



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

May 12, 1988

Mr. Ronald Degroseilliers
General Electric Company
Environmental Programs (OP 42-306)
100 Plastics Avenue
Pittsfield, MA 01201-3698

Re: F.T. Rose Site; Comments on Draft Feasibility Study (FS)

Dear Mr. Degroseilliers: *Ron*

Attached are EPA's comments on the most recent deliverable submitted for the ongoing Feasibility Study being conducted for the Rose Site. We discussed these some of these comments in draft form at our meeting held here in Boston on April 22, 1988.

As a result of our review meeting, G.E. agreed to do the following:

1. G.E. will submit a complete draft FS around May 31, 1988. This draft FS will include revised Sections 1 - 6 (in response to the attached comments, as best as possible at this time), a "wetlands assessment" (as an Appendix), and Section 7. This May submission will help to insure that the "final" FS due June 30, 1988 will not need any major revisions.
2. As a follow-up to the wetlands assessment information that needs to be provided to EPA, a site visit was conducted on May 3, 1988. In addition, the Endangerment Assessment leads visited the site at this time as well. The following individuals attended the visit with me on May 3rd:

Wetlands:	Peter Holmes, EPA	Bob Goldman, B&B
		Dottie McGlinicy, G&M
E.A.:	Pi-Yun Tsai, EPA	Ralph Moon, G&M

We discussed the need for "baseline" wetlands assessment information, as well as discussion of the potential impacts on the wetlands (particularly the western wetland) from the various FS alternatives (especially the groundwater pump and treat option). Utilize existing analytical data in the baseline discussion, as well as the treatability data (e.g. "cone of influence" calculations) in the potential impact discussion. Include appropriate mapping with overlays.

3. EPA needs to receive the revised E.A. by early June (at the latest) so that EPA can review the final E.A. prior to its release. The E.A. must be finalized by June 30, 1988 since it must be available at the time of release of the draft FS.

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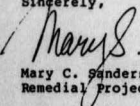
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4. G.E. reviewed the draft Community Relations Plan at the meeting. I have consolidated all comments and relayed them to EPA's community relations staff/contractor.
5. G.E. agreed to submit a draft fact sheet for this stage of the project to EPA for finalization and distribution. Sample fact sheets were provided at our meeting held on April 7th. A second fact sheet will be needed in June which will explain the FS alternatives screening and the preferred alternative.

EPA received the first fact sheet at the site visit on May 3rd. EPA will revise the fact sheet, add several sections, and issue the fact sheet within the next several weeks.

Thank you for your continuing cooperation. Please call me with any questions on (617) 573-5738.

Sincerely,


Mary C. Sanderson
Remedial Project Manager

Attachment

cc: Bob Bois, DEQE/Boston
John Dirgo, PRC
Steve Joyce, DEQE/Springfield
John Walker, CDM
EPA Team Members

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ATTACHMENT

A. General Comments

1. The draft FS report appears to ignore groundwater contamination in wells south of Balance Rock Road. Contaminant levels in these wells exceed proposed clean-up goals. This portion of the south plume should be addressed in remedial alternatives discussion. (See first comment on page 5-4.)
2. The proposed clean-up goal for PCB-contaminated soil and sediment (50 ppm) is based on disposal requirements for PCBs. Clean-up levels should be based on risks identified in the Endangerment Assessment for the Rose site. See the specific comment on Table 3-3.
3. The air stripper proposed in two groundwater treatment alternatives has the potential to emit significant amounts of volatile organic compounds (VOC), particularly vinyl chloride, a known human carcinogen. These remedial alternatives should address VOC emission controls for the air stripper.
4. The FS report should provide any additional references or supporting information regarding the (in)effectiveness of the proposed remedial technologies implemented at other hazardous waste sites.
5. The FS report presents costs for most remedial alternatives as lump sums, making it difficult to determine whether all relevant cost factors have been considered. Additionally, state whether total costs of alternatives are sensitive to the discount rate or the duration of remedial action.
6. If it is not possible to sustain the proposed groundwater extraction rate of 50 gpm, treatment processes will have to operate in batch rather than continuous mode. Failure to sustain this extraction rate will also increase the total groundwater treatment time. The FS should briefly address these "contingencies".
7. The FS report must provide additional information on how treated groundwater will be discharged and the potential environmental effects of this discharge. (Add details to page 6-17 and in the wetlands assessment.)
8. If remedial action is required for the pond at the Rose site, the FS report must identify treatment methods for contaminated pond water and determine risk-based clean-up levels for contaminated sediments. See comment #2 above.

