STATE OF NEW MEXICO
ENVIRONMENT

MEMORANDUM

ENVIRONMENTAL IMPROVEMENT DIVISION

DATE: December 21, 1978

TO: The File

FROM: Maxine Goad, Water Pollution Control Section MSG

SUBJECT: Sanitary Waste Treatment at Church Rock I Mine

This Division, on October 23, 1978, received information from Kerr-McGee Nuclear Corp. on the proposed modification of the sanitary waste treatment system at Church Rock I Mine, McKinley County, New Mexico. This information was submitted pursuant to the requirements of N.M. Water Quality Control Commission regulations 1-201 and 1-202. Kerr-McGee sent copies to Maxine Goad, WPC, and to Grover Hartman, EID District I.

Under the proposal, a new discharge of approximately 14,000 gpd of effluent from a new sanitary sewage treatment system would be added to an existing discharge of approximately 5,400,000 gpd (3,750 gpm) of treated mine water just before final discharge to the arroyo. In evaluating the impact of the discharge on the shallow ground water to be impacted by seepage from the arroyo bottom, I would regard the addition of the treated sanitary sewage discharge to be a very minor modification to the existing mine water discharge since the ratio of flows is approximately 1 to 400. Therefore the combined discharge would be covered as an existing discharge under section 3-106.A. of the WQCC regulations.

No discharge plan is being required for the combined discharge to the arroyo at this time. However, pursuant to section 3-106.A. a discharge plan may be required for the combined sanitary and mine water discharge to the arroyo, as well as seepage of mine water from the treatment ponds, at some time in the future.

MSG:tpc

cc: William Bennett, EID District I

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(DRAFT) INSPECTION REPORT (OPEN)

1. Kerr-McGee Nuclear Corporation
   Post Office Box 218
   Grants, New Mexico 87020

2. Date of Inspection: January 27-28 and February 1, 1977

3. Type of Inspection: Unannounced, Reinspection No. 9

4. License No. SUA-616 (Docket No. 40-1917) as issued by the AEC.

5. Previous Inspection: October 11-12, 1973

6. Proprietary Information: None

7. Scope of Inspection:

The inspection was the first performed by the New Mexico Environmental Improvement Agency upon this licensee. The inspection was routine and included a tour of the licensee's facility, a tour of the tailings pond area; a review of selected records pertaining to personnel monitoring, the licensee's evaluation of airborne concentrations in both restricted and unrestricted areas, and interviews with selected personnel. The records pertaining to the licensee's evaluation of water monitoring wells were not received since they were in the corporate headquarters in Oklahoma City, Oklahoma.

8. Participants

Billy Stevens, General Manager

Don King, Mill Superintendent

Jonathan Ma, Assistant Metallurgist

Jim Cleveland, Superintendent, Environment-Industrial Hygiene

Dave Kump, Environmental Engineer

Marlin Visage, Technician

Alphonso A. Topp, Jr., Environmental Scientist III, NMEIA, Santa Fe

Richard E. Blubaugh, Environmentalist IV, NMEIA, Milan

9. Management Interview

All the above individuals except for M. Visage participated in the management interview. Mr. Stevens was informed that a number of deficiencies were encountered and grouped under two categories. These are enumerated in the letter dated Mar 15, 1977, to Mr. Stevens. The violation concerning time studies was not mentioned since it was not encountered until Feb. 1, 1977 and the interview was held on January 28, 1977. In summary, Mr. Stevens was notified of the several violations and deficiencies and informed that he would receive a letter stating the violations and deficiencies and a request for a response detailing corrective and preventive action taken. Mr. Stevens was also informed that the inspection would remain "open" until the water monitoring records had been received and an independent measurement of discharged surface water radioactivity had been made.

10. Result of Inspection: Letter to licensee stating items of non-compliance, requesting details of corrective and preventive action taken.

11. Recommended reinspection date: January 1978.

12. Richard Blubaugh
Inspector/Environmentalist

February 14, 1977
Date

T W Dotts
Reviewer

March 15, 1977
Date

13. Inspection History

No items of noncompliance were noted during the previous inspection conducted under the Atomic Energy Commission's requirements on October 11-12,1973.

