

SEP 10 1993

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FYF + Action
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B/151



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SEP 10 1993

Docket No. 070-00139

Mr. Donald P. Chabot,
Senior Environmental Engineer
Engelhard Corporation
Route 152
Plainville, MA 02762

Dear Mr. Chabot:

Enclosed are the comments of the U.S. Nuclear Regulatory Commission for the Engelhard Corporation on "Decontamination Plan for the Interior of the Plainville, Massachusetts Plant of Engelhard Corporation" and "Radiological Characterization Survey Program for the Plainville, Massachusetts Site of Engelhard Corporation." Please address these comments by submitting answers to the comments and/or by revising the plans and resubmitting them within 60 days. If you have any questions please call me at (301) 504-2565.

Sincerely,

A handwritten signature in cursive script that reads "Jack D. Parrott".

Jack D. Parrott, Project Manager
Facilities Decommissioning Section
Decommissioning and Regulatory
Issues Branch
Division of Low-Level Waste Management
and Decommissioning
Office of Nuclear Material Safety
and Safeguards

Enclosures: As stated

cc: Attached list

NRC Comments on the Decontamination Plan for the Interior of the Plainville,
Massachusetts Plant of Engelhard Corporation

- 1) Due to the fact that radiologically contaminated effluent was allowed to be discharged to the onsite septic system, sewer lines inside or underneath the buildings 1 and 2 should be surveyed. Also, the sealed pipes on the tunnel ramp should be investigated to see if they contain residual contamination.
- 2) The presence of an incinerator onsite has lead to radiological contamination of the roof, roof drains, and around the roof drain outfalls at other licensed facilities. Therefore, a plan for surveying the roof, roof drains, and the areas around the roof drain outfalls should be included. This may involve taking core samples of the roof material due to covering of the original surface from subsequent reroofings.
- 3) Before work can begin, NRC needs to know which NRC licensed contractor will be doing the work so that their Health and Safety plan can be evaluated. If a non-NRC licensed contractor is selected to do the work, a Health and Safety plan needs to be approved by NRC before work can begin.
- 4) There is not enough specific information provided to evaluate the classification of affected versus unaffected areas. Also, it appears that the July 1988 survey was done while the floor was covered with equipment making a comprehensive survey impossible. Please provide the July 1988 survey data so that NRC to evaluate these issues.

Comments on the Radiological Characterization Survey Program for the Plainville, Massachusetts Site of Engelhard Corporation

- 1) Page 8. The surface scan referenced on this page and elsewhere will probably not be effective given the type and concentration of contamination (low-levels of enriched uranium) and the fact that most of the potentially contaminated soil areas are covered by pavement. It is suggested that the gamma scan survey be replaced by a more thorough direct soil sampling and analysis effort to cover all of the potentially affected area (see comment 6).
- 2) Page 8. It is stated in the text that the soil samples will be analyzed for gross (alpha and beta) radioactivity. Yet in Table 8.1, soil and sediment gross radioactivity analysis is not mentioned. In any case it is not recommended that the soil and sediment samples be analyzed for gross radioactivity because NRC experience at other decommissioning sites has shown that gross alpha analysis results generally do not correlate with the isotopic uranium results from the same samples. Furthermore, we do not regulate residual soil contamination by gross alpha concentration, rather this is done by total uranium concentration as determined by isotopic analysis. Therefore, it is recommended that only isotopic analysis be attempted on the soil and sediment samples.
- 3) Page 15. Which samples will be tested for TCLP metals? Please explain why this is being done.
- 4) Page 16. On which area(s) of the site will the geophysical survey be performed? Will the survey technique(s) chosen detect burials?
- 5) Page 20. Is building 12 the one that now lies over the former drum storage area? Will potentially affected areas under other buildings also be sampled?
- 6) Page 22. It is not clear from the written description what sampling pattern will be used at the drywell location. A grid and sampling pattern should be established across the potentially affected areas in accordance with the NUREG/CR-5849 section on Open Land Surveys - Affected Areas and projected onto a map of the site. NRC would like to review the grid and sampling pattern before sampling begins.
- 7) Page 23. How many unaffected area surface soil samples will be taken?
- 8) Table 4.4. The sample analysis of the drilling mud from MW05 indicates the presence of Th-228, Pu-238 and Pu-239. Your isotopic analysis should include these isotopes to either confirm or deny their presence in the soil, sediment and groundwater at the site.
- 9) Tables 4.9 and 4.11. The units are in pCi/l; they should be in pCi/g.

- 10) Figures 4-5, 8-2, 8-3, and 8-4. The area designated as affected in Figure 4-5 is different than the sampling areas defined in Figures 8-2 through 8-4. What is needed is a designation of different potentially affected areas for the different horizons or media of interest (i.e., surface soil, subsurface soil, sediment) instead of one potentially affected area and then different sampling areas.
- 11) Figure 8-2. Due to past overflows of drywells to the surface, surface soil should be sampled in an area completely surrounding the dry wells and in drainage ways leading away from them.
- 12) Please provide a groundwater table map and topographic map of the site on the same scale as the Site Plan in Figure 3-1.
- 13) Are there any drainage/sewer lines beneath the buildings that were in use during the licensed period? If present, these also need to be surveyed.
- 14) Radiological release criteria for potentially contaminated equipment used onsite should be referenced; acceptable criteria are presented in U.S. NRC Regulatory Guide 1.86.