

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

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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.