

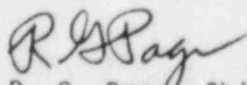
U.S. NUCLEAR REGULATORY COMMISSIONNEGATIVE DECLARATION REGARDINGRENEWAL OF LICENSE NO. SMB-920CABOT CORPORATIONKAWECKI BERYLCO INDUSTRIES DIVISIONBOYERTOWN, PENNSYLVANIADOCKET NO. 40-6940

The U.S. Nuclear Regulatory Commission (the Commission) is considering the renewal of Source Material License SMB-920 for the continued operation of the Kaweck Berylco Industries facility at Boyertown, Pennsylvania.

The Commission's Division of Fuel Cycle and Material Safety has prepared an environmental impact appraisal for the proposed renewal of license SMB-920. On the basis of this appraisal, the Commission has concluded that the environmental impact created by the proposed license renewal action would not be significant and does not warrant the preparation of an environmental impact statement. Accordingly, it has been determined that a Negative Declaration is appropriate. The environmental impact appraisal (NUREG-1027) is available for public inspection at the Commission's Public Document Room at 1717 H Street, N.W., Washington, D.C. A copy may be purchased by writing to the U.S. Nuclear Regulatory Commission, Sales Manager, Division of Technical Information and Document Control, Washington, D.C. 20555.

Dated at Silver Spring, Maryland this 13th day of December, 1983.

FOR THE NUCLEAR REGULATORY COMMISSION



R. G. Page, Chief
Uranium Fuel Licensing Branch
Division of Fuel Cycle and
Material Safety, NMSS

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 40-8355

AMAX INC.

NEGATIVE DECLARATION REGARDING STORAGE OF
CONTAMINATED SOIL UNDER LICENSE

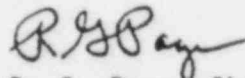
The U.S. Nuclear Regulatory Commission (the Commission) is considering licensing AMAX Inc., to stabilize and store soil contaminated with source material at a site in Wood County, West Virginia. The low-level contamination resulted from past zirconium ore processing operations at the site. AMAX Inc. has proposed to collect and move all soil contaminated above acceptable limits to a central area on the site and to stabilize the wastes under a clay cap designed to reduce water infiltration, prohibit dispersal of solid radioactive particulates into air and to limit any radon or thoron emissions. The stabilized material would remain in storage under a license issued by the Commission to AMAX Inc.

The Commission's Division of Fuel Cycle and Material Safety has prepared an environmental impact appraisal for the proposed contaminated soil stabilization and storage actions. On the basis of this appraisal, the Commission has concluded that the environmental impact created by the proposed actions would not be significant and does not warrant the preparation of an environmental impact statement, and, accordingly, it has been determined that a negative declaration is appropriate. The environmental impact appraisal is available for public inspection at the Commission's Public Document Room

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at 1717 H Street, N.W., Washington, D.C. A copy may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, ATTENTION: Director, Division of Fuel Cycle and Material Safety.

Dated at Silver Spring, Maryland, this 3rd day of May, 1982.



R. G. Page, Chief
Uranium Fuel Licensing Branch
Division of Fuel Cycle and
Material Safety, NMSS



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

Kerr-McGee Chemical Corporation
(Kress Creek Decontamination)

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Docket No. 40-2061
Source Material License
No. STA 583

ORDER TO SHOW CAUSE

I

Kerr-McGee Chemical Corporation ("the licensee") is the holder of Source Material License No. STA 583 issued by the Nuclear Regulatory Commission (NRC) ("the Commission"). The license authorizes the possession of an unlimited quantity of thorium at the Rare Earths Facility, West Chicago, Illinois. Production operations under the license ceased in December, 1973.

II

Over the years, a portion of the wastes from the plant site have been disposed of by being discharged into Kress Creek, a tributary of the DuPage River, either via a storm sewer or a drainage ditch. The wastes entered the creek at a point about 0.7 Km south of the Kerr-McGee site. The creek flows in a southeasterly direction for about 2 Km to its confluence with the West Branch of the DuPage River.

Radioactive contamination along Kress Creek and the DuPage River was detected as a result of an aerial survey in 1977 and later verified by extensive surveys of the West Chicago area undertaken by Argonne National Laboratory in 1977 and 1978 under contract to the NRC. The results of these surveys, which were limited to measurements of surface exposures and dose rates, were reported in NUREG/CR-0413 published in September 1978. Additional surveys of the creek and river were made by the United States Environmental Protection Agency (EPA) (1980) and Oak Ridge Associated Universities (ORAU) under NRC Contract (1981). Based on these surveys, the NRC staff, in a letter dated December 18, 1981, requested that the licensee submit a plan for the decontamination of Kress Creek and for storage or disposal of the contaminated soil. After discussions with the licensee, further review of existing data on contamination along the creek and consideration of potential changes in EPA and NRC cleanup actions, the staff decided to further assess the radiological contamination in Kress Creek and informed the licensee, in a letter dated June 4, 1982, it was not necessary to take further action in regard to the December 18, 1981, letter and that the staff would further advise Kerr-McGee upon completion of the assessment.

