPL and remove most, if not all, of the DNAPL and DNAPL-impacted sediments. I also provided GE with a draft list of questions I had on the submittal (See Attachment #1). Please note that this list of questions was generated by a cursory review of the plan and does not constitute a formal review of the submittal. At this meeting, Bill Horne asked if EPA could expedite its review and approval of the proposed sheetpile installation so that GE/MTI could initiate the installation of the sheetpile while other details of the proposed plan were finalized. Bill Horne and I agreed to discuss this issue on March 7, 2000.

On March 7, Bill Horne and I further discussed the proposed plan and sheetpile installation. I informed Bill Horne that EPA will likely reject GE's proposed contingency that if, despite GE's best efforts to remove all the DNAPL, some DNAPL or DNAPL-impacted materials remain, GE will place an impermeable HDPE liner over the area. Rather, EPA would likely require GE to use pumps or other liquid collection methods to remove the DNAPL and perform long-term monitoring for the constituents present in the DNAPL. Therefore, I recommend that GE's sheetpile installation layout and bracing procedures allow for the flexibility to excavate material

to depths greater than those proposed in the submittal. Specifically, I recommend that the design allow for the excavation to be safely performed to a depth of at least 960 feet above mean sea level (AMSL) in the area encompassing boring locations HRSC-3, 5, 6 and 9 (See Attachment #2).

Also, although free phase DNAPL was not detected in the piezometer installed at location HRSC-8, which is located within Cell D, there was significant staining observed in the soil boring between elevations 963.92 and 962.92 feet AMSL. This is close to the elevation where free-phase DNAPL was observed in the piezometer installed at HRSC-3 (962.11 feet AMSL). The distance between locations HRSC-3 and HRSC-8 is only 12 feet. Furthermore, location HRSC-8 is located within 5 feet of where the 3-foot diameter pipe was placed to isolate and recover the free-phase DNAPL and where GE/MTI have recovered at least 650 gallons of free-phase DNAPL. Therefore, it is possible that the DNAPL extends to location HRSC-8 and other areas within Cell D and GE should ensure that the proposed sheetpile layout and bracing procedures allow for excavation to be performed to the necessary depths in this area as well.

With regard to the proposed location of the downstream cutoff wall, I recommended that GE install the cutoff wall a minimum of 10 feet downstream from the proposed location. As Bill Horne and I discussed in the field, the sheetpile should be installed starting at or downstream of source control sheetpile # 127 and extend toward the centerline sheetpile where the 2-inch submersible pump is currently located. The relocation of the cutoff wall further downstream would allow for additional DNAPL removal to be performed in Cell D, should that be necessary. Bill Horne and I also discussed how the relocation of the downstream cutoff wall would affect proposed excavation activities in the Cell D and in the newly isolated area of the river. We agreed on the following:

- In the area currently outside of both Cell C and Cell D (See Attachment #2), GE would not be required to perform additional sediment excavation unless there is evidence that GE's excavation, dewatering, and DNAPL removal activities caused contamination to migrate into this area, or if the DNAPL that is present in Cell C at elevation 962 feet AMSL extends into this area.
- In the area bounded by: the existing cutoff wall located between Cells C and D; the existing Cell D centerline sheetpile wall; the newly installed downstream cutoff wall; and the source control sheets (See Attachment #2); GE shall excavate sediments in the entire area to a depth of 1.5 feet or to the minimum depths specified in the ½-Mile Work Plan, whichever is deeper.

Therefore, subject to the terms in this letter, GE can proceed with the installation of sheetpile. However, it is GE's responsibility to ensure that the sheetpile installation layout and bracing procedures are sufficient, to the extent practical, to allow GE's contractor to remove all the DNAPL and DNAPL-impacted material. If DNAPL or DNAPL impacted material remains, EPA

will likely require GE to use pumps or other liquid collection methods to remove the DNAPL and perform long-term monitoring for the constituents present in the DNAPL.

EPA and DEP are continuing to review the remainder of the submittal. Upon completion of this review, the Agencies would like to discuss the proposed plan with GE. It would expedite the final approval of the proposed plan if GE had responses to questions provided to GE on March 6, 2000.

If you have any questions, please contact me at (617) 918-1282 or (413) 236-0969.

Sincerely,



Dean Tagliaferro  
On-Scene Coordinator

#### Attachments

cc: Bill Horne, GE  
Andrew J. Thomas, Jr., GE  
J. Lyn Cutler, MA DEP  
Sue Steenstrup, MA DEP  
Holly Inglis, EPA  
Bryan Olson, EPA  
Tim Conway, EPA  
K.C. Mitkevicius, USACE  
Ray Goff, USACE  
Site File

# Attachment 1

## Comments on DNAPL Proposal

Q. What is the maximum depth of sediment excavation that can be safely be 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.

Q. Is the existing cut-off wall located between Cells C and D going to be removed prior to DNAPL excavation activities?

Q. How are the sediments/DNAPL going to be removed? From the top of the bank? From within the cell? Will stockpiling within the cell performed? Will the material be direct loaded into water-tight containers? Provide details on this phase of the operation.

Q. 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's prohibited.

Q. 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.

Q. What contingency is in place should "boils" be encountered? No only would "boils" make complete removal of the DNAPL difficult, they may make visual inspections unsafe and impractical.