14. Current Inspection

The unannounced reinspection was conducted by Messrs. Alphonso A. Topp and Richard Blubaugh on January 27-28 and February 1, 1977. It was Mr. Blubaugh's first such inspection. On January 27, the entrance interview was held with

Mr. James E. Cleveland, Superintendent, Environment--Industrial Hygiene and Mr. Dave Kump, Environmental Engineer, since Mr. Billy Stevens was not available until the following day. Upon entering, we were referred to Mr. Ronnie Dauffenbach, Industrial Relations Manager who turned us over to Mr. Cleveland. After the interview, a thorough tour of the mill facilities and tailings pond areas was conducted with Mr. Cleveland and Mr. Kump. Fences and signs were not in compliance. The records review was begun on the 27th and completed on February 1, 1977. A few deficiencies were found during the record review. The inspection was not completed since the records on unrestricted area water monitoring were not available for review. They were in corporate headquarters in Oklahoma City, Oklahoma. Also, an independent radioactivity measurement of surface water effluent could not be made since there was no discharge. The inspection will remain open until these two items are completed. The exit interview was held with Mr. Billy Stevens, General Manager; Don King, Mill Superintendent; Jonathan Ma, Assistant Chief Metallurgist; Mr. Cleveland; Mr. Kump and Messrs. Topp and Blubaugh.

15. Organization

The corporation is a wholly owned subsidiary of Kerr-McGee Corporation which is a fully integrated natural resources company and is listed on the New York Stock Exchange. Parent company officers include Mr. J. J. Kelly, President; Mr. D. A. McGee and Chairman of the Board of Directors. Kerr-McGee Nuclear Corporation is incorporated in the state of Delaware and its officers include Mr. Frank A. McPherson, President and Mr. Jack Swales, Vice-President. Mr. W. J. Shelley, Manager of Regulation and Controls, works for Mr. F. A. McPherson and does handle regulatory matters for Kerr-McGee Nuclear Corp.

Mr. James E. Cleveland reports directly to Billy Stevens, General Manager of Kerr-McGee Nuclear Corporation, who reports directly to Mr. Jack Swales, Vice-President of Kerr-McGee Nuclear Corp. Charley Stanley, Mill Manager, and Art Gebeau, Mining Manager also report to Mr. Stevens. Mr. Cleveland informed the inspectors that he had taken over the radiation safety program in January of 1976. Prior to that time, the program was delegated to the office of the Chief Metallurgist, George Sloan, who also reports to Mr. Stevens. The Agency had not been notified of this major change in management organization; however, it does appear to be an improvement for the radiation safety program since there are no production managers between the RSO (Mr. Cleveland) and top management (Mr. Stevens).

16. Responsibility

Mr. J. E. Cleveland stated that he is fully responsible for all aspects of radiation safety and for all records related to activities conducted under this license. He is also responsible for all environmental surveys and industrial hygiene. He reports directly to Mr. Stevens, General Manager.

17. Mill Operation

Mr. Cleveland stated that the mill currently processes approximately 6000 tons of raw ore per day and that they would be processing approximately 6500 tons per day in the near future. He also stated that some toll milling is done for Anaconda Company, United Nuclear Corp, and Ranchers Exploration and Development Corp. The present grade of ore being processed is from .175 to .200 U_3O_8 with a moisture content from 8 - 10 % according to Mr. Cleveland. He also stated that the recovery was approximately 95% and the final product consisted of approximately 80% U_3O_8. In addition to the mill operation per se, pregnant solution from two ion exchange units is added to the precipitation circuit. One IX unit is located at the millsite and receives all the mine water except for mines in Sections 35 and 36 which flow to a separate IX unit located between them.

18. Inventory and Sales

Mr. Cleveland stated that there presently was 849,861 pounds of yellow-cake in storage at the millsite. He further stated that 80% of the yellow cake is shipped to Kerr-McGee, Nuclear Corporation facilities at Sequoyah, Oklahoma. The remaining 20% of shipments go to the allied facility.