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III

A comprehensive, radiological survey of Kress Creek has now been performed by ORAU under contract to NRC. The comprehensive radiological survey was specifically designed to determine not only current direct radiation levels, but also the depth distribution of contamination in the creek and river beds and in bank soils along the creek and river. This survey indicated that lands adjacent to Kress Creek and the West Branch of the DuPage River are contaminated with thorium and with daughter products of the thorium decay chain essentially in secular equilibrium. Soil contamination levels and direct levels of radiation were found to be relatively constant throughout the length of Kress Creek, and to extend downstream along the West Branch of the DuPage River.

The average concentrations of total thorium (Th-232 + Th-228) at 1 meter from the edge of the creek at various depths were: 26.1 pCi/g (picocuries per gram) at the surface; 40.2 pCi/g at 15 cm depth; 38.9 pCi/g at 30 cm depth; 28.9 pCi/g at 60 cm depth; and 18.7 pCi/g between 60 and 90 cm. The soil concentrations decreased with increasing distance from the creek. The highest level of total thorium measured in a sample was 555 pCi/g, with a number of other samples exceeding 200 pCi/g. Many of the highest levels were detected in areas near the storm sewer outfall, and hence constitute a potential source of continuing contamination for locations further downstream.

Direct levels of radiation measured at 1, 5, 10, and 25 meters from the edge of the creek and 1 meter above ground surface averaged 28, 25, 21 and 14 uR/hr (microrentgen per hour) respectively. However, radiation levels greater than 100 uR/hr were detected in several locations. Normal background radiation levels in this area averaged 8.6 uR/hr.

The contamination levels found along the creek exceed the environmental standards promulgated by EPA under authority of the Atomic Energy Act of 1954, as amended, for unrestricted use of areas on which thorium processing wastes have been disposed. See 40 CFR 192.41 (48 FR 45947). The NRC is charged with implementation and enforcement of these standards. See Section 275d of the Atomic Energy Act of 1954, as amended. The contamination levels also exceed the identical standards established for cleanup of vicinity properties under Title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended, and published in 40 CFR 192, Subpart B. The EPA has stated that these standards are appropriate for cleanup of offsite vicinity properties. In each case, the EPA standards were established under a statutory directive to establish standards of general application for the protection of public health, safety, and the environment from the radiological hazards associated with processing of thorium processing waste.

¹United States Environmental Protection Agency "Final Environmental Impact Standards for the Control of Byproduct Material from Uranium Ore Processing (40 CFR 192)", EPA 520/1-83-008-2, September 1983, Page A.1-3, Comment 6. Also, Federal Register notice, published October 7, 1983 (48 CFR 45940).

Accordingly, the NRC staff concludes that cleanup of the offsite vicinity properties along Kress Creek and the DuPage River is required and that the following levels of contamination specified in EPA standards are to be used as criteria for the offsite properties:

1. 5 picocuries of radium per gram of soil (pCi/g), averaged over the first 15 centimeters (cm) below the surface, and
2. 15 pCi/g averaged over 15 cm thick layers more than 15 cm below the surface.

The specified levels of contamination may be averaged over areas of 100 square meters.

IV

In view of the foregoing and pursuant to Sections 62, 63, 81, 83, 84, 161b, and 275d of the Atomic Energy Act of 1954, as amended, and the regulations in 10 CFR Parts 2 and 40, the licensee is HEREBY ORDERED TO SHOW CAUSE WHY IT SHOULD NOT BE REQUIRED TO TAKE THE FOLLOWING ACTIONS:

1. Prepare a remedial action plan for the cleanup of radiologically contaminated areas in and along Kress Creek and the West Branch of the DuPage River and for the subsequent safe storage or disposal of contaminated soil.
2. By July 2, 1984, submit the plan to the Office of Nuclear Material Safety and Safeguards, United States Nuclear Regulatory Commission, for review and approval.
3. After approval by the Office of Nuclear Material Safety and Safeguards, execute the cleanup plan in an expeditious manner.
4. In both the planning and execution of remedial actions, priorities shall be established based on the extent of public exposure resulting from the contamination and the timing of projected disposal or safe storage capacity.

The licensee may show cause why the actions described in Section IV should not be ordered by filing a written answer under oath or affirmation that sets forth the matters of fact and law on which the licensee relies. As provided in

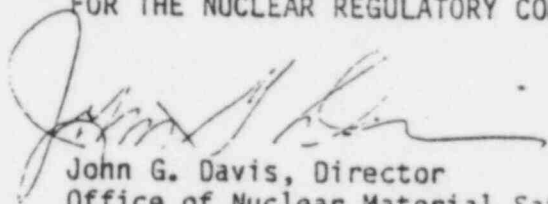
10 CFR 2.202(d), the licensee may answer by consenting to the order proposed in Section IV. Upon the licensee's consent or the licensee's failure to answer this order, the terms of Section IV of this order shall be effective. Alternatively, the licensee may demand a hearing on this order.

Any request for a hearing or answer to this order must be filed within 20 days of the date of this order and shall be submitted to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. A copy of the request for hearing or answer shall also be sent to the Executive Legal Director at the same address.

If the licensee demands a hearing, the issue to be considered at a hearing is:

- o Whether on the basis of the matters stated in Sections II and III, the licensee should be ordered to take the actions stated in Section IV.

FOR THE NUCLEAR REGULATORY COMMISSION



John G. Davis, Director
Office of Nuclear Material Safety
and Safeguards

Dated at Silver Spring, Maryland,
this 21 day of March, 1984.