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DSI-4
(31)

Kennecott Energy

November 26, 1996

Mr. John C. Hoyle
Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Hoyle:

Subject: Comments on the Nuclear Regulatory Commission's Strategic Assessment Initiative

Kennecott Uranium Company is a uranium recovery licensee which operates and manages a currently idled uranium mill in Sweetwater County, Wyoming. Kennecott Uranium Company has reviewed portions of the NRC's Strategic Assessment Initiative and believes that this action will have significant impact on uranium recovery licensees.

In view of these potential impacts, Kennecott Uranium Company has prepared the following comments regarding the following Strategic Assessment initiatives:

1. DSI 4: NRC's Relationship with Agreement States

1.1 Turn Agreement States Program over to the Environmental Protection Agency (EPA)

Kennecott Uranium Company is opposed to turning the Agreement States Program over to the EPA for the following reason:

1.1.1 The EPA lacks the experience and the requisite nucleus of trained staff to adequately manage the Agreement States Program. The NRC alone possesses the trained personnel, institutional memory and experience to operate the Agreement States Program. This program is not a simple one as it involves such diverse license types as uranium recovery, medical, radiography and others. In addition, agreements differ from state to state. Some states such as Colorado, for example, are "full" agreement states in that they regulate the full spectrum of licensees including uranium recovery licensees. New Mexico, on the other hand, returned the regulation of uranium recovery facilities to the NRC. Utah, for example, currently does not regulate uranium recovery facilities. In addition, one state, Idaho, ceased being an agreement state and returned regulation of radioactive materials to the NRC. The regulation of the Agreement State Program is a complex one requiring management by an experienced agency (ie; the NRC).

Acknowledged by card 12/31/96 ADM

1.2 Strongly Encourage States to Become Agreement States

Kennecott Uranium Company is opposed to this option for the following reasons:

1.2.1 As additional states become agreement states, costs for the existing NRC licensees will increase since a smaller nucleus of licensees is available to fund the operating budget of the agency under OBRA mandated full fee recovery.

1.2.2 As additional states become agreement states, it will shrink the available pool of expertise within the NRC since the experienced personnel will no longer be needed by the agency. This will tend to scatter and decentralize regulatory and licensing expertise.

1.2.3 Individual states will find it difficult to develop the levels of regulatory expertise currently found within the NRC, especially in such complex areas as decommissioning, mill tailings management and low level waste.

1.2.4 This approach is opposed to the basic philosophy of the Atomic Energy Act which sets a goal of a unified, centralized, national program for radioactive materials regulation.

1.2.5 This approach may drive some states into agreement state status, only to discover that agreement state status is undesirable for them. At this point, they may relinquish their agreement state status and revert to NRC state status. These changes in status will create inevitable difficulties for the licensees in those states. This situation becomes especially difficult for licensees involved in prolonged decommissioning and/or reclamation efforts such as uranium recovery licensees who require regulatory stability in order to complete their work. Uranium recovery licensees, especially those involved in decommissioning and/or tailings reclamation, require stability of regulatory staff and regulatory continuity in order to complete their work in a timely and cost effective manner.

1.3 Devolve Regulation of Atomic Energy Act Section 274 Materials to the States.

Kennecott Uranium Company is opposed to this option for the following reasons:

1.3.1 This option would create regulatory chaos. Lack of a nationally consistent program would mean more stringent regulation in some states than in others. Regulatory costs for the licensees would vary widely from state to state depending upon their regulations, making licensees in some states unable to compete economically with similar licensees in other states. In the case of uranium recovery licensees whose location is fixed by their orebodies, it may force some to cease operation.

1.3.2 This approach is inconsistent with the philosophy of the Atomic Energy Act, which presupposes a national regulatory program for radioactive materials.

1.4 Continue the Current Agreement States Program, Including Adopting Current Incentives

Kennecott Uranium Company supports this option since it allows states to become agreement states without undue coercion by NRC. It also allows states to remain NRC states if they so desire.

1.5 Other Agreement State Issues

Uranium recovery licensees have observed a disturbing trend among states, in which some states assert authority over mill tailings reclamation and 11e.(2) byproduct material without assuming the responsibility associated with agreement state status. States without agreement state status over 11e.(2) byproduct material accomplish this by regulating the "non-radiological component" of byproduct material. By asserting regulatory authority over a non-radiological component (nitrates, for example) of byproduct material (tailings seepage), a state can assert regulatory authority over the cover design of a mill tailings impoundment by determining that it serves to protect groundwater from various non-radiological constituents. Conceivably, this could be extended ad infinitum, giving the state regulatory authority over chemicals used in a uranium mill, for example.

