SOHIO WESTERN MINING COMPANY

June 30, 1980

P.O. BOX 25201, ALBUQUERQUE, NEW MEXICO B7125

TELEPHONE: (505: 242 2762

Mr. Gerry Stewart, Program Director Radiation Protection Bureau Environmental Improvement Division P.O. Box 968 Crown Building Santa Fe, New Mexico 87503

RE: Sohio L-Bar Uranium Mill License Application

Dear Mr. Stewart:

This uranium mill license application has been prepared by completing Form RPS-16 and providing the necessary documentation to fulfill the requirements of the New Mexico Radiation Protection Regulations, Part 3.

Attached is Sohio's draft Environmental Report. This report details the many changes and improvements in Sohio's L-Bar operation that have occurred since the completion of the original Environmental Report. This report also addresses the impacts, both radiological and nonradiological which have occurred since the issuance of Sohio's first radicactive material license in 1975.

Please note that due to various time constraints, the attached environmental report is not complete. Several' sections have not been included in this draft environmental report so that Sohio, its environmental staff and consultants can perform further review. The need for more complete review was discussed with you and your staff on March 12th and June 6th, 1980.

As requested, a schedule of the submittal of these sections follows:

- 1) Tailing Dam History and Stability, September 30, 1980.
- 2) Radiological Impacts, October 31, 1980.
- Water Quality Impact, including a discharge program, September 30, 1980.
- 4) Long-term impacts, August 31, 1980.

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Mr. Gerry Stewart

-2- June 30, 1980

- 5) Accidents (contingency plan specifics), August 31, 1980.
- 6) Appendix to Section 6, Monitoring Programs, August 31, 1980.
  - a) Radiation Detection Instrumentation
  - b) Calibration Methods and Frequency
  - c) Sampling Procedures and Assay Methods
  - d) Quality Assurance Programs

If you have any questions or comments, please call.

Sincerely,

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James D. Bazemore, Environmental Coordinator

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Attachments





## APPLICATION FOR RADIOACTIVE MATERIAL LICENSE

INSTRUCTIONS-Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail two copies to: , Radiation Protection Section, Box 2348, Santa Fe, New Mexico 87501. Upon approval of this application, the applicant will receive a Radioactive Material License. A Radioactive Material License is issued in accordance with the general requirements contained in the New Mexico Radiation Protection Regulations, Part 3, Licensing and the License is subject to Part 4, Standards for Protection Against Radiation.

1. (a) NAME AND STREET ADDRESS OF APPLICANT (Institution, firm, hospital, person, etc.)	1. (b) STREET ADDRESS(ES) AT WHICH A RADIOACTIVE MATERIAL WILL BE USED (I/ different from 1 (a).)
Sohio Western Mining Company P.O. Box 25201 Albuquerque, New Mexico 87125	40 miles west of Albuquerque Township 11N Range 5W about 3.5 miles east of Seboyeta, New Mexico in Valencia County.
Phone 505-552-6631	Phone505-552-6631
2. DEPARTMENT TO USE RADIOACTIVE MATERIAL L-Bar Uranium Mill	3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.) NM-SOL-ML-00 NM-SOL-ML-01 NM-SOL-ML-02 NM-SOL-ML-03 NM-SOL-ML-04 NM-SOL-ML-05 NM-SOL-ML-05 NM-SOL-ML-07
<ol> <li>INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of radioactive material. Give training and experience in Items 8 and 9.)</li> <li>E. E. Maurer, Mill Superintende C. Olsen, Met. Superintendent</li> </ol>	<ul> <li>5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection office if other than individual user. Attach resume of his training and experiences as in Items 8 and 9.)</li> <li>Int J. D. Bazemore, Environmental Coordinator</li> </ul>
-	Phone 505-552-6631, Ext. 213

6. (a) RADIOACTIVE MATERIAL. (Elements and mass number of each.)	6. (b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. (If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)
Natural uranium. See Attachment "Sealed Sources"	Ore stockpile: 10,000 tons @ .06% to .21%, 5.4C. max. Mill Circuit Inventory: 3 days @ 6484 lbs. U <sub>3</sub> 0 <sub>8</sub> , 2.5C.
	Finished goods inventory; one truck load @ 40,000 lbs. U308, 5.2C.

