

JUN 3 1994

Docket 40-7102
License SMB-743

Mr. Jim Terry
Oak Ridge National Lab
MS 6200
P.O. Box 2008
Oak Ridge, Tennessee 37831

Dear Mr. Terry:

SUBJECT: COMMENTS ON DRAFT DOPAA DATED MAY 13, 1994 (TAC NO. L30638)

I have reviewed your submission of the Draft Description of the Proposed Action and Alternatives (DOPAA) for the Shieldalloy Metallurgical Corporation (Shieldalloy) Facility at Newfield, New Jersey, dated May 13, 1994. In general, I found it to be satisfactory. To better define the DOPAA issues, my comments are enclosed.

Because the Nuclear Regulatory Commission does not have answers to many of the questions listed in your submittal, we will transmit to Shieldalloy these questions and the questions from your first information request dated April 28, 1994. A copy of the letter to Shieldalloy will be provided to you.

If you have any questions about the issues discussed in this letter, please call me at (301) 415-8106.

Sincerely,
Original Signed By

Gary C. Comfort, Jr.
Licensing Section 2
Licensing Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

Enclosure: As stated

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Enclosure

COMMENTS ON MAY 13 DOPAA

Response to Questions in Cover Letter:

- Q. Is dilution of radioactive materials to achieve a regulatory limit allowed by NRC regulations?
- A. Although the NRC has no regulations which preclude the use of dilution to meet regulatory limits, the NRC has followed a policy to not allow it (other than effluents to air or liquid pathways or if incidental to remediation). In fact, for long-lived isotopes, such as thorium and uranium, dilution is about the only way to substantially reduce the hazards associated with the waste itself. Most other techniques only contain the waste. For the project under consideration, dilution is unlikely to be practical with regard to the slag, but may be possible for the baghouse pile, and therefore, should be included as an alternative.
- Q. What information is available on Thermite Slag Recovery Technology?
- A. My understanding is that this is a chemical extraction technique which could be used to extract thorium and uranium from the slags. If this technique is considered viable, it should be covered under Section 2.1.3 of your DOPAA. Specifications about the viability and process of this technique will be requested from Shieldalloy.
- Q. What information is available on Smelting Thermal Recovery Process?
- A. My understanding is that the slag can be used as a conditioner for steels in that the slag would remove impurities (including radioactive constituents) from steel. Future disposal of a larger quantity of contaminated material would need to be discussed under this option. If this technique is considered viable, it should be discussed under Section 2.1.7 of your DOPAA as it could be a commercial use of the slag. Specifications about the viability and process of this technique will be requested from Shieldalloy.

SPECIFIC COMMENTS

- Section 1.1: In first paragraph, line 6, replace "acceptable for completing the decommissioning of" with "an acceptable method for decommissioning." In its present status, it gives the impression that the licensee is already in the process of decommissioning.
- In second paragraph, line 3, delete "waste" before piles. Because there is a possibility of future use, the slag may not necessarily be a waste.

In second paragraph, line 4, replace "is evaluating" with "evaluates" to make it less passive.

- Section 1.2: Shieldalloy's preferred action is to dispose of material on site in concentrations higher than that allowed for unrestricted release at the time of decommissioning and to provide financial assurance in an amount to cover this action. Because this amount of financial assurance coverage is expected to be far below the amount expected to be required to bring the site to unrestricted release limits, NRC has opted to make a decision on this issue. Although Shieldalloy has no plans to halt operations and begin decommissioning in the near future, a decision at this point will allow the proper amount of financial assurance to be provided for the safe disposal of the material without allowing Shieldalloy to continue to generate further slag material without bounds. A discussion of this should be included in the background.
- Section 2.1.1 Fourth Paragraph (Drainage Layer), Line 3, Delete "Although more...fabric,". Mention of cost at that point is inappropriate.
- Section 2.1.2 Line 2, Insert ", if any such facilities were determined to be available at the time of decommissioning," after "Newfield".
- Section 2.1.3 General: Your discussion only mentions physical separation methods. My understanding is that the Thermite Slag Recovery Technology may allow chemical separation of the thorium and uranium from the slag. Until we receive more information from Shieldalloy, I suggest that we add this in general terms. If it is found to be impractical, the reference can be deleted.
- Section 2.1.5 This is not an alternative and should be deleted. It is only one method to execute the off-site disposal alternative in Section 2.1.2 or 2.1.3. I do agree that it should be examined as part of other alternatives to see if there is any effect in requiring a more immediate cleanup.
- Section 2.1.6 Although it is unlikely that NRC or EPA would allow the creation of mixed wastes by combining the slag with RCRA-regulated materials, this alternative should be retained until we receive further information from Shieldalloy describing the intent of this alternative.

Section 2.1.7 Although Shieldalloy will be requested to develop methods for commercial uses, topics such as Smelting Thermal Recovery and the recycling of baghouse dust might come under this area. Until we receive information from Shieldalloy with specifics, I suggest that these topics be mentioned in generalities (as place holders), and the necessity for further review of these areas can be made after Shieldalloy responds.

Section 2.1.8 Because it is unlikely any foreign country would accept this material unless there were a commercial use, I suggest that this category be combined with Section 2.1.7. It may make commercial ventures more viable because disposal in other countries after further processing may be more easily accomplished. However, concerns about exporting source material will require evaluation.

Section 2.3 Include Part 20 in NRC's implementing Regulations.

General: Although there is no expectation that the slag or baghouse dust is considered a mixed-waste, until Shieldalloy responds adequately to show that it is not mixed waste, each alternative in the DOPAA should also be prepared to handle disposal of mixed wastes and/or hazardous wastes associated with the radioactive constituents of the site.

See also comments identified in NRC comments on the DOPAA for the Cambridge site for applicability.