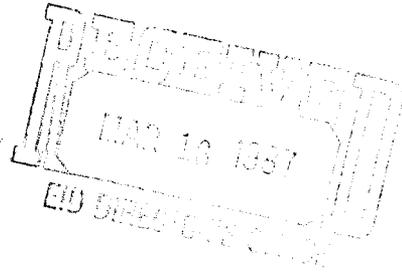




Department of Energy  
Albuquerque Operations  
Los Alamos Area Office  
Los Alamos, New Mexico 87544

MAR 12 1987

*Richard M*



CERTIFIED MAIL - RETURN RECEIPT REQUESTED

RECEIVED

MAR 17 1987

Mr. Michael Burkhart, Director  
New Mexico Environmental Improvement Division  
P.O. Box 968  
Santa Fe, New Mexico 87504-0968

GROUND WATER/HAZARDOUS WASTE  
BUREAU

Dear Mr. Burkhart:

The Los Alamos National Laboratory maintains a surface impoundment at Technical Area 16 (TA-16) to collect effluent from pressure vessels used to filter high explosives waste. This effluent is then discharged through a permitted National Pollutant Discharge Elimination System (NPDES) outfall. Last summer, after we discovered high levels of barium had accumulated in the impoundment, the Laboratory treated the liquid to remove the barium and discharged the effluent under the permit.

Because the barium level exceeded the criteria for toxicity under the New Mexico Hazardous Waste Management Regulations (NMHWMR-3) (100mg/l), the Environmental Improvement Division (EID) determined the Laboratory had stored and treated a hazardous waste in the impoundment. Although neither the Department of Energy nor the University of California has acquiesced in EID's determination, we have since submitted a closure plan (November 13, 1986) and continue to analyze the contents of the impoundment to insure that high levels of barium are not accumulating. In addition, we have ordered a broad spectrum analysis of the effluent to determine whether other hazardous constituents are present.

Following two sampling events on November 10 and 20, 1986, the Environmental Surveillance Group, HSE-8, notified The Design Engineering (WX) Division, the organization responsible for maintaining the impoundment, that they could discharge its contents under the Laboratory's NPDES permit (pH:6-9, COD:2000 g/l seven-day average, 1000 g/l daily average, and TSS:90 mg/l seven-day average, 60 mg/l daily average). Group HSE-8 based its approval on parameters for the NPDES permit having been met (pH:7.21 and 8.0, COD:135 +/- 27g/l and 126 +/- 25g/l) and on analytical results indicating barium levels of 60 and 59 mg/l respectively - well below the criteria for toxicity defined in NMHWMR-3.

At this juncture, WX Division discharged additional wastewater through the pressure vessels into the impoundment on December 12, 1986, and then proceeded to discharge from the impoundment under the permit. Subsequent analysis of effluent samples taken during discharge from the impoundment indicate barium levels exceeding 100 mg/l (specifically, 130 mg/l).



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M. Burkhart

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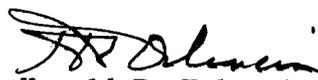
In response to this incident, the Laboratory sampled the soils below the discharge point and analyzed them for Extraction Process (EP) toxic levels of barium. We are currently awaiting these results and will submit them to EID following in-house review.

The Laboratory immediately initiated steps to preclude the recurrence of such an incident. Specifically, we have begun design work on an accumulation tank which would provide the ability to treat the effluent prior to its discharge under the permit. Because discharge under the permit is subject to Section 402 and 307(b) of the Clean Water Act, and because the treatment vessel will meet the definition of a wastewater treatment tank, the unit will not require a Resource Conservation and Recovery Act (RCRA) permit [40CFR264.1(g)(6) and NMHWMR-3 Section 206.A.4.f].

The Laboratory can feasibly have the accumulation tank in place and operational by August or September of this year because the tank will not require a permit for its installation and use. Meanwhile, we are treating potentially high barium liquid prior to transfer to the pressure vessels. This treatment will take place in sumps which meet the definition of wastewater treatment units. In addition, prior to any discharge of liquid from the impoundment, samples will be collected and analyzed to assure compliance with all regulatory requirements, specifically NMHWMR-3 and NPDES Permit limitations.

We hope our efforts to provide a solution to this problem meet with your approval. If you should have any questions regarding this matter, please call James Phoenix at 667-5288.

Sincerely,

  
Harold E. Valencia  
Area Manager

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