

To DES 10/20/82
Return to L. J. Ryan 396-55

OCT 15 1982

Mr. Paul C. Cahill
Director, Office of Federal Activities
United States Environmental Protection Agency
Washington, D.C. 20440

Dear Mr. Cahill:

Thank you for your letter of July 6, 1982 commenting on the Draft Environmental Statement (DES) related to the decommissioning of the Kerr-McGee (K-M) Rare Earths Facility in West Chicago, Illinois. Although originally we felt that the Environmental Impact Statement (EIS) should only address the proposed licensing action for the decommissioning of the K-M facility, we have decided to recognize in the final statement that the K-M site is an alternative site for the storage/disposal of the other residues located in West Chicago. Accordingly, the Final Environmental Statement (FES) will recognize, as you suggest, the overall problem in West Chicago, in the sense that the K-M site could be used to consolidate other existing thorium residues in the area. However, it will not consider a separate cell design for onsite storage/disposal or other disposal alternatives for the offsite materials since this is beyond the scope of the Nuclear Regulatory Commission (NRC) licensing action. Also, inclusion of this information is not intended to imply that K-M would necessarily agree to acceptance of the offsite wastes onto the K-M site.

The Environmental Protection Agency (EPA) should recognize the legal limitations under which NRC must operate. As indicated in many conversations with EPA staff over the past 18 months, NRC has jurisdiction over Kerr-McGee only with respect to the facility site and adjacent properties which were contaminated as a direct result of NRC licensed operations. On December 19, 1980 NRC sent a letter to the Office of Management and Budget (OMB) informing that office that several locations in West Chicago were contaminated with thorium. Our letter explained that the contamination in question resulted from operations conducted many years before enactment of the Atomic Energy Act and the implementation of a Federal regulatory program for protecting the public health from radiation hazards due to source, byproduct or special nuclear material. The letter to OMB further suggested that a meeting of appropriate Federal agencies be convened to review the problem and to develop a position regarding agency responsibilities. As a result of our letter, OMB convened a meeting of NRC and EPA officials on February 18, 1981 and at the meeting requested NRC and EPA to develop a Memorandum of Understanding (MOU) to clarify the respective regulatory responsibilities of NRC and EPA relative to the control of areas contaminated with radioactive materials and to set forth a working relationship for the two agencies in controlling these areas. Such a MOU was subsequently drafted by the two agencies. NRC was prepared to sign the document, but EPA deferred entering into an agreement.

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Our draft DES considered only pertinent information and alternatives related to the decommissioning of the Kerr-McGee Rare Earths Facility covered by NRC License No. STA-583 (Docket 40-2061). We believe that decommissioning of the plant, including cleanup and stabilization of any residual thorium onsite, is an important first step. Unless and until this is done there is the possibility that thorium now onsite could be washed by rain onto adjacent property and into Kress Creek. We intend to pursue possible remedial actions for Kress Creek and adjacent property to the plant as a separate action after deciding what to do with the large amount of thorium presently located on the factory site.

It is estimated that cleanup of the site and stabilization of the residual thorium onsite will require as long as five years. Within that period and before final action is taken with respect to onsite storage/disposal, the NRC will determine what action is required with respect to remedial actions at the adjacent properties and Kress Creek.

Regarding the residual thorium contamination that exists at other offsite locations, we recommend that EPA take whatever remedial action is believed necessary, such as EPA preparation of an Environmental Statement which would discuss various disposal options, including onsite stabilization, for thorium at Reed-Keppler Park.

The discussion of health risks due to offsite contamination on pages 1 and 2 of your letter is, we believe, based on incomplete information and could be misleading. The quantity of tailings at Reed-Keppler Park, as determined by a radiological survey we had made in the Fall of 1981 and Spring of 1982 is about 400,000 cubic feet, not 3,600,000 as stated in your letter. Mr. Carl Gerber of the EPA staff was informed of the results of this study during a meeting in our offices. The report of the study will be published in the near future.

Finally, we take issue with your characterizing the DES as inadequate on the basis that NRC did not address West Chicago waste management problems not under NRC's jurisdiction but more appropriately under EPA's. As your letter indicates, our DES is a major step toward resolving the problems in West Chicago and we ask for your support so that the plant site can be cleaned up and stabilized at an early date.

Sincerely,

Original Signed by
Richard E. Cunningham

Richard E. Cunningham, Director
Division of Fuel Cycle and
Material Safety

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 6 1982

OFFICE OF
THE ADMINISTRATOR

Mr. R. G. Page, Chief
Uranium Fuel Licensing Branch
Division of Fuel Cycle and Material Safety, NMSS
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Page:

The Environmental Protection Agency has reviewed the Draft Environmental Statement (DES) related to the decommissioning of the Rare Earths Facility, West Chicago, Illinois (NUREG-0904). We believe the document is inadequate because it addresses only some of the waste management problems and health hazards in the West Chicago area related to the rare earth facility.

Wastes of varying volumes and concentrations are found in numerous locations in West Chicago. How and when these wastes got where they are is not known precisely; however, it is clear that they are the direct result of the operation of the rare earths facility by Kerr-McGee or its corporate predecessors. Some of the off-site wastes, particularly that in the adjacent residential areas and in Kress Creek, can be linked to the operation of the facility even after it was licensed by the government in 1956. Other wastes, particularly those in Reed-Keppler Park, appear to have been moved there from the facility in the late 1940's.