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9. ARARs refer to promulgated requirements, criteria or limitations. Advisories and guidelines are "to be considered". A "clean-up goal" could be an ARAR, a guideline, a detection limit, or a background level. Use this terminology throughout the FS, particularly in Section 3 (especially in the Institutional Analysis) and in Table 3-3. Pages 3-2 and 3-3 are correct.

The FS report must consider the criteria in Section 121(d) (4) of SARA when evaluating remedial alternatives that do not comply with all ARARs. Also note that SARA requires compliance with ARARs, or provides for a waiver if the criteria are met. Other guidelines and values "to be considered" are utilized just as that - considered.

10. The FS report should present a general discussion of monitoring programs for (1) groundwater and surface water, (2) influent and effluent for the groundwater treatment system, and (3) ambient air during remedial actions that disturb contaminated soil. Although the details of any monitoring program will be developed during the design phase, a brief discussion should be included in the FS.
11. The (RI)FS is lacking a baseline wetlands assessment, as well as discussion of the potential impact of the various remedial alternatives on the wetlands. As discussed in the cover letter, this information must be included in the FS.

B. Specific Comments

Page

- 1-1 Update the statement on the Administrative Order.
- 1-2 The second paragraph omits another important screening criterion resulting from SARA: the emphasis on permanent remedies and reduction of toxicity, volume, and mobility. Include this in the discussion.
- 1-6 The next to last sentence states that PCBs were found in groundwater near the disposal area at concentrations generally less than 3 ppb. This sentence should be revised to be consistent with the first paragraph on page 1-10. PCBs were found in well MW-8, approximately 800 feet from the disposal area, and concentrations in most wells were below 10 ppb.
- 1-8, 1-9 The term "wet areas" on these two pages should be changed to "wetlands", as well as throughout the entire report.
- Ch. All EA language should be from the revised EA (e.g. reference 2,3 risk range versus "unacceptable"; page 6-7, etc).

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2-1 The last paragraph should also note that PCBs were detected in soil samples collected from the Rose family garden (see page 89 of Geraghty & Miller, 1987).

3-1 Delete the sentence starting "These clean-up standards and/or criteria are...."

3-6 It is not clear how Blasland & Bouck derived risk-specific doses (RSD) for carcinogens. See the comment for Table 3-3 that follows.

Lifetime Health Advisories, RSD, and Mass. Drinking Water Guidelines are not ARARs. They are guidelines "to be considered". Rephrase this sentence.

3-7 See comment #9 under general comments and revise the "ARAR" terminology accordingly.

3-8 The first sentence should be reworded to address general comment #9. Detection limits are "considered" for clean-up goals; they are not ARARs.

The first sentence states that ambient water quality criteria are less stringent than drinking water standards and guidelines mentioned on page 3-6. This statement is not correct for PCBs and should be revised.

Although NPDES requirements may be less stringent than drinking water standards and guidelines, they are still ARARs for discharge to surface waters and should be listed as such.

3-9 In the last paragraph, the NESHAP for vinyl chloride should be considered an ARAR (relevant and appropriate) for air stripper emissions. The standard (10 ppm, 3-hour average) is not "far in excess of what could be emitted by an air stripper at the Rose Site." Page 3-11 of the FS estimates that vinyl chloride emissions from the air stripper will be approximately 20 mg/m³. Note that at 70°F, this concentration is equivalent to 7.6 ppm.

3-10 DEQE must determine which air guidelines or policies are ARARs or which are "to be considered".

3-12 The OSHA standard of 0.2 mg/m³, 8-hour average for ozone is not more stringent than the NAAQS of 0.26 mg/m³, 1-hour average. The OSHA standard allows excursions above 0.2 mg/m³ as long as the 8-hour average is not exceeded. It would be more difficult to meet the NAAQS every hour.

The 2 standards for ozone are both ARARs. The more stringent standard may be the "clean-up level". Reword this entire section accordingly.

