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URFO:PJG
Docket No. 40-8905

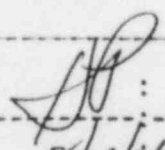
J. C. Stauter, Ph.D
Nuclear Licensing & Regulations
Kerr-McGee Corporation
Quivira Mining Company
Kerr-McGee Center
Oklahoma City, Oklahoma 73135

Dear Dr. Stauter:

We are in receipt of your letter dated June 9, 1986 providing a commitment to submit a reclamation plan for USNRC review and approval. We thank you for your commitment and look forward to working with you in developing a reclamation plan which meets the criteria of 10 CFR 40, Appendix A, and 40 CFR 192.

We are enclosing a draft copy of what we believe is your current source material license, based on our review of license files transmitted to us by the State of New Mexico. We request a written response by August 15, 1986, either confirming the draft license or providing any changes which you believe are part of the existing license. Upon agreement between our staffs regarding the specifics of the existing license, we will provide for your review and comment a copy of a staff prepared draft upgraded version of your license. This draft upgraded license will include standard conditions found in all other NRC mill licenses and also will propose deletion of existing conditions which are no longer applicable. The type of license conditions that will be included in the initially upgraded license are, for the most part, those conditions contained in the list of standard conditions we distributed during our meeting in Albuquerque on May 29, 1986. However, in accordance with staff policy we will request that you file a license amendment application to support this upgrade of your license. This initial upgrading of your source material license will be performed for the benefit of the NRC and will be considered fee exempt.

We also wish to notify you that Mr. Pete Garcia of my staff has been assigned as project manager for your facility. Mr. Garcia will be your

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ME : 8/8/86 :
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initial contact on all matters relating to your source material license. He can be reached at (303) 236-2820.

Should you have any questions, please feel free to contact Mr. Garcia or me at your convenience.

Sincerely,

/s/

Harry J. Pettengill, Chief
Licensing Branch 2
Uranium Recovery Field Office
Region IV

Enclosure: As stated

cc: Mr. Art Gebeau
Quivira Mining Company
Ambrosia Lake Operations
P.O. Box 218
Grants, New Mexico 87020

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1. Kerr-McGee Nuclear Corporation 1/2/74 #2
2. Post Office Box 218
Grants, New Mexico 87020
3. SUA-616
4. February 28, 1976
5. 40-1917
6. Uranium
7. Unlimited
8. This license authorizes uranium ore processing at a nominal throughput of seven thousand (7,000) tons per day in accordance with the procedures described in the licensee's application dated February 3, 1970, and supplemented March 19, 1971. 4/7/71 #1
9. Authorized Place of Use: The licensee's Ambrosia Lake Facility
located in McKinley County, New Mexico.
10. The licensee is hereby exempt from the requirements of Section 20.203(e)(2) of 10 CFR 20 for areas within the mill provided all entrances to the mill are conspicuously posted in accordance with Section 20.302(e)(2) and with the words, "Any area within this mill may contain radioactive material.
11. The licensee shall immediately notify the Director, Region IV, Division of Compliance, USAEC, Denver, Colorado, by telephone and telegraph of any failure in an earth dam retention system which results in a release of radioactive material into unrestricted areas. This requirement is in addition to the requirements of 10 CFR 20.

12. Changes in the mill circuit and equipment shall be approved in writing by the manager. Maintenance activities shall be approved in writing by the mill shift foreman or his supervisors. During such changes and activities, radiation safety surveys shall be conducted to determine employee exposures to radioactive materials.
13. For the purpose of complying with Section 20.103(b), 10 CFR 20, the limits given in Appendix B, Table I, of this Part may be deemed to apply to exposures to the concentrations for 80 hours in any period of 14 consecutive days. In any period where the number of hours of exposure is less than 80 hours, the limits specified in the Table may be increased proportionately. In any such period where the number of hours of exposure is greater than 80 hours, the limits specified in the Table shall be decreased proportionately.
14. As a minimum, the licensee shall conduct environmental surveys in accordance with the procedures described in Items 7 and 14 of Attachment B of his application dated February 3, 1970.
15. The licensee shall determine that employees leaving work are not contaminated with radioactive materials. When an employee has showered and changed clothes prior to leaving work, he may be assumed to be free of contamination.
16. This amendment authorizes the operation of a mine water uranium recovery treatment facility located at the Quivira Mining Company operations at Ambrosia Lake, New Mexico. The mine water treatment facility is an ion exchange plant to remove uranium from mine waters and includes two ion exchange columns located underground at the mine site. The radiological effluent monitoring program and the radiological safety program in effect at the licensee's Ambrosia Lake facility shall be expanded to include the mine water treatment facility.
 - A. Hoods other than the Chicago Eye Shield No. 600, BM 1925, Type C are not authorized;
 - B. An efficiency factor (percent reduction) greater than 90% is not authorized; and
 - C. The maximum working time for which an efficiency factor may be applied for each employee shall not exceed eight (8) hours per week. 3/24/86

