



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

JUN 11 1981

PDA
40-4492

WMUR:DMS
Docket No. 40-4492
SUA-667



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

THRU: Harry J. Pettengill, Section Leader
Operating Facilities Section II
Uranium Recovery Licensing Branch

FROM: Dennis M. Sollenberger
Operating Facilities Section II
Uranium Recovery Licensing Branch

SUBJECT: REVIEW OF THREE YEAR (1978-1980) COMPLIANCE HISTORY
FOR THE FEDERAL-AMERICAN PARTNERS (FAP) MILL
(DOCKET NO. 40-4492)

I have reviewed all inspection reports and related correspondence concerning the FAP mill for the past three years. Activities at the site are authorized and regulated by Source Material License No. SUA-667.

Inspections at the FAP mill during the periods 1978-1980 were conducted by I&E, Region IV, on the following dates:

1. October 2-3, 1978
2. March 1, 1979
3. May 1, 1979
4. June 27-28, 1979
5. August 18-20, 1980

Discussions of inspection findings and subsequent correspondence between the licensee and I&E are presented below.

October 2-3, 1978 Inspection

Five violations were noted by the inspectors during this inspection. The violations and their resolutions, presented in letters dated January 30, 1979 and March 14, 1979, are as follows:

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- (1) Violation - Contrary to 10 CFR 20.103(a)(2) workers inhaled a quantity of soluble uranium in excess of the quantity that would result for inhalation of such material for a 40-hour week at concentrations specified in Appendix B, Table I, 10 CFR 20.

Resolution - FAP indicated that surveys have been and will continue to be conducted. These surveys shall be evaluated according to instructions received from the USNRC Inspectors. The results of these evaluations should now indicate actual exposures to workers. In addition, management will be kept informed of survey results and any apparent over-exposure will be reported as required.

- (2) Violation - Contrary to License Condition No. 14 that requires, in part, that the mill exhaust systems be sampled quarterly for radioactive material, these systems were not sampled for radioactive material during the fourth quarter of 1977.

Resolution - After further investigation of their records, FAP found that sampling was conducted for the fourth quarter of 1977 and proper evaluation made. To ensure that this issue will not arise in the future, FAP has contracted the stack sampling to an independent company.

- (3) Violation - Contrary to 19.11(d), the notice pursuant to 19.11(b) did not appear in a sufficient number of places on October 3, 1978, to permit individuals engaged in licensed activities to observe them.

Resolution - Notices were immediately placed on all bulletin boards to permit individuals engaged in licensed activities to observe them. Periodic tours by the General Manager and Safety Director with weekly monitoring by the Radiation Safety Officer or his designee will monitor the posting of the Notices.

- (4) Violation - Contrary to 10 CFR 21.21(a), appropriate procedures had not been adopted that would provide for the evaluation and reporting of defects in basic components as defined in Section 21.3 of 10 CFR 21.

Resolution - The procedure had been prepared and was on file but due to a misunderstanding was not presented to the inspectors. The document was modified to compensate for the change in General Managers and both copies were submitted to I&E for inspection.

- (5) Violation - Contrary to 10 CFR 19.12, employees, working during the period from July 14, 1977 to October 3, 1978, were not instructed concerning health protection associated with exposure to radioactive materials.

Resolution - FAP stated that those workers (2) who had not been instructed concerning health protection associated with exposure to radioactive materials were immediately indoctrinated and all of their questions answered. Also, new workers are instructed and trained prior to reporting to their work place, and verification of this is presented to FAP Management.

In addition to the above resolutions, FAP has committed to conducting frequent meetings involving the General Manager, Mill Superintendent, and Radiation Safety Officer to discuss such items as mill tailings management, stack emissions, dust controls, personnel exposures, etc. The General Manager and Mill Superintendent will conduct inspection tours on a non-scheduled basis, but at intervals frequent enough to ascertain and correct problem or potential problem areas. Surveys and evaluations of surveys are reflected in the monthly reports submitted to the General Manager and filed in the Office of the Director of Safety and Radiation.

The following I&E annual inspection of June 27-28, 1979, found that the corrective actions committed to by FAP had indeed been implemented.