19. Work Schedule

Mr. Cleveland stated that 199 people work at the millsite. This includes salaried people as well as hourly workers. The mill operates continuously except for the last week in June and the first week in July which is reserved for the annually scheduled "maintenance turnaround". During this period some salaried people and all maintenance people work at the mill, mostly on day shift. There are three 8 hour shifts per day in all circuits except the crushing and sampling circuit which normally operates a maximum two shifts per day. The hourly workers operate on a 10-day on--4-day off cycle which is staggered to allow continuous operation of the mill. The lab works day shift only. Most maintenance men work on day shifts as well as "on call". The license condition 13 allows for an exposure period of 80 hours in any 14 consecutive day period. This condition appears to be unnecessary since it is never used. Most exposure records did not exceed MPC for 8 hours. A few had to be averaged over a 40 hour exposure period (see item 22)

20. Restricted Area Sampling Program

Normally, ten area samples are collected and analyzed each month in the crushing circuit. These area samples consist of a ten minute sample at 10 l/min for a total sample volume of 100 liters. The sampler being used is a RAC 440 B carbon vien pump with a .50 mm Whatman 41 filter. Radon samples have been

collected at the same locations as the air samples since January 1973 according to Mr. Cleveland. The radon samples are collected for 5 minutes at a flow of 2 l/min for a total volume of 10 liters. The sample is counted by a scintillation alpha counter after a 30 minute wait. The counters are Eberline PRM 4R and a Ludlum Alpha scintillation counter. The sampling locations are shown on the attached form #1 and 1a. In addition to the above, silica dust levels are also determined once each month at eight locations in the crushing circuit (see form #1b.)

Uranium ore dust samples are also collected and analyzed monthly at 13 locations in the area of the sample bucker downstairs, and at 10 locations in the area of the sample bucker upstairs (see forms #2 and 2a). Sampling method is the same as above for area samples. Breathing zone samples are usually taken at these areas, however, and these samples are collected with a MSA diaphragm pump type S or H for five minutes at a flow rate of 10 l/min on a 25 mm Whatman 41 ashless filter for a total of 50 liters. Uranium concentrations are determined fluorometrically in the mills's analytical laboratory.

Breathing zone samples are collected in both the packaging and precipitation areas twice per month. There are 14 sampling locations in the packaging area and 18 sampling locations in the precipitation area for a total of 64 breathing zone samples collected and analyzed for U_3O_8. (See forms 3 and 3a for locations).

All equipment is calibrated periodically according to Mr. Dave Kump. The MSA pumps are calibrated via a wet test or a bubble meter. The RAC pump is calibrated less frequently with a wet test meter. Kerr-McGee patented Instant Working Level Meters are also used in restricted area monitoring. Some new equipment has recently been acquired for additional restricted area monitoring.

A new RAC isokinetic stack sampler has been purchased and will be in use in the near future. A new multi-channel analyzer has also been acquired for use in some of their environmental studies.

21. Airborne Concentrations Measured in the Restricted Area.

Record review established that the licensee had collected and analyzed air samples from all locations where employees work during each month of the inspection period, and that all sample locations which were to be sampled according to licensee's application were, in fact, sampled. Review also established that the applicable MPC of 2.5×10^{-11} u ci/ml or 75 ug/m^3 U_{nat} for uranium ore dust was not exceeded in the headend or crushing and sampling circuit during the period since the previous inspection. The maximum concentration as applied to exposure calculations during thetime since the previous inspection in this area produced a result of .98 MPC (2.46 u ci/ml $\times 10^{-11}$). This concentration was found to exist during cleanup around the pulverizer and was determined from a breathing zone sample taken on N. Baca, sample bucker upstairs on 7/19/74 and from sample taken on 2/11/75 on Baca and P. Pino in the same area. This exposure was based on an 8 hour work day, however, there is no real significance to this exposure when calculated over an 80 hour period. The maximum radon concentration was found along the mill ramp in the crusher area on 10/25/74. The concentration found was .625 u ci/ml $\times 10^{-7}$ or .625 MPC. The majority of results were much lower than this.

