

40-2061

PDR

40-2061



WILLIAM J. SCOTT  
ATTORNEY GENERAL  
STATE OF ILLINOIS  
160 NORTH LA SALLE STREET  
CHICAGO 60601



TELEPHONE  
793-3500

October 19, 1979

William A. Nixon  
Division of Fuel Cycle  
& Material Safety  
Office of Nuclear Material  
Safety & Safeguards  
United States Nuclear  
Regulatory Commission  
Washington, D.C. 20505

Re: Kerr-McGee Chemical Corporation  
West Chicago Facility

Dear Mr. Nixon:

The People of the State of Illinois, by William J. Scott, Attorney General of the State of Illinois submit the following comments on the proposed "Stabilization Plan" of the Kerr-McGee Chemical Corporation related to its activities in West Chicago, Illinois.

1. The Plan has not considered all reasonable alternatives to on-site disposal of the waste material. The Plan considers:

1. The three currently operating low-level waste sites;
2. Abandoned open pit mines, in particular two sites within 150 mile radius to our Chicago site; and
3. Argonne National Laboratories and the Fermilab.

The consideration of alternatives is inadequate for the following reasons:

1319 294

14465

7911130 183

C

A. Kerr-McGee does not consider all reasonable suitable sites within a 150 mile radius. Rather it has merely considered two such sites. Kerr-McGee seems to dismiss other open pit mines because of their recreation potential and tendency to fill up with water. Kerr-McGee incorrectly assumes that these conditions are true of all strip mines or even the majority of them. Further, even sites with water may be suitable if dewatering of the site is considered in the site preparation plan. Kerr-McGee must analyze all geologically suitable strip mine sites within a reasonable distance from its West Chicago facility.

B. Kerr-McGee has arbitrarily limited consideration of alternative sites (except for licensed low-level sites) to those within 150 miles. There are other suitable sites beyond 150 miles within a reasonable distance of the West Chicago facility which should be considered.

C. Kerr-McGee dismisses Argonne National Laboratories as a potential site on the basis of a letter received from the Department of Energy stating that Argonne would be unavailable. DOE is not intractable and if Argonne National Laboratories should prove to be the most superior site DOE may be willing to reconsider its position. Argonne National Laboratories should be analyzed for geological suitability.

D. Kerr-McGee has failed to consider the use of property already owned by the Company off of the West Chicago site.

E. Kerr-McGee's cost benefit summary is inadequate. It has compared only the comparative economic cost of the various sites and has not considered environmental, safety and irretrevable committment of resources.

2. If the material to be buried is of a hazardous nature (either radiologically or chemically) then on-site burial is unsuitable. The hydrology and the geology of the land are inappropriate for the burial of hazardous chemical or radioactive material. The geology of the site is not suitable for long term containment of leachable solid waste due to the relatively high permeability of the soil. The potential for migration and pollution of the groundwater is significant. Evidence of this is the former use of this site for the percolation ponds and the degradation of the groundwater quality in the area.

The water table is relatively high in certain areas of the site and contamination of this aquifer in the past has been significant. Further, the potential for future contamination exist. We are unable to assess the potential for future contamination resulting from the construction activities associated with the excavations, dredging and operations.

To compensate for this Kerr-McGee proposes to construct an artificial clay liner of 10 feet of clay under the material from the factory and a 2 foot artificial clay cap over the entire burial site. There is scant evidence about the suitability of artificial clay liners.

The use of a compacted clay liner as an engineering modification to the site is not acceptable because it is not a proven technology and cannot be relied upon for long term containment. There is no evidence to show that clay type soil may be recompacted to achieve a permeability coefficient of  $10^{-8}$  cm/sec. Further, such a device is inconsistent with Illinois Environmental Protection Agency's internal standard which requires a ten foot liner of in situ clay like soil. This problem is particularly acute in view of the location of the Kerr-McGee site within a popular residential area.

However, on the basis of the Stabilization Plan and the meeting held between members of the Attorney General's staff and Kerr-McGee's technical staff on October 12, 1979 it appears that Kerr-McGee does not base its plan upon the suitability of the clay liner. Rather, Kerr-McGee believes that the material to be buried is not of a hazardous nature based on leach tests they conducted.

There is insufficient data at the present in the Stabilization Report to be able to determine whether or not the material to be buried is or is not of a hazardous nature. The Stabilization Plan does not provide a comprehensive list of the materials proposed to be buried. Further, leachability tests have not been conducted on certain known elements such as fluorides and nitrates.