17. This amendment authorizes operation of evaporation ponds as described in addendum dated November, 1976 to renewal application. 11/23/76
 18. This amendment authorizes the licensee to transfer its uranium mill tailings to the Ranchers Exploration and Development Corporation's Johnny M Mine at a nominal rate of 8,000 tons of tailings per month. This amendment is subject to the following conditions:
 - A. Kerr McGee shall make monthly isotopic analysis of the transferred tailings which shall include total uranium, thorium 230, radium 226, lead 210, Se, Mo, V, and As.
 - B. Kerr McGee shall take monthly air samples in the tailings loading area and analyze these samples for thorium 230, radium 226, and lead 210.
- At the end of three months after beginning the transfer operations, Kerr McGee and the New Mexico Environmental Improvement Agency shall review the above sampled data to determine a measurement program for the remainder of the operation. 6/20/77
19. Operation of evaporation ponds 16 and 17 located in Section 4, T13N, R9W, is authorized in accordance with subject letter [April 4, 1979]. 4/18/79
 20. Prior to abandonment of ponds 16 and 17 a reclamation plan shall be submitted to the division for review and approval.
 21. Operation of ponds 16 and 17 shall be in accordance with an approved discharge plan pursuant to New Mexico Water Quality Control Commission Regulations.
 22. The licensee shall comply with Part 4, New Mexico Radiation Protection Regulations. DELETED 8/8/80
 23. The Division Director or his authorized representative shall be allowed to enter the premises and inspect the radiation related activities of the licensee at all times. Failure of the licensee to admit the director or his authorized representative shall constitute grounds for issuance of an immediate cease and desist order. DELETED 8/8/80

24. Operation of evaporation ponds 18, 19, 20, and 21 located in Section 4, T13N, R9W, McKinley County, New Mexico, is authorized in accordance with subject letters noted above [May 29, June 6, July 6, July 25, and November 15, 1979; and January 3, January 20, and February 20, 1980 and the following conditions. 3/3/80
25. Prior to abandonment of ponds 11-21 inclusive, a reclamation plan shall be submitted to the division for review and approval. 3/3/80
26. Operation of ponds 18, 19, 20, and 21 shall be in accordance with an approved discharge plan pursuant to New Mexico Water Quality Control Commission Regulations. 3/3/80
27. All evaporation ponds containing mill tailings effluent shall be visually inspected at a frequency of not less than once per day and immediately after heavy rain storms for berm integrity, seepage, berm erosion, liner integrity and liquid level. 3/3/80
28. Evaporation ponds 11-21 inclusive shall each have a highly visible liquid level gage to monitor liquid level and the minimum three-foot freeboard. 3/3/80
29. A flow meter shall be installed in the main tailings line to continuously monitor the discharge of liquid to the ponds. 3/3/80
30. Evaporation ponds 11-21 inclusive shall be monitored monthly for three months from the date of this amendment and subsequently on a quarterly basis for the following: gross alpha, gross beta, thorium-230, radium-226, lead-210, uranium, selenium, arsenic, molybdenum, barium, chloride, sulfate, total dissolved solids and pH. 3/3/80
31. A contingency plan for responding to an unexpected release of liquid from the ponds shall be prepared within 180 days of the amendment date and submitted to the Division for review and approval. Methods for cleaning up such an accidental release shall be included with special reference to land and stream bed contamination. 3/3/80
32. Operation of an Ion Exchange Plant located at Church Rock I Mine, T17N, R16W, McKinley County, New Mexico, is authorized in accordance with subject letters noted above [February 27 and September 9,

1980], attachments to those letters and the following conditions.
11/4/80

33. Radioactive materials shall be used by individuals designated in writing by the Radiation Safety Officer for Church Rock Operations Mr. Frederick W. Ferdinand, or his designated alternate. 5/8/85
34. In the event of an accidental spill of radioactive material, concurrence of the Division is required for the final soil decontamination level. 11/24/80
35. Sixty (60) cubic yards of lime slurry from the Crownpoint Section 9 Pilot In-situ Leach Project of Mobil Oil Corporation as described in the above letters [April 30, 1981; January 5, 20, and 27, 1982], may be disposed of in Pond #7 or processed through the mill circuit. 2/17/82
36. Damaged yellowcake barrels may be returned for disposal to Kerr-McGee's Ambrosia lake tailings pile, as described in the above letter [June 15, 1984]. 8/13/84
37. Uranium shall be removed from Quivira Mining Company's Church Rock Mine water by ion exchange, the uranium-bearing resin shall be transported to Quivira's Ambrosia Lake mill for elution, and the eluted resin shall be returned to Church Rock for reuse in accordance with the above letters [July 20, 1984] and attachments. All Department of Transportation requirements shall be followed in the transport of the resin. The resin shall be thoroughly drained at the mine prior to transport to the mill. 8/6/84
38. In accordance with Kerr-McGee Corporation's October 7, 1983 news release subject license is amended to change the name of the licensee from Kerr-McGee Nuclear Corporation to Quivira Mining Company.
39. Uranium will be dissolved from open mine workings in Quivira Mining Company's Sections 17, 19, 22, 24, 30, 30W, 33, and 35 mines by spraying water containing sulfuric acid or sodium bicarbonate and hydrogen peroxide. The dissolved uranium in the water will be extracted by ion exchange. The uranium bearing resin will be transported to Quivira's Ambrosia Lake Mill for elution, and the eluted resin will be returned to the above-named mines for re-use in accordance with the original application, letters, and attachments

presented by Quivira and accepted in Groundwater Discharge Plan (DP-362). All U.S. Department of Transportation requirements shall be followed in the transport of the resin. The resin shall be thoroughly drained at the mine prior to transport to the mill.
8/20/85