The maximum concentration found in the yellow cake area was 1.01 MPC on February 15, 1976 for an 8 hour exposure period for Ballew. Again, this is not a significant concentration when averaged over an 80 hour exposure period as provided in the license SUA-616.

During the inspection on Februarly 1, 1977, it was found that time-weighted exposure calculations were not being performed as a routine on individuals working in an area where high or excessive concentrations were being found. One

reason is that the last time study was made in 1971, and it was not readily available. It was recommended that more frequent time studies are made especially on the maintenance people.

22. Airborne Concentrations Experienced During Periods of Non-Routine Maintenance

During the interview with Mr. Cleveland, it was learned that only those maintenance jobs in the yellow cake area receive an authorization for radiation surveys. Other areas are not considered to warrant such surveys by the Shift foremen who make the determination of whether a job requires surveys or not. It was recommended that this procedure be modified to allow Mr. Cleveland the opportunity and authority to determine whether a special maintenance job requires radiation surveys or not. There were several 8 hour exposures above the appropriate MPC of 6.0×10^{-11} U ci/ml. The highest ones are shown below:

P.4-29

SPECIAL MAINTENANCE EXPOSURES

DATE	PERSON(S)	XMPC	TIME EXPOSED	LOCATION
9-24-75	B. Almanza	1.84	30 Min.	Dryer
	R. Sanchez	" "		
10-26-75	R. McCorkle	2.96	360 Min	Dryer
	B. Almanza	" "		
	A. Ortega	" "		
	J. Daisdon	" "		
11-16-75	G. Mercer	5.25	300 Min	Dryer

These special maintenance jobs are all on the yellow cake dryer and usually involve working inside it. There were no time weighted studies on record to show the inspector the opportunity to verify that there was no over exposure. Again, the main reason being that there is no valid time study available. The above concentrations were calculated on an eight hour exposure period. A request was made for a time-weighted study on the highest concentration above. Review of this time study indicates that

It was recommended that more frequent time studies be performed and used im time weighting whenever these is an exposure concentration greater than the appropriate MPC for an eight hour period.

23. Unrestricted Area Airborne Concentrations:

Record review established that, at various with license application commitments, the licensee did not collect airborne samples at the frequency specified in the license application Item 14. There were only airborne concentrations recorded

for one six month period in 1973 and 1974. The application commitment was for two samples per year. The maximum uranium concentration recorded was .66 MPC. The range was from .03 MPC to .66 MPC for the period reviewed--1973 to present. There was some question whether the locations presently being sampled were the same as those specified in the license application. However, it was determined that the present sampling locations were close enough to those specified that there would not be any significant differences in results. The applicable MPC of 8×10^{-13} u ci/ml U_{nat} was not exceeded in the records reviewed. The unrestricted area samples are collected with a portable Bendix Hi-Vol Air Sampler at approximately 22 cubic feet per minute for 15 minutes at each location. The sampler is periodically calibrated with a pitot tube. Samples are collected on Whatman 41 filter paper and analyzed fluorometrically for uranium at the mill laboratory. Meterological conditions are recorded at time sample is taken. This agency has a Hi-Volume sampler located near the tailings pile on the northeast side. There is also a continuous SO_2 monitor which was placed by the Agency in the old school house now being used as the Safety-Environmental offices. The present monitoring plan calls for 21 airborne uranium samples quarterly at all mines, the mill, Ambrosia Lake--general, San Mateo and 8 locations at the restricted area perimeter. (see attached memo dated July 23, 1976 from Dave Kump to J. Cleveland).

foot. p. 4-32

24. Liquid Effluent Measurements

Review of all these records was not possible since the file on monitor wells was in corporate headquarters in Oklahoma City. A file on surface water monitoring, however, indicated a discharge of surface water in the Rio de Puertocito on 3/10/76 with a 33 p.ci/l. This surface water channel

receives discharge from United Nuclear Homestake Partners' Ion Exchange Plant also. There was no discharge from the licensee during this inspection, so an independent measurement has not yet been made. This inspection will remain open until the file on monitor wells has been reviewed and an independent measurement can be obtained on the surface discharge.

