



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

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DEC 14 1979

MEMORANDUM FOR: Ross A. Scarano, Chief  
Uranium Recovery Licensing Branch

THRU: John J. Linehan, Section Leader  
Uranium Recovery Licensing Branch *ddj*

FROM: Daniel M. Gillen  
Uranium Recovery Licensing Branch

SUBJECT: TRIP REPORT

Places and Dates

October 18, 1979 morning; Lucky Mc Uranium Corporation Mill, Gas Hills, Wyoming  
October 18, 1979 afternoon; Federal-American Partners Uranium Mill, Gas Hills, Wyoming  
October 19, 1979; Sweetwater Uranium Project, Minerals Exploration Company, Wyoming

Purpose

Lucky Mc and FAP: Familiarization tour of the mill facilities and tailings disposal areas

MEC: Scheduled tailings dam embankment construction inspection.

Attendees

Lucky Mc: D. Gillen, NRC  
L. Nugent, Lucky Mc, Mine Manager  
L. G. Dooley, Lucky Mc, Mill Superintendent  
D. Fike, Lucky Mc RSO

FAP: D. Gillen, NRC  
B. Thurman, FAP, Mill Superintendent  
L. Iverson, TVA  
K. Wright, FAP, General Manager  
F. Jackson, FAP RSO

MEC: D. Gillen, NRC  
A. DePhilippe, Corps of Engineers,  
Philadelphia District  
J. Welsh, MEC  
R. Milnar, Dames & Moore  
J. Marshall, MEC, Mill Manager  
H. L. Snyder, MEC, Environmental Coordinator  
L. Dykers, MEC, General Manger

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Summary

1. Lucky Mc

After an initial interview with Mr. Lee Nugent, Mine Manager, I toured the mill with Mr. L. G. Dooley, Mill Superintendent, and Mr. D. Fike, Radiation Safety Officer. Particular attention was paid to those areas of the mill that have recently been modified or will soon be modified. Those areas are the old Solvent Extraction Circuit and the new Solvent Extraction building presently under construction, the semi-antogenous sag mill, the resin-in-pulp process and the yellowcake drying and packaging areas. Mr. L. Nugent and Mr. L. G. Dooley then conducted me on a tour of the tailings impoundment.

The new Solvent Extraction building is nearing completion and Mr. Nugent asked about the schedule of our review of that amendment application. I informed him that a fire protection license condition would be added to the license and that he could expect approval of the amendment in one to two weeks.

I questioned Mr. Nugent as to the status of the changes to the dust collection system and yellowcake packaging area which were recently added to the license (March, 1979). His response was that the modifications have not been implemented but are expected to be operational by December 1, 1979.

Mr. Dooley informed me that based on the results of Lucky Mc's comparative evaluation (letter of February 16, 1979) personnel monitoring is now the only method used to establish airborne exposure of personnel operating the crusher and yellowcake dryer circuits. Fixed area sampling has been discontinued.

The status of modifications to the tailings impoundments was inspected and the following learned:

- a. There are approximately 2 weeks of earthwork remaining in the construction of embankment No. 2A.
- b. Following the approval to place tailings in No. 2A, a 1000 gpm pumping system will begin pumping from No. 4 pond to No. 2A, with some liquid split off for recycling.
- c. It will take from 18 to 24 months to evacuate all solution from No. 4.

- d. . During 1980, while pumping is still in progress, work will begin on the downstream portion of the No. 4 embankment.
- e. The work on the upstream portion and the crest of the No. 4 embankment will be accomplished in 1981 when the pond is fully drained.

Tailings material was being disposed of in the nearly full pond No. 2A during the day of my visit, and Mr. Nugent informed me of the immediate need for approval to place tailings in No. 2A. I pointed out the fact that license condition 49 of Amendment No. 5 requires submittal of additional hydrologic information for our review and written approval prior to placement of tailings in No. 2A. Lucky Mc will send this information (Hydro-Engineering report) within the next week.

Items discussed during the tour of the mill and tailings area were reviewed in an exit meeting with Mr. Nugent and Mr. Dooley.