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- 3-13 50 ppm is an "action level" under a specific provision of TSCA, and it is an ARAR. However, the selected clean-up goal (including pond sediment) needs to be protective of public health and the environment (i.e. risk-based), as previously stated.
- 3-15 Any alternative that requires treatment or separation of PCB-contaminated materials is subject to the requirements of 40 CFR 761.60(e). Disposal of PCBs by incineration or land-filling (on- or off-site) is subject to 40 CFR 761.70 or 40 CFR 761.40, respectively. Add these specific provisions as ARARs in the appropriate sections (pages 3-15, 3-16).
- 5-1 The "assumption" that GE will have sole property control is significant. EPA must be kept informed of any change in property ownership.
- 5-3 For alternative GW-1 periodic backwashing will be needed not only for the carbon adsorbers, but for the air stripping tower as well. Backwashing will be necessary to remove iron precipitate and suspended solids deposited in the tower during the air stripping process. (This comment has less importance for alternative GW-1A).
- 5-4 Although the details of location decisions will be made during design, the FS must at least generally address the location issue with regards to the "point of compliance". Since the entirety of both plumes must meet ARARs (and presumable the clean-up goals), location should be discussed relative to the 2 plumes' concentrations.
- The first paragraph of Section 5.3 refers to the PCB Spill Cleanup Policy in 40 CFR 761 Subpart G and cites a spill cleanup level of 25 ppm for restricted access sites. 40 CFR 761.123 defines restricted access areas as being at least 0.1 kilometers (100 meters) from a residential/commercial area and limited by man-made barriers. The disposal area, based on its proximity to the Rose residential area, may not meet this definition. In this case, the spill cleanup level for a nonrestricted access area would be 10 ppm. This regulation should be considered an ARAR (Table 3-2). Revise the paragraph. Note again that risk-based levels are to be considered when determining the clean-up goal.
- 5-6 Dechlorination of PCBs is not the same as destruction of PCBs; rephrase.
- 5-8 Typo in SM-10, biodegradation.
- Sec. 6 Beginning on page 6-17, all table numbers in the text are incorrect. The text skips from Table 6-2 to Table 6-4. Correct the text references accordingly.

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6-4 The report presents a unique definition of the "no action" alternative; groundwater extraction and treatment with groundwater monitoring. The "no action" alternative is usually defined as doing nothing more than monitoring the migration of contaminants from the site. Rename the current "limited" or "initial" alternative and add the true "no action" alternative briefly.

6-6 The exposure potential for the no action alternative (item 2) should be rated low to moderate (see Table 2-3).

6-13 The first full paragraph states that PCB concentrations in the effluent from the carbon beds will be monitored. VOC concentrations should also be monitored.

The report should provide a reference for (or correct) the statement in Item 3 that Aroclors 1242, 1254, and 1260 will sorb more strongly than Aroclor 1016.

6-14 The reported carbon use rate in the first partial paragraph considers only PCBs entering the adsorbers. Although residual VOC concentrations after air stripping should be low, they should also be considered in estimating carbon use rate and O & M costs for remedial alternatives.

Carbon use rates may also be increased by the configuration of the treatment system in alternative GW-1. This alternative does not provide filtration between the air stripper and the carbon beds. Carbon use rates could increase if the bed is used as a filter - adsorber, rather than as an adsorber only.

The first partial paragraph also states that parallel operation of carbon beds will require replacement after approximately 9 years. This is incorrect if carbon is to be replaced at 50 percent saturation, as the report assumes. Parallel operation will require carbon replacement every 4 to 4.5 years. Series operation of carbon beds offers several advantages that are not pointed out in the report: (1) complete utilization of the initial bed; (2) reduced potential for breakthrough of PCBs and VOCs in treated effluent; and (3) the chance to sample the effluent between beds in series, further reducing the possibility of discharging PCBs and VOCs in the effluent.

6-17 The statement in the first paragraph, that air discharges from the air stripper should be "well below" state and federal VOC emission limits is incorrect. See the comment for page 3-9 previously.

6-23 The first line estimates the expected VOC removal efficiency for hydrogen peroxide pretreatment as 80 to 90 percent. Page 6-14 (next to last line) states that the expected efficiency is greater than 50 percent. Clarify for consistency.

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- 6-25, Carbon use rates for alternative GW-3 (hydrogen peroxide pretreatment with carbon adsorption) are much higher than for alternatives GW-1 and GW-1a (air stripping and carbon adsorption). Table 6-8 shows a use rate of 270 pounds per day for alternative GW-3; Table 6-4 shows a use rate of 200 pounds per year for alternatives GW-1 and GW-1a. The use rate for alternative GW-3 seems excessive, even after taking into account the lower VOC removal efficiency of hydrogen peroxide pretreatment. Recheck and support these figures.

