

Note For: Tim Johnson
From: Jack Parrott 
Subject: Engelhard Corp./D.E. Makepeace Co. RCRA site containing AEC regulated waste

Enclosed is a letter and information from Robert Brackett of EPA Region 1 concerning a former AEC licensee, at that time known as D.E. Makepeace Co. a division of the current Engelhard Corp., which is about to become subject to a RCRA Corrective Action Order to characterize and clean-up their site. Uranium contaminated wastewater was discharged to an on-site septic leach system from 1957 to 1962. During that time the company was licensed by the AEC to fabricate uranium fuel elements for the AEC and commercial customers. The company has indicated that natural uranium, depleted uranium and enriched uranium were all used on-site.

The RCRA order has identified 48 Areas of Concern (AOC) at this site which need to be investigated. AOC #16 is the one containing the septic leach field which received uranium contaminated wastewater. Limited soil sampling done in the vicinity of AOC #16, which is paved, shows gross alpha concentrations up to 870 pCi/g and gross beta up to 260 pCi/g. Isotopic analysis of another soil sample in the vicinity of AOC #16 shows the concentration of U-234 at 38 pCi/g, U-235 at 4.3 pCi/g and U-238 at 26 pCi/g. A groundwater well in AOC #16 has had gross alpha up to 1,300 pCi/l, U-238 at 28 pCi/l and Th-228 at 111 pCi/l. This well also has high levels of organic solvents and heavy metals.

I have made and enclosed a chronological list of the documents that Mr. Brackett sent to me as background information on this site. Particular attention should be paid to the last two documents. The letter from 1987 questions the EPA's jurisdiction over the radioactive contamination found on site, and the 1991 draft RCRA order does not require any action on the identified radioactive contamination because RCRA does not have authority. Mr. Brackett indicates that NRC and EPA should coordinate investigation and clean-up actions at this site. It sounds like NRC may be the only agency that can exercise authority to characterize and remediate the radiological contamination.

I have also included a copy of their license.

B/17



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

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

November 7, 1991

Jack Parrott, Mail Code 5E2
Nuclear Regulatory Commission
Washington, DC 20555

Re: Engelhard Corporation, Plainville, MA

Dear Jack:

I am glad we had the opportunity to talk yesterday. I have enclosed the information which you requested, including the draft 3008(h) Corrective Action Order, which should be considered confidential. The area in question is designated AOC #16 or SWMU #16.

As I indicated during our conversation, I am interested in any records you may have regarding licensing and closure of the radionuclide related business at the site. Also, we will need to consider how NRC and EPA will coordinate the investigation and cleanup actions at the site.

I will be out of the office next week. I will call you during the week of November 18. Thanks again for your cooperation.

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Brackett".

Robert W. Brackett, Geologist
MA & RI Waste Regulation Section

Enclosure



Chronological list of background documents sent by U.S. EPA Region 1 concerning Engelhard Corp./D.E. Makepeace Co. disposal of AEC regulated liquid uranium wastes to on-site leach pits.

- 2/6/57 Health physics appraisal of liquid waste disposal system at D.E. Makepeace Co. by Nuclear Science and Engineering Corporation
- 8/19/57 Letter from D.E. Makepeace Co. to Commonwealth of Massachusetts Department of Public Health requesting expedited review of water disposal system plan for uranium fuel fabrication section of plant
- 8/20/57 Letter from Commonwealth of Massachusetts Department of Public Health to D.E. Makepeace Co. approving water disposal system design with provisions
- 1/14/60 Letter from D.E. Makepeace Co. to Commonwealth of Massachusetts Department of Public Health requesting approval for an additional leaching pit to dispose of wastewater from the Nuclear Department
- 2/4/60 Letter from Commonwealth of Massachusetts Department of Public Health to D.E. Makepeace Co. approving an additional leaching pit for the disposal of wastewater from the Nuclear Department with provisions
- 2/17/60 Letter from Office of Selectman, Town of Plainville to D.E. Makepeace Co. requesting notification of Plainville Board of Health when provisions mentioned in previous Department of Public Health letter are complied with
- 9/29/60 Letter from D.E. Makepeace Co. to Commonwealth of Massachusetts Department of Public Health requesting approval for reuse of cooling water from Nuclear Department equipment
- 5/11/61 Cost estimate from Hall Sanitary Pumping to D.E. Makepeace Co. for installation of crushed rock around perforated pipe leach lines
- 8/2/61 Report on visit to D.E. Makepeace Co. by inspector from Massachusetts Department of Public Health concerning overflow of wastewater from leaching pits and installation of leach lines to alleviate the problem
- 8/4/61 Diagram for proposed plan for installation of leach lines in addition to existing leach pits
- 8/9/61 Letter from Commonwealth of Massachusetts Department of Public Health to D.E. Makepeace Co. describing the leaching pits' overflow problems, the pumping out of the leaching pits and the disposal of waste at the North Attleborough Sewage Treatment Plant. Approval for the waste disposal system is withdrawn due to noncompliance with previous provisions and overflow of waste to the ground surface.

8/14/61 D.E. Makepeace Co. internal memo describing actions taken or planned in order to alleviate waste disposal problem including removal of sludge and adding sulfuric acid to each pit

8/16/61 Hand written description of actions taken to alleviate waste disposal problem

8/16/61 Diagram of proposed lateral leach lines

8/18/61 D.E. Makepeace Co. internal memo describing long term actions that will help to alleviate wastewater problem

8/22/61 Letter from D.E. Makepeace Co. to vendors requesting information on high water alarms

8/22/61 Diagram showing design of reinforced concrete covers for leaching pits

8/25/61 D.E. Makepeace Co. internal memo describing actions to take to avoid having to install additional wastewater drainage

1/21/74 Diagram showing layout of facility buildings

3/24/77 Description of wastewater flows and quantities

3/6/87 Confidential letter from Durland Evans, General Manager of Engelhard Corporation, Specialty Metals Division, to Lynn Cusick, U.S. EPA, supplementing an information request to EPA. Includes description of AEC regulated activities which occurred on site and identifies Solid Waste Management Unit (SWMU) #16 as having received liquid waste from uranium operations. EPA jurisdiction of the waste discharged to SWMU #16 is questioned because it has not been proven hazardous and the radioactive portion is regulated by the Atomic Energy Act.

10/8/91 Draft confidential RCRA Corrective Action Order for the Engelhard Corporation site in Plainville, Massachusetts