



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 8**  
**999 18TH STREET - SUITE 500**  
**DENVER, CO 80202-2466**

Ref: 8P-HW

Mr. Warren J. Jacobi, Manager  
Radiation Services Program  
Colorado Department of Public Health and Environment  
8100 Lowry Blvd.  
Denver, CO 80230-6928

Re: Followup to meeting of July 22, 2002 on Cotter

Dear Mr. Jacobi:

Thank you for meeting with my staff on July 22, 2002, to discuss the application of the CERCLA Off-Site Rule at the Cotter Mill in Canon City. As you are aware, we received correspondence from Cotter in late June 2002, requesting an EPA determination under the Off-Site Rule to allow the facility to accept CERCLA wastes. Cotter's request for an acceptability determination was for five (5) units at the mill, in addition to the two impoundments that were determined to be acceptable in August 2000.

As we discussed in our meeting on July 22, EPA's review of this situation has raised a number of questions and concerns regarding this facility's status under the rule, and we are unable to proceed with the requested determination until these issues are resolved. Most of these concerns relate to the numerous items cited in the Notice of Violation (NOV) that the Radiation Services Program of the Laboratory and Radiation Services Division (LARS) issued to Cotter in April 2002. Because LARS is much more familiar with this facility than EPA is, we would appreciate any assistance that you or your staff can provide us to resolve these issues.

Since our meeting, we have been able to focus our questions and concerns in three primary areas where we need additional information. The first area of concern is in regard to the transfer of title to the impoundments to the Department of Energy (DOE) upon closure of the facility, and the related characterization, management and tracking requirements designed to assure such transfer will not be inhibited. Second, EPA has identified some issues related to the adequacy of the existing financial assurance for the facility. Finally, we need additional information regarding apparent releases at the facility, including what appeared to be an uncontrolled release of hazardous substances from the wooden leaching vats.



## ASSURING TRANSFER OF TITLE

With regard to the first area of concern, our understanding is that the overriding regulatory authority relative to this situation is found in the Domestic Licensing of Source Material rules at 10 CFR Part 40 and applicable State rules at RH 18.1.3. These rules require, in part, that “Disposal at a uranium or thorium processing site of material which is not type 2 byproduct material must not inhibit reclamation of the tailings impoundment or the ability of the U.S. Government to take title to the impoundment as long-term custodian.”

To ensure that this requirement is met, federal and state rules contain the following additional requirements:

1. The Nuclear Regulatory Commission (NRC) has published its *Interim Guidance on Disposal of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments*, in which it requires any licensee to “demonstrate that the proposed disposal will not compromise the reclamation of the tailings impoundment by demonstrating compliance with the reclamation and closure criteria of Appendix A of 10 CFR Part 40.”
2. The NRC’s *Interim Guidance* also requires that “a concurrence and commitment from either DOE or the State to take title to the tailings impoundment after closure must be received before granting the license amendment to the 11e.(2) license” for facilities that directly dispose of materials that are not 11e.(2).
3. Colorado regulations at RH 1.6 require each licensee to “maintain records showing the receipt, transfer, and disposal of all sources of radiation.”
4. The NRC also has regulations at 10 CFR Part 61 that apply to low level radioactive wastes. Facilities that dispose of these materials must either comply with the permit requirements in these rules or obtain an exemption from them.

EPA’s primary questions and concerns here relate to Cotter’s apparent lack of compliance with these requirements and the potential impact this non-compliance could have on the company’s ability to assure that transfer of title to the impoundments to DOE upon closure will not be inhibited. For example, what impact could the lack of adequate characterization, management and tracking procedures for radioactive materials at the facility have on the transfer? Has this lack of compliance already resulted in the direct disposal of non-11e.(2) materials in the impoundments? If non-11e.(2) materials have already been placed in the impoundments, has Cotter obtained the DOE commitment to accept transfer of title that is required in such an instance? If there is insufficient documentation that the disposed materials are compatible with the impoundments, will the facility be able to obtain the required DOE commitment?

EPA believes that the disposal of non-11e.(2) wastes into uranium mill tailing impoundments can be an environmentally and economically sound solution when the wastes have radiological, chemical and physical properties compatible with the tailings from the mill and the design of the impoundments. However, under the NRC and state requirements cited above, it appears that the facility has an affirmative obligation to demonstrate such compatibility. The requirements cited in items 1 and 3 above reinforce the need for thorough characterization, management and tracking of radioactive materials at the facility, both to assure an environmentally sound facility and to support the eventual transfer of title to the impoundments to DOE.

In this case, it appears that Cotter does not have a sufficient level of characterizing, managing and tracking for its radioactive materials at the facility, and has not provided the required documentation of suitability of all materials placed in the impoundments. In its NOV of April 2002, LARS cited Cotter on these issues in Items of Concern D and J, respectively, and directed Cotter to:

- “develop and implement an inventory tracking system” that would “track and document all radioactive materials received at the facility”; and
- provide “clear documentation demonstrating that all materials received for direct disposal are suitable for disposal” into the tailings impoundment.

