

September 30, 2003

MEMORANDUM TO: Chairman Diaz
Commissioner McGaffigan
Commissioner Merrifield

FROM: William D. Travers */RA/*
Executive Director for Operations

SUBJECT: POTENTIAL AGREEMENT STATE POLICY ISSUES FROM AN
NRC RESPONSE TO A CITIZEN'S QUESTIONS

Staff has prepared a response to Ms. Sarah Fields' (a Utah resident) questions on the policy and legal requirements of Agreement States adopting NRC guidance and policies once the Agreement States amend their agreements to include uranium milling. Ms. Fields' questions were prompted by an NRC response to questions from Mr. William J. Sinclair, Director, Division of Radiation Control, Utah Department of Environmental Quality, on the classification of 11e.(2) byproduct material at a uranium mill (Attachment 1). The NRC response to the Ms. Fields' questions (Attachment 2) has potential policy implications on the required acceptance of NRC policies and guidance by Agreement States in general.

The staff plans to proceed with the attached response to the citizen's questions in 10 working days unless directed otherwise by the Commission.

SECY, please track.

Attachments:

1. Ltr. to W. J. Sinclair from P. H. Lohaus
dated March 7, 2003
2. Draft Response to Ms. Fields

cc: SECY
OCA
OGC
OPA
CFO

March 7, 2003

Mr. William J. Sinclair, Director
Division of Radiation Control
Department of Environmental Quality
168 North 1950 West
P.O. Box 144850
Salt Lake City, UT 84114-4850

Dear Mr. Sinclair:

The purpose of this letter is to provide you with the U.S. Nuclear Regulatory Commission response to your questions presented in your letter of January 14, 2003, regarding the classification of materials at the White Mesa Mill in Blanding, Utah. As a general comment, "byproduct" material as defined under the Atomic Energy Act of 1954, as amended, is excluded from regulation under the Resource Conservation and Recovery Act (RCRA). In addition, the answers provided do not preclude the White Mesa Mill licensee from properly surveying potentially contaminated material for release from the site, as specified in the license.

The enclosure contains specific responses to your questions. If you have any additional questions on the classification of materials at this site, please contact me at (301) 415-3340 or Terry Brock at (301) 415-2323, Email: tab2@nrc.gov.

Sincerely,

/RA/

Paul H. Lohaus, Director
Office of State and Tribal Programs

Enclosure:
As stated

Response to Questions In January 14, 2003 Letter from William Sinclair

Question 1: What is the proper classification of simple solid waste(trash) from office buildings, plant buildings, e.g., fluorescent light bulbs containing mercury, NiCd batteries, etc.? In what circumstances might such waste be classified as 11e.(2) byproduct material? Would this solid waste be allowed to be disposed of in the tailings cells?

Response:

Waste generated within the site boundary are wastes related to ore processing and, as such, can be disposed of as 11e.(2) byproduct material. Waste disposed of in the tailings impoundment should be placed so that it does not impact the long term stability of the impoundment.

Question 2: Uranium mills typically have an analytical chemistry laboratory to support ongoing process operations and ore assaying needs. As a result, there may be a large array of commercial chemicals in various stages of use at a mill. If chemicals are used for ongoing process operations and/or ore assaying needs with the end result being such chemicals are eventually disposed as wastewaters that are piped to the existing impoundment, what would be the waste classification of such chemicals?

Response:

Chemicals used as part of ongoing process operations and ore assaying needs are classified as 11e.(2) byproduct material and can be disposed of in the tailings impoundment.

Question 3: If there are laboratory chemicals in various states of consumption and shelf-life (unused and sealed to half empty bottles) that do not readily lend themselves to having a common usage for either of the above operations described in question #2, would such chemical products be allowed to be disposed as wastewater from the laboratory operations which are piped to the existing impoundment?

Response:

Laboratory chemicals brought on-site are assumed to be a component of processing ore and should be disposed as 11e.(2) byproduct material. If there was, in fact, no intent to use the chemicals in site operations, then these materials would not be 11e.(2). Chemicals that were intended to be used in site operations, but never used, can be classified as 11e.(2) byproduct material and disposed of in the tailings impoundment. Residual chemicals from historical uses in ore processing can also be classified as 11e.(2) byproduct material and piped into the tailings impoundment.