## 2. Federal-American Partners

The site visit to FAP began with a tour of the mill with Mr. B. Thurman, FAP Mill Superintendent, and Ms. L. Iverson, TVA. During the tour a substantial overflow of one of the acid leach tanks occurred. The spill was immediately hosed down into the sump. The processing areas are hosed down regularly benefiting both fire protection and general cleanliness. The dust collection system serving the crushing area was in operation. The yellowcake drying and packaging area is being kept in a very clean condition.

On request, I was conducted to the old U.S. Energy building on the FAP site. The building had been contaminated during the tailings overtopping in February, 1979, and is to be removed from the FAP restricted area by either U.S. Energy or the Bureau of Land Management. Last week, as requested by the NRC, the building was decontaminated and surveyed in accordance with Annex C criteria. The survey results will be transmitted to the NRC. My inspection of the structure showed a small amount of silt deposited on the floor. This was explained as deposits resulting from heavy rains of the previous two days.

Next, I was taken on a tour of the two tailings impoundments. Construction work on the embankments has been completed and tailings material was being disposed of in pond No. 2. Slimes were being pumped from No. 2 pond to the northwest portion of No. 1 pond in order to reduce the substantial seepage occurring in the area. The six recovery wells downstream of tailings dam No. 1 were observed to be in place and in operation.

Before leaving the site, I met with both Mr. K. Wright, FAP General Manager, and Mr. F. Jackson, FAP Radiation Safety Officer. I asked Mr. Jackson about the mill laundering procedure. FAP is considering adding on-site laundry facilities as part of their mill expansion, but presently the clothing is being alpha scanned before leaving the site for commercial laundering.

3. Minerals Exploration Company, Sweetwater  
I accompanied Mr. A. DePhilippe of the U.S. Army Corps of Engineers, Philadelphia District, on a routine inspection of the tailings basin (cell C) embankment construction. We met Mr. J. Welsh of MEC and Mr. R. Milnar of Dames & Moore, who conducted us on a tour around the embankment. Mr. Walsh informed us that MEC is having difficulty finding materials meeting Zone 2 gradation requirements. Zone 2 is the pervious downstream shell having not more than 15 percent passing the number 200 sieve.

We made a circuit of the crest of the embankment, stopping at many points to observe equipment operation and inspect fill materials. Under heavy vehicle traffic, Zone 1 (core) and Zone 3 (random upstream shell) showed no signs of insufficient compaction. Mr. DePhilippe informed MEC construction personnel that excessive Zone 2 fill material was being placed along the east side of the cell C before being compacted.

We then visited one of the borrow areas presently being excavated for Zone 2 material. Mr. DePhilippe took a representative bag sample for a check against gradation requirements.

The mine dewatering system was in operation and working very effectively. Water is pumped from 17 wells to settling ponds where barium chloride and a flocculent are added to remove the radium. The water is then discharged to the Battle Spring Flat playa.

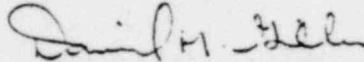
While Mr. DePhilippe accompanied Mr. Milnar to review Dames & Moore's laboratory data and inspection reports, I met with various MEC personnel. After a brief introduction to Mr. L. Dykers, General Manager, I met with Mr. H. L. Snyder for a general discussion of the environmental monitoring program. Finally, I met with Mr. J. Marshall, Mill Superintendent, and the following items were discussed:

- a. Mill schedule; the mill construction is on schedule with a July, 1980 completion target date.

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- b. Tailings management alternative; MEC is very interested in exploring tailings disposal plans other than the completion of the remaining three cells (A, B, and D) of the impoundment. MEC plans to present a rough proposal to the NRC some time in December, 1979 or January, 1980.
- c. Status of liner modification amendment request; I informed Mr. Marshall that our review of the amendment request could probably be completed in three weeks.

Before leaving the site, Mr. DePhilippe commented that Dames & Moore personnel had neglected to run moisture-density curves for the Zone 2 material from new borrow areas. Mr. Milnar responded that this would be done immediately. As customary, Mr. DePhilippe will submit a detailed inspection report to DSE, NRR, who will forward a copy to WMUR.



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Division of Waste Management

cc: H. Fontecillo, Technical Assistant  
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