Not only does the volume of the solid wastes outside the facility exceed the volume of the wastes remaining on-site but the potential health hazard in West Chicago appears to be greater for the off-site waste deposits than for the facility itself. For example, the calculated annual whole body dose to the most exposed, off-site individual from the current on-site waste (shown in Table 5.5 of the DES) is less than 1 mrem resulting from direct radiation exposure from ground deposition of windborne particulates and from submersion within a cloud of windborne particulates from the facility itself. However, we estimate there are about 50 homes within an area east and north of the site where the external radiation exposure rate is at least 0.02 mrem/hour,

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or about 170 mrem/year, above background as the result of previous waste deposits. These exposure rates are reported in the NRC inspection report 04002061/81-2 dated August, 1981. Even after correcting for occupancy and shielding provided by the houses, these doses present a health risk about 100 times, or more, greater than that calculated from airborne particulates originating on the facility site.

The potential for future health risks can also be evaluated quantitatively if it is assumed that the total amount of contaminated material is proportional to the likelihood of further exposure. In this case there are about three times as much off-site contaminated materials as there are on-site. Frigerio¹ reports there are 3.6 million cubic feet of contaminated materials at Reed-Keppler Park. In contrast, there are about 1.27 million cubic feet of on-site contaminated materials (see Tables 4.2 and 5.2 in the DES). Thus, with this assumption the risk of exposure to contaminated materials appears about 3 times greater for the off-site material than for the on-site material. To fail to discuss these significantly greater exposure levels caused by off-site waste, inevitably translates into a failure of the DES to analyze the public health hazards.

In addition to the health hazards, there is also a question of economics or cost effectiveness that needs to be considered. As stated in the DES, Kerr-McGee has indicated its willingness to accept the contaminated earth from Reed-Keppler Park and other off-site locations for storage if local or state officials arrange for transfer of the soil to the Kerr-McGee site and if the course of action eventually approved is on-site stabilization of waste. This raises the question of whether the best course of action is to approve stabilization of only on-site materials when there is a possibility that all the waste materials in West Chicago could be stabilized at the same site. We believe an alternative should be analyzed which would include moving the off-site waste to the site and stabilizing it all, regardless of who incurs the costs for such moving.

In view of these facts, we believe the Environmental Statement should recognize the total problem in West Chicago and address how the wastes not at the facility are to be addressed in light of NRC's general health and safety responsibility.² We recognize there may be jurisdictional questions

¹Reference 1 "Thorium Residuals in West Chicago, Illinois," by N. A. Frigerio, T. J. Larson, and R. S. Stowe, NUREG/CR-0413, ANR/ES-67, September, 1978.

²Under Section 161(G) of the Atomic Energy Act, the Commission may "establish by rule, regulation or order such standards and instructions to govern the possession . . . of . . . source material . . . as the Commission may deem necessary or desirable to . . . protect health or to minimize danger to life . . ."

regarding responsibility for the off-site materials since there are a number of known sites in West Chicago that may have been contaminated prior to passage of the Atomic Energy Act. However, a discussion of the total problem could include a review of responsibilities, including those of all the involved government bodies--Federal, state, and local--as well as the licensee, Kerr-McGee.

We agree that some form of stabilization at the facility will ameliorate the present adverse conditions. However, we believe the DES should address the environmental impact of the second phase of NRC's preferred alternative (III). Alternative III would require either the removal of the stabilized material to a permanent disposal site or leaving the stabilized wastes in West Chicago at some future date. In the former situation the environmental impacts of handling the wastes another time need to be discussed. In the latter case the impact of permanent storage at the West Chicago facility site needs to be detailed and assessed.

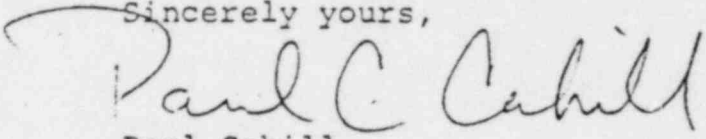
We also believe another alternative or perhaps a modification of alternative III should be considered. That is to separate the waste in the storage/stabilization process by extent of contamination. The more highly radioactive wastes could be placed in a truly interim storage configuration while the less contaminated wastes could be put into a permanent storage configuration. Thus if a permanent disposal facility were to become available only the highly contaminated waste would have to be moved. If such a permanent facility did not become available then the highly contaminated waste could be repackaged on the West Chicago site when the initial storage configuration had reached its containment limits.

Based on our review which is summarized above, we have rated this draft environmental statement ER-3: inadequate because it does not address major aspects of the problem and with reservations about the alternatives considered. The EPA is presently reviewing certain technical aspects of the DES, including the durability of trench caps, the design of monitoring programs, and the need for Kerr-McGee to obtain an NPDES permit or to otherwise control surface water releases. Should we have additional comments in these technical areas, we will transmit them as soon as possible.

We believe the DES is a major step toward resolving the problems in West Chicago and look forward to working closely with the NRC staff in this resolution. If you have any questions on our review and comments or would like to discuss

the overall situation, please contact Carl R. Gerber (755-0464) who heads an EPA taskforce on the West Chicago problem or W. Alexander Williams (382-5077) of my staff.

Sincerely yours,

A handwritten signature in cursive script that reads "Paul C. Cahill". The signature is written in dark ink and is positioned above the typed name and title.

Paul Cahill
Director
Office of Federal Activities

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Kerr-McGee -- Docket No. 40-2061

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October 12, 1982