25. Area Radiation Surveys (?)

26. Personnel Monitoring

Vendor reports establish that the licensee continues to participate in a monthly badge exchange program through the services of Radiation Detection Company of Sunnyvale, California. A review of these reports show that there are 9 operators issued TLD badges plus 5 badges are located at various locations throughout the mill. The maximum exposure recorded was 500 mrem during any one quarter for the operators and 520 mrem/quarter for the area badges.

27. Instruction to Employees

Review of procedures implemented during the period covered by this inspection showed that the licensee posted instructions on the bulletin board stating that copies of the license, the regulations and the standard operating procedures related to this license were available for inspection in the office of the Radiation Safety Officer, Jim Cleveland. The inspectors also had the opportunity to sit in on a safety meeting for new employees. The radiation safety hazards and pertinent precautions were well covered by Mr. M. Visage during this presentation. Mr. Cleveland stated that all employees have weekly and monthly safety meetings.

STATE OF NEW MEXICO

RADIATION PROTECTION SECTION
ENVIRONMENTAL IMPROVEMENT AGENCY

HEALTH and SOCIAL SERVICES department

March 15, 1977

Bill Stevens, General Manager
New Mexico Operations
Kerr-McGee Nuclear Corporation
P. O. Box 218
Grants, New Mexico 87020

Dear Mr. Stevens:

This letter reports on an unannounced inspection of activities authorized by former U. S. Atomic Energy Commission Source Material License Number SUA-616 conducted on January 27, 28 and February 1, 1977 by Mr. Richard E. Blubaugh, of this Agency and myself. Administrative control of this license was transferred to this Agency on May 1, 1974.

The inspection was of an examination of the activities authorized under the license as it relates to radiation safety, and to compliance with the Agency's rules and regulations, and to adherence to activities detailed in the license application dated February 3, 1970. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

This inspection was not completed for two reasons. One, the file containing records of unrestricted area water monitoring was not on the premises (it was reported to be in the corporate headquarters in Oklahoma City, Oklahoma). Two, there was no surface water discharge at the time of the inspection; therefore, the inspectors were unable to collect a sample for independent analysis. Until this Agency is notified that it may proceed with these two items and the completion of these items, this inspection will remain open. An additional report will be made upon the completion of the inspection.

As discussed with Messrs. Billy Stevens, Don King, Jonathan Ma, Jim Cleveland, and Dave Kump on January 28, 1977, this report will address those activities in question under two different headings. One will be concerned with violations of the Agency's rules and regulations, license application commitments, and the license conditions of Source Material License Number SUA-616. The other heading will address those activities of concern which are questionable under the ALARA (ALARA=As Low as Reasonably Achievable) principle or Part 4-100B. of the New Mexico Regulations for Governing the Health and Environmental Aspects of Radiation.

I. Under the first heading, the violations noted were:

A. Contrary to Item 4 of subject license application and the definition of "Restricted Area", fencing was not observed in areas along the north and east sides of the mill complex.

B. Contrary to subject license condition No. 10, entry to the mill was made without seeing a sign with the words: "Any area within this mill may contain radioactive material."

C. Contrary to subject license condition No. 14 and license application, Item 14, unrestricted area surveys were found to have been taken only once each year during 1973 and 1974 instead of twice each year as stated in application 14.

D. Contrary to Part 4-200 of the New Mexico Radiation Protection Regulations, adequate time-weighted exposure calculations are not being performed due to inadequate time studies. The last complete time study was performed at least two years ago according to Messrs. Dave Kump and Marlin Visage. It is recommended that a valid time study be made each six months or less; and whenever operator duties vary, especially pertinent are maintenance personnel duties.

E. Contrary to subject license condition No. 12, amended March 31, 1971, and Part 4-200 of the New Mexico Radiation Protection Regulations, radiation safety surveys are not being conducted during special maintenance activities. According to Mr. Jim Cleveland, only those special maintenance activities in the yellow cake area are being referred to him for radiation safety surveys. There were no surveys presented which would indicate that this procedure is adequate. It is recommended that the approval of all special maintenance activities include the signature or initials of the Radiation Safety Office so that adequate radiation safety surveys may be performed where necessary.

