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April 16, 2002

Chief, Rules and Directives Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Gentlemen:

Subject: Kennecott Uranium Company's Comments on Draft Standard Review Plan (NUREG-1620) for Staff Reviews of Reclamation Plans for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act - Federal Register, Vol. 67, No. 24, Tuesday, February 5, 2002, page 5348

Kennecott Uranium Company (KUC) is a uranium recovery licensee and is the operator and manager of the Sweetwater Uranium Project, one (1) of the six- (6) remaining conventional uranium mills in the United States. The Sweetwater Uranium Project is located in the Great Divide Basin in Sweetwater County, Wyoming and licensed under Source Materials License SUA-1350. The Sweetwater Uranium Project is not operating. It is in standby status awaiting an improved uranium market. Kennecott Uranium Company has reviewed the above described Federal Register notice and has the following comments concerning the *Draft Standard Review Plan (NUREG-1620) for Staff Reviews of Reclamation Plans for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act*:

1. Seismicity

Kennecott Uranium Company supports the language included in the document that states, "The study by Bernreuter, et al. (1994) is intended as a screening study; the probabilistic seismic hazard estimates are not site specific and are only calculated for random earthquakes." Kennecott Uranium Company agrees that the hazard estimates are not site specific. The conclusions of the study entitled *Seismic Hazard Analysis of Title II Reclamation Plans*, by D. Bernreuter, E. McDermott, and J. Wagoner of Lawrence Livermore National Laboratory, Livermore, California dated June 1994 have been challenged by others. In the State of Wyoming certain conclusions in the study have been refuted in a document entitled *Hazards Report 96-1: Recommendations Regarding Seismic Design Standards for Uranium Mill Tailings Sites in Wyoming* - by James C. Case. KUC recommends that other relevant publications containing information on seismicity in areas containing Title II sites should also be listed in the Section entitled References. One such paper is entitled *Earthquake hazards in the Intermountain U.S.: Issues relevant to uranium mill tailings disposal* - by Ivan G. Wong et al.

2. Groundwater Corrective Action Programs (CAPs)/Alternate Concentration Limits (ACLs)

Many Title II uranium mill tailings sites are in remote areas where the pathways to exposure to contaminated groundwater are limited. In such cases, continued operation of Corrective Action Programs (CAPs) can consume water resources that may be of future use, since the water removed by the Corrective Action Program is usually evaporated in the tailings impoundment or in an evaporation pond. The future value of the ground water being evaporated may exceed any risk posed by the contaminants.

3. Appendix I - Guidance on Disposal of Alternate Feed and Non-11e.(2) Byproduct Materials in Uranium Mill Tailings Impoundments

This appendix should include additional discussion and references specific to the issues of processing alternate feed at a uranium mill. The guidance should describe and allow the use of a performance-based license to facilitate the acceptance of alternate feed materials. A licensee, through the use of its performance based license and its Safety and Environmental Review Panel (SERP), should be able to approve for acceptance various types of alternate feed materials from different sources provided that such materials fall within certain

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broad ranges (radiological, chemical and physical) established by the Nuclear Regulatory Commission (NRC) in the license. The guidance should include a discussion of the application of a performance-based license for the acceptance of alternate feed materials by a licensee.

This appendix should also include a discussion of the *Environmental Assessment for International Uranium (USA) Corporation's Uranium Mill Site White Mesa, San Juan County, Utah in Consideration of an Amendment to Source Material License SUA-1358 for the Receipt and Processing of the Molycorp Alternate Feed material*. This Environmental Assessment states:

"NRC staff have determined that the Molycorp material should be classified as "source material" ore and therefore is excluded by definition as a solid and hazardous under the Resource Conservation and Recovery Act (RCRA) (see 40 CFR Part 261.4). NRC staff consulted with EPA Region 8 staff, which concurred with this interpretation. Secondly, the State of California (Radiological Health Branch) considers the material to already be classified as source material. Staff concluded that the material in question could be classified as licensable source material. There are two reasons for this conclusion: (1) the uranium content of the material in question, i.e., 0.15%, makes this licensable source material; and (2) as an ore, the material could be legitimately recycled by IUSA which will process the material for its uranium content. Under EPA regulations, source material is not considered a solid waste for purposes of RCRA. If the material is not a solid waste it cannot be classified as a hazardous waste (see, 40 CFR 261.4 (a)). This is true even if the material contains a hazardous characteristic if the material is legitimately reclaimed."

This language allows materials with a hazardous characteristic to be directly accepted as alternate feed. This interpretation has the concurrence of the State of California (Radiological Health Branch) and the Environmental Protection Agency (EPA) Region 8. This is significant information that should be included in the document.

4. Staff Requirements - SECY-99-0277 - Concurrent Jurisdiction of Non-Radiological Hazards of Uranium Mill Tailings

This document states:

"The Commission has disapproved the staff's recommendation to formally adopt the current staff practice of acknowledging the concurrent jurisdiction of non-Agreement States over the non-radiological hazards of 11e.(2) byproduct material. The Commission has determined that NRC has exclusive jurisdiction over both the radiological and non-radiological hazards of such material. The staff should ensure that all affected states are aware of this decision."