Q. 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.

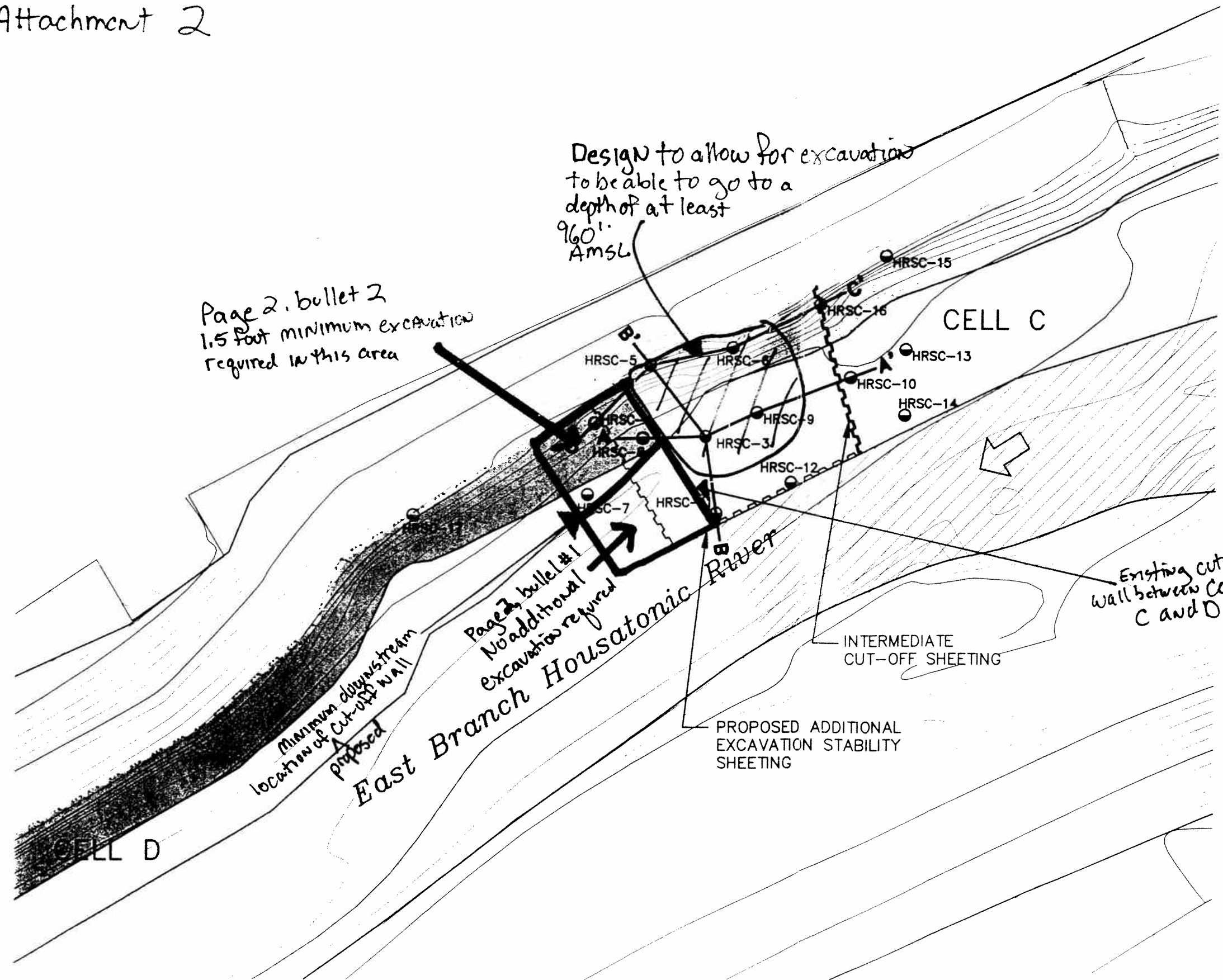
Q. Has the compatibility of the HDPE been compared to the constituents in the DNAPL. There may be other synthetic or geocomposites members that they be more resistant to the constituents present in the DNAPL.

Comments: Minimum limits of the excavation may need to be expanded.

Downstream location of the proposed cut-off wall may need to be extended 15 feet. Additional contingency.

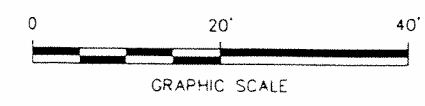
Additional excavation of surficial contamination needs to be addressed. All surface areas with the DNAPL cell are currently smeared with DNAPL/sheens.

Attachment 2



- LEGEND:**
- BORING LOCATION FOR DNAPL INVESTIGATION
  - ADDITIONAL EXCAVATION TO OCCUR IN CONJUNCTION WITH EAST STREET AREA 2 SOURCE CONTROL ACTIVITIES
  - EXCAVATION SHEETPILE
  - SOURCE CONTROL SHEETPILE
  - TOP OF BANK
  - SEDIMENT REMOVAL AREA
  - SEDIMENT REMOVAL AND REPLACEMENT COMPLETED
  - APPROXIMATE EXTENT OF DNAPL OBSERVED

- NOTES:**
1. BASE MAP PROVIDED BY LOCKWOOD MAPPING, INC. PREPARED FROM 1990 AERIAL PHOTOGRAPHY. RIVERBANK AND RIVER BED TOPOGRAPHIC INFORMATION PROVIDED BY BBL FROM OCTOBER 12-23, 1998 FIELD SURVEY.
  2. COORDINATE GRID BASED ON 1927 STATE PLANE COORDINATES.
  3. ELEVATION DATUM REFERENCED TO NGVD 1929.



GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS <b>REMOVAL ACTION</b> UPPER 1/2-MILE REACH OF HOUSATONIC RIVER	
<b>DNAPL</b> INVESTIGATION RESULTS	
<b>BBL</b>	BLASLAND, BOUCK & LEE, INC. <i>engineers &amp; scientists</i>
FIGURE <b>1</b>	