F. Contrary to subject license condition No. 16, allowance for protective clothing other than that specified has been made in determining whether an individual is exposed to airborne concentrations or radioactive material in excess of the limits. License condition No. 16 authorizes only the Chicago Eye Shield No. 600, BM 1925, Type C. According to Messrs. Jim Cleveland and Dave Kump, another system has been in use for about one year. This system is NIOSH approved and manufactured by Mine Safety Appliances, Pittsburg, Pennsylvania. It includes a Rigi-Pak Model "180" filter system and a Clearvue face mask assembly. A Rite Whitecap No. 455 compressed air system with helmet, face shield, and shroud was also occasionally used without authorization. In addition, a few other monitoring devices have been in use which were not described in the subject license application.

In view of the fact that proper authorization was sought in your letter of February 5, 1973, and that administrative jurisdiction was transferred in May, 1974 without final action upon your request being made, and that the protective clothing now in use is determined to be more adequate in its intended purpose; this violation is considered to be of minimum significance. However, it is recommended that all protective clothing now in use or proposed to be used be described in detail and that said descriptions be included in a "request for authorization" according to Part 4-130 C. of the New Mexico Radiation Protection Regulations. It is also recommended that monitoring equipment being used be described and discussed in relation to its use in an addendum to the present license application if this has not already been done.

II. Under the second heading, the activites in question were:

A. Dust accumulations were noticed in several areas of the crushing and sampling circuit. The most notable accumulation was on the floor beneath the exiting vent of the miciodyne at the top of the sample cutting tower. A port on the dust collection system in this same area was found in the open position indicating that the system was operating at maximum potential. Further discussion with Dave Kump and Marlin Visage indicated that there may be a problem with certain operators not turning on the vent fans, or else, turning them off when they desire. It is recommended that a totally automatic lock-out system be considered for the dust collection system.

B. Soft drink cans were observed in the crushing and sampling area indicating the presence of eating and drinking activities. One individual in the fine ore storage bin area was observed to be smoking a pipe. These activities are not addressed in your existing Standard Operating Procedures. It is recommended that these activities be evaluated in accordance with the ALARA principle.

C. Yellow cake dust was present in significant amount in the sample box used for weighing moisture samples in the Y-C packaging area with the only ventilation of said box being an overhead miciodyne. It is recommended that adequate ventilation be provided for this sample box area that would not draw yellow cake dust around the breathing zone of the operator.

D. It was observed that the exhaust vent of the clothes dryer in the yellow cake area was not connected to the miciodyne collection system, rather it was vented to the surrounding atmosphere. It is recommended that this situation be evaluated in accorance with the ALARA principle and that appropriate action be taken.

Please inform this Agency, within 20 days of receipt of this letter, of measures taken to correct and prevent the violations and deficiencies enumerated above.

Thank you for the time and courtesy extended to Mr. Blubaugh and me during the inspection. Your continued cooperation will be appreciated. If you have any questions concerning this letter, please address them to me at 827-5271 in Santa Fe.

Sincerely,

Alphonso A. Topp, Jr.
Environmental Scientist III

AATjr:bh

STATE OF NEW MEXICO
ENVIRONMENTAL IMPROVEMENT AGENCY
HEALTH and SOCIAL SERVICES department
P.O.Box 2536
Milan, New Mexico 87020
Tel: 505-287-8628

March 14
~~February 21~~, 1977

Bill Stevens, General Manager, New Mexico Operations
Kerr-McGee Nuclear Corporation
P.O.Box 218
Grants, New Mexico 87020

~~ATTENTION: WILLIAM STEVENS, GENERAL MANAGER~~

Dear Mr. Stevens:
~~Gentlemen:~~

This letter ~~refers to the~~ reports on an unannounced inspection of activities authorized by U.S. Atomic Energy Commission Source Material License Number SUA-616 conducted on ~~by Messrs. Alphonso Topp, Jr. and~~ Richard E. Blubaugh, of this Agency, ~~on~~ and report. January 27 and 28, and on February 1, 1977. By Administrative ~~jurisdiction~~ control of ~~said~~ ~~source material~~ license ~~has been granted to this Agency since~~ was transferred to this Agency on May 1, 1974.