7. DESCRIBE PURPOSE FOR WHICH RADIOACTIVE MATERIAL WILL BE USED. (If radioactive material is for "human use," supplement RPS 16A must be completed in lieu of this item. If radioactive material (s in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.)

Natural uranium concentration mill.

#### 8. INDIVIDUAL USER(S) TRAINING

Complete the following information on the individual user(s) and his training in:

- A) Nuclear physics, atomic structure, and interaction of radiation with matter
- B) Radiation detection instrumentation, calibration, and standardization
- C) Radiation protection, waste disposal, and survey and dosimetric procedures
- D) Radiobiology, including effects of radiation on the human body

lame, Title, Degree(s)	Where Trained	Length of Academic Training in A, B, C, and D	Length of On-the-job Training in A, B, C, and D
SEE ATTACHMENT,	SUBJECT 9.1 AND	9,2,	

### SEALED SCURCES

ISOTOPE 6			7		8		
В.	Cesium 137	Β,	Sealed Sources (Gen- eral Radioisotopes Products Mod. 850233 or 6082, Gamma Indus- tries Mod. VD or the equivalent).	Β,	Five sources not to exceed 200 millicuries each.		
c.	Cesium 137	c.	Sealed Source (Amer- sham/Searle Mod. 850233 or the equivalent).	c.	One source not to exceed 5 micro- curies each.		
D.	Neptunium 237	D.	Sealed Source (Eberline drawing 10739-B04).	D.	Two sources not to exceed 5 micro- curies each.		
E.	Americium 241	E.	Sealed Sources (In Har- shaw Standard Small Crystal Assembly).	۰.	Two sources not to exceed 0.04 micro- curies each.		
F.	Cesium 137	F.	Sealed Source (Texas Nuclear Mod 570-57157C, 5176 or 5190).	F.	Three sources not to exceed 200 millicuries each.		

EXPERIENCE WITH RADIATION.	(Actual use of	radioisotopes or eq	uivalent experience.)
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Isotope	Maximum Amount	Where Experience Was Gained	Duration of Experience	Type of Use
Natural U	+1,000,000 lbs.	Climax Uranium Co. Kerr McGee Nuclear Corporation	1953-1965 1968-1974	Uranium Milling Uranium Milling
	and of the destruction of the second se	Sohio Western Mining	1974-present	Uranium Milling

#### 10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

Туре	Number Avzilable	Radiation Detected	Sensitivity Range (mr/hr)	Window Thickness (mg/cm <sup>2</sup> )	Use (Monitoring, surveying, measuring)	1
	SEE AT	ACHMENT,	SUBJECT 6.0,	APPENDIX A.		

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.

ABOVE.

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)

SEE ATTACHED SUBJECT 6.0. -- TLD Badges supplied and calibrated and processed by Eberline Instrument Company, Santa Fe, N.M.

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

- 13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) Yes No
- 14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak test, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.

SEE ATTACHED SUBJECT 9.5.

15. WASTE DISPOSAL. It a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved.

SEE ATTACHMENT SUBJECT 3.2.4.

CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH THE NEW MEXICO RADIATION PROTECTION REGULATIONS, PART 3, LICENSING, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

SOHIO	WESTERN	MINING	COMPANY
	and the second states	Service in the service and prove the service	

DATE	JUNE	30,	1980	
DATE				

Applicant Named in Item 1 ene BAZEMORE JAMES By:

ENVIRONMENTAL COORDINATOR Title of Certifying Official

# LICENSE RENEWAL APPLICATION ANALYSIS FOR I.-BAR URANIUM PROJECT SOHIO WESTERN MINING COMPANY

P epared by:

Uranium Licensing Section Radiation Protection Bureau Environmental Improvement Division Health and Environment Department

May 26, 1982

GEORGE S. GOLDSTEIN, Ph.D. Secretary Health and Environment Department

LARRY J. GORDON, M.P.H., M.S. Deputy Secretary

THOMAS E. BACA, M.P.H. Director Environmental Improvement Division

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