We note that these items were not considered violations by LARS within the NOV, but instead were listed as “Items of Concern.” We would like clarification on whether LARS considers these Items of Concern to be violations of state regulations and NRC directives<sup>1</sup>. It is also not clear to EPA how much latitude the state has in its regulatory structure regarding implementation of NRC requirements and guidance.

EPA is concerned with the lack of an adequate system for managing radioactive materials at the facility because it brings into question whether there has already been inappropriate disposal of non-11e.(2) byproduct materials in the impoundments. For example, in its comments to Cotter dated June 18, 2002, LARS indicated that Cotter may have directly disposed of non-11e.(2) materials in its impoundments from such specific sources as “soil cleanup material from the railroad station, Team Track, Sand Creek, Saint Louis Airport Site, et al.” EPA is concerned that other non-11e.(2) materials may have also been placed in the impoundments, and that such inappropriate disposal could continue to occur if adequate characterization, management and tracking procedures are not implemented.

EPA is particularly concerned with this possibility that non-11e.(2) materials may have already been placed in the impoundments because it may impact both the future custody of the impoundments and EPA’s determination under the Off-Site Rule. It appears from our review of the record that Cotter has not obtained the DOE or State commitment that would be required in such an instance. In this case, EPA questions whether the presence of non-11e.(2) materials could inhibit the ability of DOE to take title to the impoundments as long term

custodian. Such uncertainty about the future custody of the impoundments would likely have a negative impact on EPA's decision about whether the facility should be allowed to accept federally-directed CERCLA materials.

Our concern with this issue has been exacerbated by Cotter's response to the LARS directive in the April 2002 NOV that Cotter should provide the required documentation that all disposed materials are compatible with the design of the impoundment. In their response, dated May 23, 2002, Cotter referred LARS to the Radiation Health and Safety (RH&S) Procedures in their license and stated their belief that no immediate or future action is required to address this issue. In a letter to Cotter dated July 9, 2002, LARS restated that the company "should" provide documentation on materials received for direct disposal and noted that the State intends to reevaluate Cotter's procedures for accepting material as part of the license renewal.

EPA strongly supports the LARS directives on this issue, and believes that compliance with these requirements is a key factor in assuring the eventual transfer of title to DOE. More specifically, we suggest that the *Material Acceptance Procedures* currently in the *Radiation Health and Safety* (RH&S Section 1-7) section of the Cotter license should be amended to address the following: 1) the universe of materials defined to be acceptable at the facility under license conditions 6.1, 7.1 and 9.1 is too broad; 2) the notification criteria dependent on this broad universe result in insufficient notification of the State and DOE; and 3) while the license includes the criteria for evaluating materials for disposal, it does not include the necessary procedures for notifying and obtaining commitment from DOE and obtaining any necessary exemptions under 10 CFR Part 61.

Another issue in this area concerns the 3,120 drums of calcium fluoride that Cotter received from Honeywell in 52 shipments over a nine-month period from May 31, 2000 to March 19, 2001. Since completion of the shipments 17 months ago, the drums have been stored on the site, and Cotter has not yet developed a method for processing them. In fact, LARS has reported that Cotter is not able to open the drums. EPA is concerned that this situation raises the question of whether Cotter has demonstrated the ability to manage and process these materials safely.

EPA's last issue in this area relates to the company's proposed new process for extracting zirconium from ores. This proposal raises a question about whether the processing of zirconium materials can be shown to be primarily for the recovery of uranium. EPA notes the NRC *Interim Position and Guidance on the Use of Uranium Mill Feed Material Other Than Natural Ores* states that "If, in addition to uranium product, another product is also produced in the processing of the ore, the licensee must provide documentation showing that the uranium product is the primary product produced." If the company cannot provide this documentation, the residues from the process may no longer be considered a by-product material under 40 CFR §261.4(a)(4), and may be considered RCRA wastes. If this occurs,

will this change the regulatory status of the impoundment in which the residues are placed? More important, will it affect DOE's acceptance of the impoundments as long-term custodian?

To summarize EPA's concern in this area, there are several issues that cause us to question whether Cotter will be able to assure that transfer of title to the impoundments to DOE will not be inhibited. Of particular concern are the issues of compliance with the applicable requirements for characterizing, managing and tracking radioactive materials at the facility, the demonstration of compatibility of all materials placed in the impoundments, and the obtaining of DOE commitment to take title. Our concerns in this area are amplified because of the company's stated intention to make processing of alternate feed materials and direct disposal a significant part of its business. EPA has an obligation under the Off-Site Rule to minimize the likelihood that facilities accepting federally directed CERCLA wastes do not themselves become Superfund sites. Consequently, we would greatly appreciate any information that LARS could provide to assuage our concerns.