The report also shows different capital costs for activated carbon units for these alternatives (\$32,000 for alternative GW-3 in Table 6-7 versus \$24,000 for alternatives GW-1 and GW-1a in Table 6-3). The report should explain these differences.

- 6-29 The cost estimate for pond remediation does not appear to consider the following items: removal and treatment costs for pond water; dewatering costs for excavated sediments; and the cost of any required clean fill to replace excavated sediments/regrading. Include these costs in the estimate(s).
- 6-35 The statement in the first paragraph, that EPA's PCB regulations specify a cleanup goal of 50 ppm for PCBs in soil is incorrect. Delete this phrase. Additionally, the FS report should propose or identify cleanup levels for VOCs in soil and sediments. See general comments given previously.
- 6-36 Two samples from 1984 had PCB concentrations above 50,000 ppm. See boring B-84 in Appendix B of Geraghty & Miller (1987).
- 6-40 The list at the top of this page should also include the maintenance of a temporary cover over the disposal area until all contaminated materials have been excavated.
- 6-57 The next to last sentence of the first paragraph states that "additional labor costs were included for oversight" of on-site incineration. It is not clear why oversight is required for this alternative, but not for other on-site alternatives. Revise and carry throughout the alternatives, as appropriate.

In the second paragraph, some estimate of incinerator capacity (e.g. feed rate, etc.) should be provided to justify the expected operation time of 3 years.

- 6-60 The institutional ranking of alternative SM-5 (off-site incineration) should be lower because this alternative does not meet the SARA preference for on-site remedies.
- 6-66 The institutional ranking of alternative SM-7 (off-site landfilling) should be lower. This alternative does not meet the statutory preferences of SARA for on-site, permanent remedies.

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6-71 It is not clear why alternative SM-8 (chemical fixation/stabilization) was given a low institutional ranking. This alternative would be completed on-site and could significantly reduce the mobility and toxicity of contaminants (with resultant increase in volume, however).

Table Cross-reference the revised E.A. tables, when available.

2-1

2-2 As previously stated, all text referring to the E.A. should

2-3 be revised to be consistent with the E.A. currently being finalized (e.g. risk ranges).

Table 314 CMR 5.00 should be an action-specific ARAR as relevant and appropriate.

3-1

DEQE must determine if M.G.L. Chapter 21E is a state ARAR.

Table Do not eliminate the PCB Spill Cleanup Policy (40 CFR 761, Subpart G) as an ARAR. It may be appropriate and relevant. See comment pertaining to Page 5-4.

3-2

Table Retitle this table. In keeping with previous comments, this table should be a comparison of ARARS (expand this list with reference to Tables 3-1, 3-2, 3-4 and the text revisions), other guidelines (to be considered), and proposed clean-up levels (versus ARARS).

3-3

The assumptions used to calculate the Risk-Specific Doses (RSD) in this table should be explained. Reproduce the RSDs by using a 10^{-5} risk level, exposure conditions presented in the Geraghty & Miller EA, and carcinogenic potency factors recommended by U.S. EPA (Lee, 1987). In addition, the source of the Lifetime Health Advisory numbers should be identified.

Develop a new table similar to (revised) Table 3-3 for soil/sediment levels. Include ARARS, other guidelines, proposed clean-up levels, and site data.

Table Revise the components of this table to correspond to the revised definition of the "no action" alternative (or add a new table).

6-1

Table This table should include all contaminants identified in a (revised) Table 3-3 as requiring treatment to meet (ARARS and) clean-up goals.

6-2

The third column should be retitled "clean-up goal" or "effluent limitation"; delete the ARAR title.

Table Explain why the hydrogen peroxide use rates differ for the four groundwater remedial alternatives.

6-4

6-6

6-8

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- Table 6-11 The assumptions behind the present worth monitoring costs should be explained. The line item of \$76,000 does not follow directly from the annual monitoring costs in Table 6-1.
- Table 6-12 The total costs of off-site incineration (\$2,580 per cubic yard) appear high. However, even if these costs were decreased by a factor of two, this alternative would still be much more expensive than all other cost estimates in the report. Provide a reference for the cost, however, and indicate what the fee includes.
- Fig.2 The scale on this figure is incorrect. Based on site drawings from other reports, the scale should probably be 0 to 200 feet, not 0 to 800 feet.
- Fig.9 This figure shows source management alternative SM-9, not SM-10.

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