In discussing this issue, NUREG - 1620 *Draft Standard Review Plan (NUREG-1620) for Staff Reviews of Reclamation Plans for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act* states:

"The NRC exercises exclusive, pre-emptive jurisdiction over all radiological and non-radiological ground-water contaminants from uranium mill tailings facilities, in accordance with Commission direction in Staff Requirements Memorandum SECY 099-277 (NRC, 2000)."

KUC recommends that this language should be strengthened to reflect the actual wording and intent of *SECY-99-0277 - Concurrent Jurisdiction of Non-Radiological Hazards of Uranium Mill Tailings*. It should be revised to read:

The NRC exercises exclusive, pre-emptive jurisdiction over all radiological and non-radiological hazards of 11e.(2) byproduct material including ground-water contaminants from uranium mill tailings facilities, in accordance with Commission direction in Staff Requirements Memorandum SECY 099-277 (NRC, 2000).

SECY-99-0277 - Concurrent Jurisdiction of Non-Radiological Hazards of Uranium Mill Tailings also states:

"The NRC exercises exclusive jurisdiction over all radiological and non-radiological ground-water contaminants from uranium mill tailings facilities."

This language should also be changed to the language suggested above.

The document includes the following language:

"The reviewer should consult with the appropriate non-Agreement State agency on the designated water use for the ground-water resource and any numerical limits the State has determined to be a hazard. Close coordination with the State may be needed to determine the need for including such constituents in the license, along with the evaluating the benefits and costs of potential mitigative measures. "

On one hand the agency has exerted exclusive and pre-emptive Federal jurisdiction over 11(e).2 byproduct material including all radiological and non-radiological ground-water contaminants from uranium mill tailings facilities, while in the above language the agency instructs the reviewer to seek input from non-agreement states.

In a letter dated January 25, 2002 to Mr. Gary Beach, Administrator Water Quality Division, Wyoming Department of Environmental Quality, Mr. Melvyn Leach, Chief of the Fuel cycle Licensing Branch stated:

"As you are aware, on August 11, 2000, the NRC rendered its decision with respect to the concurrent jurisdiction of non-Agreement states over the non-radiological hazards of 11(e).2 byproduct material. The NRC has determined that it has exclusive jurisdiction over both the radiological and non-radiological hazards of such material. The purpose of this letter is to inform you of the staff's ongoing effort to develop guidance related to implementation of the NRC's "exclusive jurisdiction" decision. In this regard, the staff is currently revising the "Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act", NUREG-1620, June 2000, to incorporate guidance for evaluation of issues pertaining to protection of water resources at licensed uranium mill sites. The revised Standard Review Plan (SRP) will include guidance for coordination with state representatives for consideration and evaluation of non-radiological groundwater constituents of interest to the state that may produce harm. These constituents include sodium, ammonia, and sulfate."

Kennecott Uranium Company believes that the guidance should incorporate very specific language to guide the reviewer, that does not require the reviewer to consult with non-agreement states, so that it is clear that the agency is in fact exerting exclusive and pre-emptive Federal jurisdiction over 11(e).2 byproduct material.

5. Direct Disposal/ SECY-99-012, Use of Uranium Mill Tailings Impoundments for the Disposal of Waste Other Than 11e.(2) Byproduct Material and Reviews of Applications to Process Material Other Than Natural Ore

With this decision the Commissioners voted to allow more flexibility in the disposal capacity for uranium mill tailings impoundments subject to the following considerations:

- Adequate protection of public health, safety and the environment;
- Acceptance by the site's long term custodian, and;
- Approval by any other affected regulators.

It was originally planned that this decision be codified in the planned new rule making on uranium recovery, the proposed 10 CFR Part 41. However, plans to draft these new regulations were abandoned due to the depressed condition of the uranium recovery industry. It was then stated that existing guidance (such as NUREG-1620) would be revised to include information relating to the Commission decisions that were announced in 2000 such as SECY-99-0277 and SECY-99-012. This guidance document contains little added information regarding implementation of SECY-99-012. The guidance provided is limited to such statements as:

"The reviewer also assesses the properties of off-site materials for those sites that have large volumes of off-site material that will be placed in the disposal cell."

KUC suggests that additional guidance is required to address such issues as acceptable wastes for disposal based upon such criteria as activity (radionuclide types and concentrations), chemistry, composition and physical properties. In addition, the document should address site acceptance and transfer issues for sites approved to accept non-11(e).2 and non-Atomic Energy Act (AEA) materials for direct disposal.

Kennecott Uranium Company appreciates the opportunity to comment on this proposed rule. If you have any questions please do not hesitate to contact me.

Sincerely yours,



Oscar Paulson

Facility Supervisor

Comments NUREG-1620.doc

cc: Katie Sweeney - NMA
Marion Loomis - WMA
Rich Atkinson