On the basis of our October 12 meeting Kerr-McGee has agreed to take certain steps to try to provide all the parties a list of what elements are contained in the material to be buried. Kerr-McGee technical staff would research their files and attempt to identify the raw materials used in their process operations and will attempt to do a material balance to identify those substances expected to be found in the waste streams of all the operations conducted at this plant. Tests may then have to be conducted on some of this material. Further, Kerr-McGee has committed itself to performing leachability tests on fluorides and nitrates and providing the parties with copies of the results. An informed assessment may then be made regarding the suitability of on-site disposal.

3. The Stabilization Report is inadequate due to its failure to consider those sites within the West Chicago area where thorium has been deposited and which if it were disturbed would result in radioactive levels in excess of those 10 CFR, Part 20.

1319 296

Argonne National Laboratories has identified some 75 thorium residual areas within West Chicago where thorium from Kerr-McGee's predecessor-in-interest has been deposited. Many of these sites, if disturbed, would contain radioactive levels in excess of those levels permitted by 10 CFR 20, Part 20. These sites pose both a present and a future health hazard to the citizens of West Chicago and Illinois.

Kerr-McGee's Stabilization Plan proposes only that it will exhume and safely dispose of one site which, without being disturbed, has levels of radiation in excess of 10 CFR Part 20. Kerr-McGee also indicates that it will provide space in its on-site burial ground, without accepting legal responsibility for the thorium residuals located at Reed Keppler Park, providing someone else will exhume the material transported to Kerr-McGee's burial site.

There can be no question that the material found at the 75 West Chicago residual sites in question are generated by Kerr-McGee predecessor-in-interest. Materials identical to the material at the Kerr-McGee site and there is no other generated in the area of the thorium tailings. This is a conclusion which is arrived at by researchers for Argonne National Laboratories in "Thorium Residuals in West Chicago, Illinois" (NUREG CR-0413).

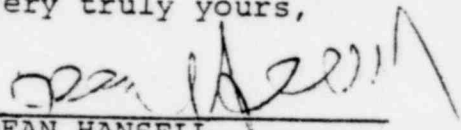
Therefore, Kerr-McGee must propose as part of its Stabilization Plan a safe and adequate method of identifying, exhuming, transporting, storing and disposing of the thorium tailings at those sites in West Chicago which cannot meet the release criteria of the NRC regulations if disturbed.

In discussing this issue with Kerr-McGee officials at our meeting of October 12, 1979 they raised the question of whether the problem of thorium residuals can be considered in a separate plan. The Attorney General's Office has no objection to not including the Thorium Residual Plan in the Stabilization Plan so long as: (1) a Thorium Residual Plan is developed as expeditiously as possible and (2) the Stabilization Plan does not preclude any reasonable options for the disposing of thorium residual piles and approval for the plans be given concurrently.

4. The Stabilization Plan should demonstrate that it complies with regulations promulgated pursuant to the Resource Conservation Recovery Act and the Uranium Mill Tailings Act of 1979. In particular note proposed regulations on the Landfill Disposal of Solid Waste, 44 F.R. 18138 (3/26/79); Solid Waste Disposal Facilities Classification Guidelines, 43 F.R. 4942 (February 6, 1978); Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities (U.S.E.P.A. Draft Guidelines) (September 12, 1978 and September 25, 1978) and Uranium Mill Tailings Licensing Criteria

Relating to Construction of Major Plants, 44 F.R. 50012, 50015 (September 7, 1979). Further, the U.S.E.P.A. definition of what is a hazardous waste as articulated in forthcoming regulations pursuant to Section 3001 of the Resource Conservation and Recovery Act will be critical to a final decision. The most recent estimate of the promulgation date of most of the Section 3001 regulations is April of 1980. See, "Administrator's Third Quarterly Report on the Status of Development of Regulations Under the Resource Conservation and Record Act of 1976" dated October 15, 1979 as submitted pursuant to court order in State of Illinois v. Costle, U.S. District Court for the District of Columbia (Civ. Act. 78-1689).

Very truly yours,

  
DEAN HANSELL  
Assistant Attorney General  
Environmental Control Division  
188 West Randolph, Suite 2315  
Chicago, Illinois 60601  
(312) 793-2491

DH:ss  
cc: Burt Davis, NRC

1319 298

14465