The inspection was of an examination of the activities authorized under the license as it relates to radiation safety, and to compliance with the Agency's rules and regulations, and to adherence to activities detailed in the license application dated February 3, 1970. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspectors.

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C. Contrary to subject license condition No. 14 and license application Item 14, unrestricted area surveys were found to have been taken only once each year during 1973 and 1974 instead of twice each year as stated in application Item 14.

D. Contrary to Part 4-200 of the New Mexico Radiation Protection Regulations, adequate time-weighted exposure calculations are not being performed due to inadequate time studies. The last complete time study was performed at least two years ago according to Messrs. Dave Kump and Marlin Visage. It is recommended that a valid time study be made each six months or less;and whenever operator duties vary, especially pertinent are maintenance personnel duties.

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so that adequate radiation safety surveys may be performed where necessary.

F. Contrary to subject license condition No. 16, allowance for protective clothing other than that specified has been made in determining whether an individual is exposed to airborne concentrations of radioactive material in excess of the limits. License condition No. 16 authorizes only the Chicago Eye Shield No. 600, BM 1925, Type C. According to Messrs. Jim Cleveland and Dave Kump, another system has been in use for about one year. This system is NIOSH approved and manufactured by Mine Safety Appliances, Pittsburg, Pennsylvania. It includes a Rigi-Pak Model "180" filter system and a Clearvue face mask assembly. A Rite Whitecap No. 455 compressed air system with helmet, face shield, and shroud was also occasionally used without authorization. In addition, a few other monitoring devices have been in use which were not described in the subject license application

In view of the fact that proper authorization was sought in your letter of February 5, 1973,and that administrative jurisdiction was transferred in May 1974 without final action upon your request being made, and that the protective clothing now in use is determined to be more adequate in its intended purpose; this violation is considered to be of minimum significance. However, it is recommended that all protective clothing now in use or proposed to be used be described in detail and that said descriptions be included in a "request for authorization" according to Part 4-130 C. of the New Mexico Radiation Protection Regulations. It is also recommended that monitoring equipment being used be described and discussed in relation to its use in an addendum to the present license application if this has not already been done.

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D. It was observed that the exhaust vent of the clothes dryer in the yellow cake area was not connected to the miciodyne collection system, rather it was vented to the surrounding atmosphere. It is recommended that this situation be evaluated in accordance with the ALARA principle and that appropriate action be taken.

III. This last section will deal with one item that does not necessarily fit either of the two preceding. The item is communication. It was noted that significant changes had taken place since the previous inspection of October 1973 by AEC; yet, this Agency was not made aware of these changes until this inspection. It would be difficult to say these changes were in the mill circuit or equipment; however, they were changes which deviated from the subject license application. The inspectors felt that the changes were for the better, that is, the position of the Radiation Safety Officer was improved so that he would have greater impact in management as regards radiation safety. The new and improved equipment should provide better protection and more reliable results of samples and the creek bed relocation has its advantages also. However, such changes should be communicated to this Agency to allow for the determination of whether they are to the benefit or detriment of radiation safety for the public as well as employees. Therefore, it is recommended that both frequent and open communications between company officials and Agency officials be made a normal state of affairs. This Agency recognizes our responsibility to improve communications, also.

Please inform this Agency, within 20 days of receipt of this letter, of measures taken to correct and prevent the violations and deficiencies enumerated above.

Thank you for the time and courtesy extended to ~~Messrs. Topp and~~ Mr Blubaugh and me during the inspection. Your continued cooperation will be appreciated. If you have any questions concerning this letter, please address them to me at 827-5271 in Santa Fe.