## **FINANCIAL ASSURANCE**

The second area of concern for EPA is the adequacy of financial assurance for the facility. We note that the LARS NOV stated that the adequacy of the existing financial assurance warranty to ensure site decommissioning could not be verified. This adequacy question was raised because Cotter has added new buildings, processes, and radioactive materials at the facility without notice to LARS. During the July 22 meeting, your staff stated that the financial assurance warranty needs to be re-evaluated in this light, but believes that the decommissioning of several older buildings will offset the closure needs of the new items. We note, however, that, during this year's inspection, LARS staff did not inspect all the buildings at Cotter, and it was not certain that no other "un-notified" waste streams have been received by the facility.

EPA also questions whether the financial assurance warranty may need to be adjusted to address two other issues. The first is whether to include the cost for off-site disposal of all materials that would not be allowed to be placed directly into the impoundment. Of particular concern are the 3,120 drums of calcium fluoride currently on site without an approved process. If these drums were still present at closure, they may need to be sent to another facility at a cost that would significantly tax the warranty. The second issue relates to 10 CFR Part 40, Appendix A, Section II, Criterion 9, where there is a requirement that the warranty must take into account total costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work. Recalculation of the warranty to address these matters ought to occur prior to the receipt of any large shipment of materials.

We would appreciate any additional information that LARS may have regarding these financial assurance concerns.

## **ENVIRONMENTAL RELEASES**

The third area of concern relates to the possibility of environmentally significant releases of hazardous substances at the facility. Our first issue in this area is in regard to a potential release observed at the facility during a site visit on June 5, 2002. On that day, EPA and State personnel observed that liquids were seeping from the wooden leaching vats in the mill processing circuit and that these liquids were likely entering the ground through cracks in the deteriorated concrete pads on which they stand. During the July 22 meeting, you and your staff agreed with this assessment and confirmed that the contents of the wooden tanks are a hazardous substance, because they are of either high or low pH, and because they contain uranium isotopes, listed as hazardous substances in Section 40 CFR 300.302.5, Appendix B.

If there is a release at the facility, the Off-Site Rule criteria require that the release be addressed under an approved control instrument, such as a permit or license condition or an order, prior to a determination of acceptability. The key questions that need to be addressed for this issue are what is the nature and extent of that release, and what remedies are appropriate. If you have not already done so, we recommend consulting with the Colorado Hazardous Materials and Waste Management Division for advice on the structure and contents of the control instrument that would address this release.

A second issue under this area is with the history of spills and releases that LARS provided to EPA a few months ago. This history was developed by the Colorado Citizens Against Toxic Waste (CCAT) and detailed a number of large spills (from 650 to two thousand gallons and from fifteen hundred to two thousand pounds) at the facility over a period of 18 months from fall of 2000 to spring of 2002. We would appreciate knowing how LARS views the environmental significance of this history and the ability of the company to manage radioactive materials in a manner that protects public health and the environment. For example, how accurate is this depiction? What was the company's response to each of the incidents? Does this history indicate a pattern of mismanagement of hazardous materials?

The last issue in this area concerns the Li Tungsten materials that are proposed for processing at the facility. Based on the situation with the calcium fluoride drums, EPA is concerned that these materials could be stored on the site for a long period of time and that chances of releases to the air or ground water could be high. EPA would like assurance that these materials would be processed in a timely fashion and managed in a manner that minimizes the potential for release.

## **SUMMARY**

We have presented some rather serious questions and concerns in this letter, and they will need to be resolved prior to our rendering a determination on whether the subject Cotter units are acceptable under the Off-Site Rule. Our concerns are, however, preliminary in

nature and do not indicate an EPA position on the Off-Site Rule status of the Cotter facility. We would like the opportunity to work with you to help us resolve these concerns, and we expect that Cotter, DOE, and others may also need to be involved in future discussions.

We again thank you in advance for your efforts in helping us resolve these issues. Please contact Terry Brown at (303) 312-6419 to set up a meeting at your earliest convenience.

Sincerely yours,

***Signed Original***

Wanda C. Taunton, Director  
Solid and Hazardous Waste Program

cc: David Geiser, Director Long Term Stewardship, Department of Energy  
Art Kleinrath, LTSM Program Manager, DOE-GJPO  
James Doyle, U.S. EPA-Region 2  
Gary Baughman, CDPHE

---

<sup>1</sup>. The above requirements appear to be enforceable requirements per State regulations and the NRC's *Notice of Two Guidance Documents: Final Revised Guidance on Disposal of Non-Atomic Energy Act of 1954, Section.(2) Byproduct Material in Tailings Impoundments: Final Position and Guidance on the Use of Uranium Feed Materials Other Than Natural Ores (60 FR 49296-49297)*. In Part 1 of the notice, the NRC states that its staff "will follow the guidance set forth below" when reviewing license amendment requests to directly dispose of non-11e.(2) byproduct material into tailings impoundments. The DOE notification and license amendment/exemption requirements are under items 9 and 10 in the notice. While some requirements were modified under an NRC Regulatory Issue Summary (RIS 00-023), the items discussed above were retained.