This situation arose out of a 1980 NRC policy decision entitled **Extent of Preemption or Concurrent Jurisdiction over Uranium Mill Tailings in Non-Agreement States**, which allowed non-agreement states to regulate the non-radiological components of byproduct material. This policy decision is included by reference. This issue and the associated 1980 NRC policy decision should be re-examined as part of the Strategic Assessment process.

2. DSI 23: Enhancing Regulatory Excellence

2.1 Uranium Recovery

Kennecott Uranium Company has the following comments on this portion of the Strategic Assessment:

2.1.1 Performance Based Licenses (PBL)

Kennecott Uranium Company believes that Performance Based Licenses lie at the heart of regulatory streamlining and simplification. PBLs will reduce the work of licensees and the NRC by reducing the volume of submittals that have to be prepared by the licensees and reviewed by the agency. The concept is an

excellent one; however, it is the belief of Kennecott Uranium Company that the NRC has been slow in implementing Performance Based Licenses.

2.1.2 Eliminating Dual Regulation

The NRC discusses use of state agency reviews where applicable, instead of performing its own reviews on in-situ leaching wellfields which are subject to dual NRC and state regulation.

Kennecott Uranium Company would like the NRC to proceed one step further and relinquish its jurisdiction over in-situ wellfields to the states. Ample justification for this action exists in a brief entitled **NRC Jurisdiction Over In-Situ Leaching of Uranium** prepared by Anthony J. Thompson, of Shaw, Pittman, Potts and Trowbridge, dated March 10, 1994 and submitted to the NRC. This brief is included by reference.

The regulation of in-situ wellfield by the NRC has spawned other problems including some related to the types of material which may be included within the definition of 11e.(2) byproduct material. These problems became apparent with the issuance by NRC of the **Staff Technical Position on Effluent Disposal at Licensed Uranium Recovery Facilities (DWM 95-01)** dated April 1995 and the **Final Revised Guidance of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments** dated September 22, 1995. These documents are included by reference.

Kennecott Uranium Company believes that in-situ wellfields should be under state jurisdiction.

3. DSI 13: Role of Industry

The NRC should expand the role of industry and increase interaction with industry and professional groups. Groups such as the Wyoming Mining Association (WMA) and the National Mining Association (NMA) represent a significant portion of the uranium recovery industry. The organizations represented by these groups possess significant technical and regulatory expertise. In addition. other organizations such as state geological surveys possess significant expertise which would be of benefit to the NRC.

For example, in June 1994, Lawrence Livermore National Laboratory (LLNL) released a document entitled **Seismic Hazard Analysis of Title II Reclamation Plans.** This report was prepared under contract from the NRC. Portions of this report were critiqued by James C. Case of the Wyoming State Geological Survey in **Hazards Report 96-1: Recommendations Regarding Seismic Design Standards for Uranium Mill Tailings Sites in Wyoming** dated

February 28, 1996. This hazards report was then submitted under cover of letter signed by the Governor of Wyoming to the NRC. Increased involvement by licensees and local experts early in the preparation of the initial report by LLNL would have resulted in a better document and avoided the subsequent critiques.

Increased interaction with outside groups by the agency would have prevented some of the problems that are now being encountered with some of the regulatory guidance. A strong dialogue between the agency and these groups can only enhance the regulatory process.

Kennecott Uranium Company has the following other comments regarding the following general regulatory issues which should be considered as part of the Strategic Assessment:

A. Elimination of Contradictory Regulation and Regulatory Guidance

Kennecott Uranium Company believes that the NRC should review and revise or remove contradictory regulatory guidance such as the **Staff Technical Position on the Reclamation of Synthetically Lined Impoundments** and the **Staff Technical Position on Effluent Disposal at Licensed Uranium Recovery Facilities.** These two (2) documents create problems for the licensees and are included by reference. The following sets of comments on these guidance documents are included by reference:

1. Comments on the Staff Technical Position on the Reclamation of Synthetically Lined Impoundments

   1.1 Kennecott Uranium Company Comments - August 1, 1994

   1.2 Wyoming Mining Association Comments - September 20, 1994

2. Comments on the Staff Technical Position on Effluent Disposal at Licensed Uranium Recovery Facilities

   2.1 Kennecott Uranium Company Comments - July 21, 1995

   2.2 Wyoming Mining Association Comments - July 14, 1995

   2.3 Power Resources, Inc. Comments - April 15, 1994

The **Staff Technical Position on the Reclamation of Synthetically Lined Impoundments** creates a contradiction between operation and reclamation of a tailings impoundment. The current regulations drive the operator toward construction of an impoundment with a synthetic upper liner. The synthetic upper liner is required to meet the requirements of 40 CFR Part 192.32(a) and 40 CFR 264.221 which mandate no penetration by fluid into the upper liner

during operations. This guidance, however, drives the licensee away from a synthetic upper liner when the 1000 year reclamation period for the impoundment is considered. The guidance states:

> "For example, a design that allows the migration of waste into the liner during facility operation is permitted if the reclamation and closure plan includes removal or decontamination of the contaminated soils, equipment and structures (including contaminated liner)."

This does not make much sense. The regulations drive the licensee toward an upper liner which is not penetrated by fluids during the operating life and toward permanent placement of tailings into a subgrade tailings impoundment (as per 10 CFR 40 Appendix A) while this guidance allows migration of waste into the liner provided that the liner is removed or decontaminated. How is the licensee expected to remove or decontaminate the liner without moving all of the accumulated tailings on top of it? The goal of 10 CFR 40 Appendix is to insure permanent, safe placement of tailings. How can this be achieved if the tailings must be removed at the close of operations to remove or decontaminate the liner.

This guidance was written to prevent the "bathtub effect", which is the potential for fluids to accumulate in a synthetically lined impoundment due to rainfall percolating through the cap of a reclaimed tailings impoundment during the 1000 year reclamation period. The concern is that the synthetic liner could fail during the 1000 year reclamation period and that the reclaimed impoundment could become a source of groundwater contamination.

The problem is that the agency cannot have it both ways. If the goal is to drive the licensees toward synthetic liners to prevent seepage during operation, then there will always be a slight chance of developing a "bathtub" during the 1000 year reclamation period. If the agency wishes to entirely prevent the formation of a "bathtub" then natural materials (ie. clays) could be used in liners, but they will allow some penetration of wastes into the liner during operation and could not be practically removed at the close of operations without moving all of the tailings, something that is impractical and unsound.

The **Staff Technical Position on Effluent Disposal at Licensed Uranium Recovery Facilities** creates regulatory conundrums for the licensee regarding radium bearing sludges derived from the treatment of in-situ wellfield restoration fluids. This document classifies water pumped from in-situ leach wellfields as mine waste water which is not 11e.(2) byproduct material. Before this water is discharged, it is often treated with barium chloride to precipitate radium in order to meet discharge or land application limits. Since this water now appears to be neither source or byproduct material the radium bearing sludges derived from it do not appear to be 11e.(2) byproduct material. Recent guidance issued on September 22, 1995 entitled **Final Revised Guidance of Non-Atomic Energy Act of 1954, Section 11e.(2) Byproduct Material in Tailings Impoundments** essentially limits tailings impoundments to accepting only 11e.(2)

byproduct material and certainly only to material regulated under the Atomic Energy Act. If the Staff Technical Position redefines the barium chloride sludges as non-Atomic Energy materials, then it appears as if they cannot be placed for disposal in uranium mill tailings impoundments according to the September 22, 1995 final revised guidance. These sludges have historically been placed in uranium mill tailings impoundments and are still being placed there today, but the conflicts between these two (2) documents raises the potential for regulatory problems.

B. Revision of 10 CFR Part 40

A solution to a number of these problems may lie in revising 10 CFR Part 40, which the NRC discussed in its Advanced Notice of Proposed Rulemaking dated October 28, 1992, which is included with its accompanying NUREG by reference.

In conclusion Kennecott Uranium Company believes that:

1. The NRC's agreement state program should remain unchanged.

2. The NRC should use the Strategic Assessment Initiative to correct certain inherent flaws in its uranium recovery related regulations by:
   - 2.1 Ceasing to regulate in-situ wellfields
   - 2.2 Eliminating the current authority of non-agreement states to regulate non-radiological components of 11e.(2) byproduct material.
   - 2.3 Eliminating or revising contradictory guidance.
   - 2.4 Considering proceeding with the previously proposed revision of 10 CFR Part 40.

3. The NRC should proceed at a faster pace with Performance Based License for the uranium recovery industry.

4. The NRC should not:
   - 4.1 Turn the Agreement State Program over to the EPA.
   - 4.2 Turn regulation of Atomic Energy Act 274 materials over to the states.

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

Sincerely yours,

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