Docket 40-8027

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PDR
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Dave Cramer

April 17, 1981

Mr. William Nixon
U.S. Nuclear Regulatory Commission
Uranium Fuel Licensing Branch
Division of Fuel Cycle and Material Safety
7915 Eastern Avenue
Silver Spring, MD 20910

Dear Mr. Nixon:

The environmental assessment of the proposed Kerr-McGee sludge disposal operation has proceeded to the point where additional information regarding expected normal releases and potential accidental releases is needed. In addition, further information is required concerning the transport potential of radiological and non-radiological contaminants through site soil.

In order to conduct an accurate, reasonable and quantitative environmental impact assessment as outlined in 10 CFR 51.30 and 40 CFR 1508.9, specific concerns need to be addressed by Kerr-McGee. Responses to such concerns are considered to be in keeping with the information requirements of 10 CFR 51.45. The major concerns have been subdivided into six areas:

- Construction of sludge processing facilities. The actions and activities associated with construction of sludge processing and solidification facilities must be addressed because of the potential environmental impact associated with construction activities. As a result of discussions with Kerr-McGee it is clear that a decision on the waste form will directly affect the impacts associated with construction of sludge processing facilities.

- Sludge processing facility and operation. It is important to have information on equipment and procedures to be used for removing sludge from pond 2, processing it to a solidified form and placing it in the proposed burial pit. This information is necessary to define source terms which are expected with normal operation and which might be expected under accident conditions.

- Pit construction/operation/closure. Because of the manner in which the pit is to be developed and used, all three phases can be occurring at any one time. Information about construction methods, operational methods and closure plans is necessary in order to define and evaluate areas of environmental impact.

- Long-term site performance. A central issue in the environmental assessment of the proposed burial operation is the performance of the site over the long term. The major natural forces which the c[illegible] burial site must accommodate in a safe manner are leaching/hydrologic transport and wind erosion. It is necessary that Kerr-McGee demonstrate its understanding of the resistance of the site to these natural forces.

- Alternative actions. A more extensive discussion of alternatives is necessary for the EIA so they can be compared with the proposed action from an environmental standpoint.

- Long-term site care. Kerr-McGee must address the institutional arrangements to be made for surveillance and monitoring after closure. Protection of the site is necessary in order to assure that the cap is not disturbed and thereby degrade the safety barriers engineered into the disposal site.

Based on the above concerns, requests for additional information have been prepared for your review. These are enclosed.

I believe a sound EIA can be written when these issues are addressed more fully. I also believe that the information being requested will serve a very useful purpose in providing the record to support an EIA.

If you have any questions, please feel free to call Ray Roland (703) 734-4020 or me (703) 821-4430.

Sincerely,

James E Hammelman

James E. Hammelman, Principal Investigator
Technology Assessment Division

Enclosure a/s

JEH:baa

Construction of Sludge Processing Facilities

1. Describe the activities associated with the construction of the sludge processing facilities. Specific areas of interest are those of digging and road construction which might produce noticeable amounts of dust in the air or silt in surface waters. Any design standards which will be followed should be referenced. In the event that such facilities involve piping of sludge from the pond to a more remote area for processing, please address the measures taken during construction and after completion of the project to assure restoration of the affected land.

Sludge Processing Facility and Operation

1. Describe the general system to be used for processing the waste, including in the description all of the major processing, storage and effluent control components. This description should address not only the radioactive portions but also the non-radioactive portions of the process (asphalt or cement storage and handling).

2. Describe the expected normal and accidental releases associated with the proposed operation. Estimates should be made of both radiological and chemical effluents and the basis for the estimates (design calculations or experimental data) provided.

3. Describe the equipment and operational procedures which will be used for dealing with accidental spills and discuss how these will limit the extent or consequence of a spill.

4. Describe the operational procedures which will be used to assure proper operation of environmental protection equipment such as radon or ammonia scrubbers.

Pit Construction/Operation/Closure

1. Describe in quantative terms how rain water will impact pit operation, how much contaminated leachate is expected to be formed and how it will be handled.

2. Describe the geologic/hydrologic investigations to be conducted during development of the pit in order to verify original design assumptions. Discuss the options to be considered if the assumptions are not supported by the additional investigations.

3. Describe and provide the rationale for the expected hydrologic performance of the site during operation and after closure.

Long-Term Site Performance

1. Describe the expected performance of the closed site relative to both hydrologic and wind erosion phenomena. Please provide the analytical and data bases for the performance prediction. Discuss the sensitivity of the performance to design variables such as soil thickness, cover crop, rainfall, adsorption coefficients, fracture pattern, etc.

2. Describe the proposed monitoring program that will be used to assure that the facility is performing as designed. The description should include a rationale for location and number of monitoring points.

Alternative Actions

1. Describe the alternatives to on-site disposal that were considered. Provide the rationale for weighing each alternative, including the consideration of timing.

Long-Term Site Care

1. Describe the arrangements that have been or will be made for ownership, surveillance and/or maintenance of the burial site after closure in order to assure its restricted use.

2. Identify the permits, licenses, approvals and other entitlements which must be obtained for the proposed action and describe the status of compliance.