March 1, 1979 Inspection

The licensee reported slurry going over the No. 2 tailings dam and an I&E inspector investigated the tailing dam, area contaminated, cleanup operations, and actions taken to prevent future overflow.

The inspector found no items of noncompliance. The inspector verified through document reviews, discussions, and observations that the remedial actions that the licensee had taken were adequate to demonstrate that the slurry was contained in the restricted area. The inspector also noted that cleanup of the spill area was approximately 95 percent complete.

May 1, 1979 Inspection

On May 1, 1979, a Region IV inspector visited the licensee's uranium mill, inspected the building that was purportedly contaminated with radioactive material, and interviewed FAP personnel to determine the past, present, and future status of the building.

After the incident in February 1979, discussed above in the March 1, 1979 inspection, it was determined that slurry had entered the building. As of May 1, 1979, Bureau of Land Management (owner of the building) was purportedly of the opinion that the building should remain as is and where is until FAP elects to dispose of it by whatever means they choose.

No items of noncompliance were found.

June 27-28, 1979 Inspection

Three violations were noted by the inspectors during this inspection. The violations and their resolutions, presented in letters dated November 13, 1979 and March 1, 1980 are as follows:

- (1) Violation - Contrary to 10 CFR 20.203(b) the yellowcake packaging area, a restricted area where radiation levels of six milliroentgens per hour existed, as not posted on June 29, 1979, with a sign or signs bearing the radiation caution symbol and the words, "Caution - Radiation Area".

Resolution - FAP purchased signs bearing the proper symbol and wording and placed them in the yellowcake packaging area and on the entrances to the area. External radiation surveys conducted and evaluated prior to June 27-28, 1979, indicated levels within acceptable limits. If continued monitoring should show any area in the mill to reach a level of five milliroentgens per hour or greater, FAP will post the area in the proper manner.

- (2) Violation - Contrary to NRC Staff Technical Position, "Bioassay Uranium Mills," dated June, 1978, which amended FAP's source material license by NRC letter of June 22, 1978, the licensee did not prepare formal documented evaluations for two workers whose urine samples were taken during the period of January 15, 1979 to May 15, 1979. Measurements read 136 micrograms per liter for one worker and 204, 42, and 158 micrograms per liter for three consecutive samplings for another worker.

Resolution - FAP has committed to follow the guidelines set forth in the NRC Staff Technical Position dated June, 1978, in that any worker who exceeds 130 micrograms per liter for a single sample or 30 micrograms per liter for four consecutive samples will be evaluated further by:

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- (1) Additional sampling will be performed and analyzed for albumin and uranium concentrations.
- (2) If resampling confirms previous results, the worker will be removed from that work area for a full evaluation and an attempt made to correlate urinary results with any possible overexposure to uranium dust.

In addition to the above procedures, the Radiation Safety Officer (RSO) will evaluate and initial all results of urinary sampling and report any items exceeding the guidelines to the General Manager. The General Manager is informed of any areas of concern by a monthly report submitted to him by the RSO. The management goal is to achieve 100% participation by workers in the program.

- (3) Violation - License Condition No. 24 requires in part, that quarterly reports be made to the NRC on December 1, 1978, and June 1, 1979, on the effluent and environmental monitoring program as described in Table SUP 1-15 and as revised by licensee letter of August 17, 1978. Contrary to this requirement, the June 1, 1978 report had not been sent to the NRC on June 28, 1979.

Resolution - The licensee was awaiting information from a contract laboratory to complete the report prior to submittal. This quarterly report was made a part of the semiannual report for the first six months of 1979 and forward to the NRC. All reports, whether complete or not, shall be sent prior to the closing date.

The following I&E annual inspection of August 18-20, 1980, found that the corrective actions committed to by FAP had indeed been implemented.