Sincerely,

Alphonso A Topp Jr
~~Russell Rhoades~~
Environmental ~~Manager~~ Scientist III

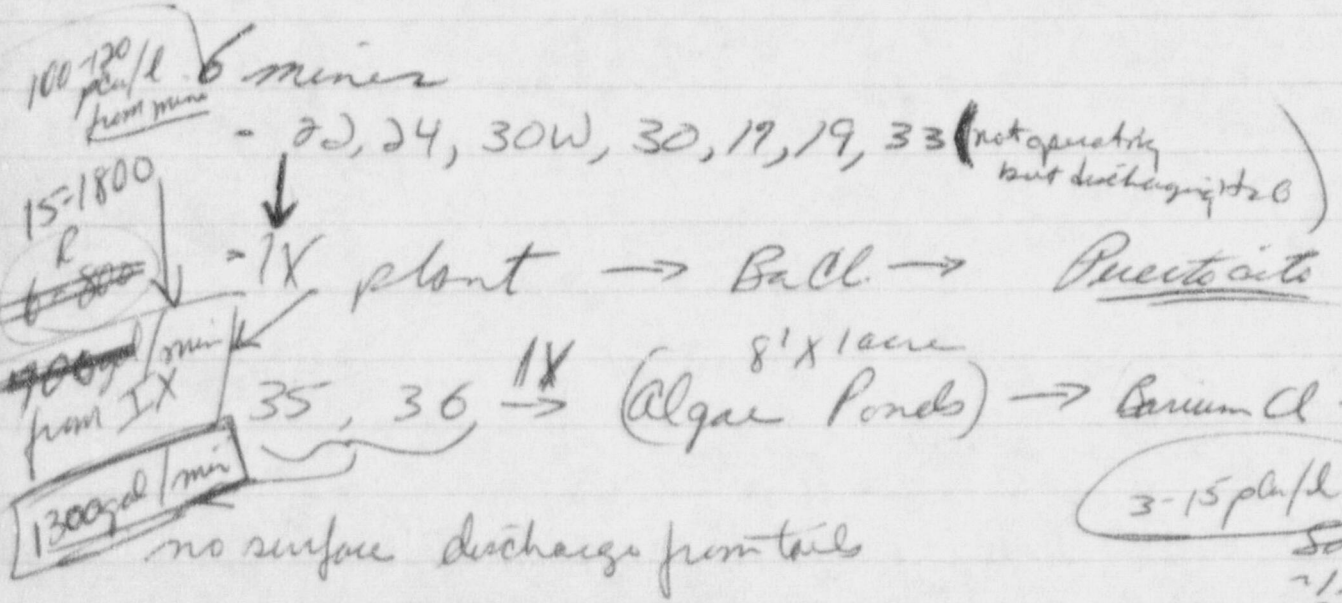
~~RR/bl~~

cc: Ted Wolf
Al Topp
Richard Blubaugh
Tom Baca
Neil S. Weber

For: Barium Chloride Treatment
Ion Exchange

Questions: ① What are the pertinent general chem. Reactions?
② What concentrations of what chemical materials are used?
③ How much water comes from mines thru BaCl + Ion Exchange plants?
④ Water to Algae Pond? —

Points of Discharge (2)



Jeri
Mining Grp. this week
dust (silicosis) + radon daught.
might suggest a review of
overlap by his groups next
~~would~~ meeting
would prefer one inspection

3.5 mgd. combined flow of 35+36
Ken Mc. comments on M.R.G. Basin Plan
March 31, 1976

Outline For Investi

Title Page

1. Subject of investigation
   a. Name
   b. Address
   c. License No.

2. Type of case
   a. Immediate report
   b. 24 hr. report
   c. 30 day report

3. Brief summary of incident or reason for investigation
   a. Overexposure
   b. Theft or less
   c. Release of activity
   d. Loss of facility use
   e. Property damage
   f. Complaint
   g. Other

4. Summary of facts
   a. Significant information deve
   b. Nature, extent, and particul
   c. Cause
   d. Licensee actions taken to co
   e. Non-compliance contributory t

Report Details

Par. 1. Information known prior to start o

2. How and why brought to the attent

3. Why an investigation was deemed n

4. Background
   a. Scope of license
   b. Pertinent licesne conditions
   c. Results of previous inspectio

5. Information developed during inve
   a. Interview
   b. Record reviews
   c. Independent measurements
   d. Contributory non compliance

6. Summary

7. Exhibits
   a. Statements made by persons inte
   b. Pictures
   c. Facility and equipment drawings