Question 4: As alternate feed material arrives at the White Mesa facility, it can be soil co-mingled with debris such as concrete, plastic, and bricks. These materials may be non-uranium bearing and are "along for the ride" as a result of any particular remediation project. These materials may be separated at the time of introduction into the uranium recovery process and eventually disposed of in the tailings impoundments. Would these materials be classified as 11e.(2) byproduct material?

Response:

Yes. The alternate feed material is regulated in mass as ore; therefore, the material not amenable to processing, i.e., debris associated with it that must be separated at the time of uranium recovery, is a waste from ore processing that meets the definition of 11e.(2) byproduct material.

Question 5: The State of Utah has identified the presence of chloroform in the groundwater. Work is currently underway to define the source(s) and extent of the contamination. Two potential sources, already identified, include septic tank drainfields which serviced both laboratory operations and sanitary sewage during the early operating era of the White Mesa Mill. Since chloroform is a hazardous waste constituent identified under the RCRA program, is it still appropriate to classify such a contaminant as 11e.(2) byproduct material? This is especially important in the light that IUC is proposing to pump contaminated groundwater containing chloroform and introduce the groundwater into the headworks of the facility for use in the processing of alternate feed. Since chloroform can be a characteristic hazardous waste at concentrations above 6,000 g, it is important to evaluate this issue in light of a dual jurisdiction question. What would be the classification of the groundwater in this situation?

Response:

It is our understanding that the chloroform groundwater contamination originated from laboratory activities directly related to processing ore. As such, the chloroform in the groundwater is 11e.(2) byproduct material, albeit improperly managed, and should have been disposed of in the tailings impoundment.

DRAFT

Ms. Sarah M. Fields
P. O. Box 143
Moab, UT 84532

Dear Ms. Fields:

I am responding to your e-mail inquiries sent to me, or other Office of State and Tribal Programs (STP) staff, dated April 15, 20, and 28, respectively. Your e-mail of April 20, which included twelve specific questions, was followed by a hard copy letter received on May 1, 2003. I am enclosing responses to your April 15 and 20 questions. You have already received a response from Ms. Cardelia Maupin to your e-mail request of April 28.

I trust we have been responsive to your questions. If you have questions on our responses, please contact me at phl@nrc.gov or Terry Brock at tab2@nrc.gov.

Sincerely,

Paul H. Lohaus, Director
Office of State and Tribal Programs

Enclosures:

1. Response to April 15, 2003 Question
2. Responses to April 20, 2003 Questions

ATTACHMENT 2

Question from your April 15, 2003 E-mail.

Question: I would like to know what the relationship is between NRC policies and guidances pertinent to the regulation of Part 40 facilities and Agreement States that also regulate these facilities. What exactly is the legal status of NRC policies/guidances with respect [to] their applicability to Agreement States?

Response: With respect to specific sections in Part 40, State and Tribal Programs (STP) Procedure, SA-200 (see specifically the 10 CFR Part 40 section of Appendix A to SA-200), which is available on the STP web site at <http://www.hsrdo.ornl.gov/nrc/procedures/sa200.pdf>, identifies the unique regulatory requirements that must be adopted by Agreement States that are authorized to regulate uranium milling facilities for compatibility. NRC policies and guidance documents pertinent to the regulation of Part 40 facilities (in this specific case, source material milling facilities) are not matters of compatibility for Agreement States. However, Agreement States adopt and utilize similar guidance in their programs and NRC guidance is often used as the basis for State developed guidance. Also, see response below to question 6 in your April 20, 2003 e-mail and letter.

Questions from the April 20, 2003 e-mail and April 20, 2003 letter.

Question 1. How is it that the debris, from which no "source material is extracted" at the mill, can be considered to be "ore" along with the material from which source material is extracted? We are not talking about a small amount of debris, but large percentages of the material shipped to the mill for processing.

Response: Ore, regardless of origin, will contain debris not amenable to a portion of the physical/chemical uranium recovery process. The physical removal of this debris is considered to be part of ore processing, and as such, the separated material is by definition 11e.(2) byproduct material eligible for disposal in the tailings impoundment.

Question 2. When, exactly, does the "alternate feed material" become "ore"? The various alternate feed materials that arrive at White Mesa have other regulatory designations prior to their journey to White Mesa; for example, source material, mixed radioactive and hazardous waste, 11e.(2) byproduct material, an industrial product, and FUSRAP waste. When, exactly, does the alternate feed lose the old definition and acquire the new definition of "ore"?

Response: The alternate feed becomes ore when it is received on the licensed mill site.