August 18-20, 1980 Inspection

Six violations were noted by the inspectors during this inspection. The violations and their resolutions, presented in the letter dated September 29, 1980, as follows:

- (1) Violation - Contrary to the requirement in 10 CFR 20.405(a)(5), the licensee had detected Radon-222 concentrations, in an unrestricted area, of 36.75 E-9 microcuries per milliliter in September 1979 and 57.7 E-9 microcuries per milliliter in

November 1979. These concentrations are in excess of ten times the 10 CFR 20 limit of 3 E-9 microcuries per milliliter and had not been reported to the NRC on August 20, 1980.

Resolution - FAP investigated the procedures used to determine environmental radon-22 concentrations. As a result of this investigation, FAP has changed the calculational methods to determine the net counts for each sample analyzed. To prevent any future miscalculations, FAP developed a detailed and specific radon-222 calculation sheet and has implemented its use.

- (2) Violation - Contrary to the requirements in License Condition No. 13, maintenance activities were observed in process on August 18, 1980, in the cyclone area where a centrifuge had been removed and no radiation surveys had been conducted.

Resolution - FAP committed to conducting radiation surveys for an extensive list of situations. For special maintenance tasks, the mill superintendant will request the Radiation Department to perform airborne uranium surveys, make recommendations regarding the need for respiratory protection, and make recommendations regarding possible limitations of work time. If special maintenance is to be done on evening or late night shifts, the RSO will be notified and his recommendations followed. If the RSO is not available, the licensee will follow the procedures listed in the response attached to the September 29, 1980 letter. All mill shift workers have been notified to contact the RSO about maintenance to be performed.

- (3) Violation - Contrary to the requirements in License Condition No. 24, soil and vegetation samples were not collected during 1979.

Resolution - FAP has collected soil and vegetation samples for 1980, and sent them to an outside vendor. No results were back by September 29, 1980. Results of the soil and vegetation sampling will be included in the January Semiannual Report. Since the August 18-20, 1980 inspection, a comprehensive set of written procedures and guidelines were formulated which includes all sampling and reporting requirements. These procedures should eliminate an oversight of a program or reporting requirement.

- (4) Violation - Contrary to the requirement in 10 CFR 20.407, personnel monitoring reports covering calendar year 1979 had not been submitted to the NRC on August 20, 1980.

Resolution - The personnel monitoring report was filed August 29, 1980, per 10 CFR 20.407 guidelines. With the aid of the above mentioned procedures and guidelines, the oversight of filing this report will be eliminated.

- (5) Violation - Contrary to the requirement in 10 CFR 40.64(b), the licensee's source material inventory, due within 30 days after September 30, 1979, had not been submitted on August 20, 1980.

Resolution - FAP committed to sending both 1979 and 1980 source material inventories to the DOE in Oak Ridge, Tennessee by October 7, 1980. Prior to October, 1978, FAP did not maintain a source material inventory. FAP was unaware of the filing requirement until NRC brought it to their attention. They are now aware of the requirement and have assigned an employee to carry out this responsibility.

- (6) Violation - Contrary to the requirements in 10 CFR 40.65, area environmental monitoring TLD results were not reported in the semiannual reports dated August 30, 1979, and February 29, 1980.

Resolution - FAP was unaware that TLD results should have been submitted until it was brought to their attention by the inspection team. All environmental TLD data that was available was submitted in the August 1980 report. FAP committed to submitting all TLD information in future semiannual reports.

The 1981 I&E annual inspection should verify whether FAP has indeed implemented the above corrective actions.

Summary and Recommendations

The review of the aforementioned inspections of the operations at the Federal-American Partners mill indicates that the I&E inspectors conducted a thorough review of the operations. In addition, the review indicates that corrective actions taken by FAP were adequate and appropriate for all violations cited during the five inspections over the last three years. However, the commitments made by FAP in their resolutions to the violations should be incorporated into the license. The FAP management commitment to ALARA was not discussed in sufficient detail to evaluate their total program in light of the current licensing policy.

Ross A. Scarano

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Since, FAP has applied for renewal of Source Material License No. SUA-667 and the staff will be reviewing the application and evaluating it against current licensing policy, any changes or updating in the FAP mill operations will be evaluated and incorporated in the renewed license. Therefore, no licensing action is necessary at this time as a result of the above assessed violations.

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Approved by:

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Case Closed: 04004492M01S