Question 3. (a.) In other words 40% of the alternate feed material could not, in fact, be processed for its source material content. If such a large percentage of material could not possibly be processed for its source material content, how could it possibly be claimed that that part is "ore" (i.e., material that is processed for its source material content)?

(b.) Why does the NRC not require that, before alternate feed material is shipped to a licensee for processing, a reasonable effort be made to separate the material that can be processed for its source material content from the material that cannot possibly be processed and must be directly disposed of?

Response: a. As stated in our response to Question 1, ore can include debris from which no source material is extracted.

b. NRC has no existing regulatory requirement to separate debris from processable material prior to shipment as alternate feed to a uranium mill. Absent a health and safety or environmental basis, or statutory direction to do so, NRC does not plan to consider development of such a requirement at this time.

Question 4. The NRC's Interim Guidance is NRC policy. It is not NRC regulation. Therefore, it is not required that it must be incorporated into the State of Utah's regulations before Utah can amend its Agreement State status. What exactly is the legal status of this policy vis-a-vis Agreement States?

Response: The NRC's interim guidance is not legally binding on an Agreement State. Also, please see our response to questions 5 and 6, below, as well as our response to your April 15, 2003 e-mail.

Question 5. Must an Agreement State adopt NRC policy regarding the receipt and processing of alternate feed material and the receipt and disposal of non-11e.(2) byproduct material regardless of whether the Agreement State wishes to permit such activities?

Response: An Agreement State may adopt the NRC's policy on alternate feed, but is not required to do so. Also, see our response to your April 15, 2003 e-mail.

Question 6. If an Agreement State wishes to permit the processing of alternate feed material and the receipt and disposal of non-11e.(2) byproduct material at mills licensed by the state, does the state necessarily have to follow the NRC's guidance with respect those activities?

Response: Although a State is not required to adopt NRC guidance, the State must adopt or apply guidance to provide assurance that it adequately protects public health and safety, that the environment is being protected, and that the long term care of the site is not jeopardized. Also, see our response to your April 15, 2003 e-mail.

Question 7. If they do not have to adopt NRC policy with respect [to] those activities, do they have to adopt some sort of policy with respect [to] those activities? Is their any standard that such a policy must meet?

Response: We believe the question is addressed in our response to question 6 and the response to your April 15, 2003 e-mail.

Question 8. Can an Agreement States adopt its own regulations with respect to the processing of feed material other than "natural ore"?

Response: An Agreement State may adopt its own regulations with respect to the processing of materials, other than "natural ore," that may be processed for source material content.

Question 9. Can an Agreement State adopt its own regulations with respect the disposal of non-11e.(2) byproduct material at a licensed uranium mill or 11e.(2) disposal facility?

Response: An Agreement State may adopt its own regulations with respect to the disposal of non 11e.(2) byproduct material at a licensed uranium mill or 11e.(2) disposal facility located in the Agreement State. However, the U.S. Department of Energy (DOE) should approve the disposal of any non-11e.(2) material in the disposal cell, because DOE will ultimately be responsible for the long term custody of the site. For that reason, Agreement States should ensure that the disposal of non 11e.(2) byproduct material does not jeopardize transfer of the site to DOE.

Question 10. What is the legal status of the various responses given to the State of Utah in the March 7 letter? Must the State conform to previous NRC understandings with respect [to] the classification of various materials at White Mesa?

Response: The March 7 letter from the NRC to the State of Utah is not a legally binding document. The State, in implementing a mill regulatory program, is not required to conform to the NRC classification of materials as presented in the March 7 letter; however, any change in State requirements after the effective date of the amended agreement does not change the classification of waste already disposed of in the tailings impoundment.

Question 11. What is the legal basis for Agreement States authorizing regulatory programs and activities not mentioned in or contemplated by the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) and NRC and Environmental Protection Agency regulations (and supporting background documents) promulgated pursuant [to] UMTRCA?

Response: States have other legal authorities for other activities and may regulate them under these other authorities. If exercised at a licensed mill, such authorities would have to be evaluated by Agreement States to ensure they would not jeopardize or affect the ability of mills to meet UMTRCA requirements.

Question 12. Can an Agreement State permit regulatory programs at a licensed uranium mill that are not specifically authorized and contemplated by the provisions of 10 C.F.R. Part 40 when those regulations were promulgated?

Response: As responded to in Question 11, States have other legal authorities for other areas not covered under 10 CFR Part 40. However, States need to ensure any other regulatory programs do not jeopardize the mills ability to meet UMTRCA requirements.