

SEP 28 1990

URFO:DCW
 In Reply Refer To:
 Docket No. 40-6659/90-01

Petrotomics Company
 ATTN: Ron Juday, Supervisor
 Shirley Basin Uranium Mill
 P. O. Box 8509
 Shirley Basin, Wyoming 82615

Gentlemen:

This refers to the routine unannounced inspection conducted by D. C. Ward, J. Grimm, and C. D. Miller-Corbett of this office on September 19, 1990, of the activities authorized by NRC Source Material License SUA-551, and to the discussion of our findings held with members of your staff at the conclusion of the inspection. The enclosed NRC Inspection Report 40-6659/90-01 documents this inspection.

The inspection was an examination of the activities conducted under the license as they relate to radiation safety and to compliance with the Commission's rules and regulations and the conditions of the license. The inspection consisted of selective examinations of procedures and representative records, interviews of personnel, and observations by the inspectors.

Within the scope of the inspection, no violations or deviations were identified.

The inspectors also reviewed the corrective action you had taken with respect to one open item identified during our previous inspection which was conducted September 6, 1989. They verified that the corrective action with respect to this open item was implemented.

As a result of this inspection, the inspectors concluded that the radiation safety program at the site is functioning adequately.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and enclosed inspection report will be placed in the NRC's Public Document Room.

PM:URFO *DCW*
 DCWard/db
 9/28/90

PM:URFO *JPG*
 JGPGrimm
 9/28/90

PM:URFO *CDM*
 CDM-Corbett
 9/28/90

DD:URFO *EFH*
 EFHawkins
 9/28/90

D:URFO:RIV *REH*
 REHall
 9/28/90

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Should you have any questions concerning this letter, we will be pleased to discuss them with you.

Sincerely,

EFH

for

Ramon E. Hall
Director

Enclosure:

Appendix - NRC Inspection Report No. 40-6659/90-01

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION

REGION IV

URANIUM RECOVERY FIELD OFFICE

NRC Inspection Report: 40-6659/90-01
Docket No. 40-6659

License SUA-551

Licensee: Petrotomics Company
P. O. Box 2509
Shirley Basin, Wyoming 82615

Facility: Shirley Basin Uranium Mill

Inspection at: Shirley Basin, Carbon County, Wyoming

Inspection Conducted: September 19, 1990

Inspectors:

Dana C Ward
Dana C. Ward, Team Leader

9-28-90
Date

/s/
Joel P. Grimm, Project Manager

9/27/90
Date

/s/
Cynthia D. Miller-Corbett
Project Manager

9/27/90
Date

Approved by:

/s/
Ramon E. Hall, Director
Uranium Recovery Field Office
Region IV

9/28/90
Date

Inspection Summary

Inspection conducted on September 19, 1990 (Report 40-6659/90-01)

Areas Inspected: A routine unannounced inspection of uranium milling operations and radiation safety program including Management Organization and

Control/Operations Review; Training and Retraining; Maintenance/Surveillance Testing; Radiation Protection; Radioactive Waste Management; Environmental Protection; and Emergency Preparedness.

The inspection involved a total of 13.5 inspector-hours onsite by three inspectors.

Results: Within the eight areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

*Ron Juday, Site Supervisor

*Steve Pfaff, Radiation Safety Officer/Coordinator

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Open Items (40-6659/89-01-01) The need to conduct annual refresher training. The inspectors noted that the licensee had conducted refresher training on September 14, 1989.

3. Management Organization and Controls/Operations Review

The Shirley Basin Mill has been decommissioned and an interim soil cover placed over the tailings area. The licensee was actively grading the tailings areas into final contours. Cleanup of windblown tailings was progressing in the basin of the former fresh water pond, which is upslope and adjacent to the tails pond. Cleanup was also active below the tailings dam where a low swale had collected tailings during the active life of the mill.

There are currently four Petrotomics employees on site and approximately 19 contractor employees engaged in earth moving activities. The organizational structure is the same as the last inspection. The senior official at the facility is the Site Supervisor who has overall responsibility for operations. The Radiation Safety Officer/Coordinator (RSO) reports directly to the Site Supervisor and has responsibility for the radiological safety of the project. The remaining two Petrotomics employees are engaged in daily maintenance work throughout the site.

The RSO is the sole member of the radiation safety staff. The Site Supervisor is trained sufficiently to act in the RSO's absence. The RSO conducts monthly inspections of the tailings dam and evaporation pond and submits a written report to the Site Supervisor. The RSO produces a semiannual environmental report as specified by License Condition No. 20 and an annual land use survey as required by License Condition No. 19. These reports were reviewed by the inspectors and found to be complete.

The inspectors reviewed the standard operating procedures (SOPs) which had been established by the licensee. The inspectors noted that the SOPs covered the various activities of facility operations. As required by

License Condition No. 29, the SOPs had been reviewed by the RSO in April 1990. The inspectors noted that the SOPs are currently in a state of revision and should be closely examined during the next inspection.

No violations or deviations were identified by the inspectors.

4. Training and Retraining

The inspectors reviewed records of radiation safety training conducted by the licensee. All employees were provided radiation safety refresher training on September 14, 1989. This closes the open item (40-6659/89-01-01). Material covered during training was reviewed and found to be in accordance with recommendations contained in Regulatory Guide 8.31. The RSO instructs all courses and there is an examination but no passing grade is set. The RSO reviewed all wrong answers and additional instruction was given if necessary. All contractors and visitors are given instruction or training commensurate with the task to be performed.

The inspectors noted that no females work on site or have worked on site in the last 3 years. The licensee stated that he was prepared to give instruction to any female workers that would be employed on site in accordance with Regulatory Guide 8.13.

The RSO and Site Supervisor received offsite refresher radiological safety training in May 1990. The inspectors noted that this training exceeded the recommendations contained in Regulatory Guide 8.31. This additional training would help the better assume the RSO position if the need should occur.

No violations or deviations were identified by the inspectors.

5. Maintenance and Surveillance Testing

The inspectors observed that the restricted area fence is discontinuous around the Petrotomics site. The licensee stated that portions of the fence had been removed to facilitate earth moving activities and that the fence would be replaced at the end of construction. The inspectors noted that the restricted area is posted in accordance with requirements. The inspectors also noted that the licensee had a sign at the entrance station which stated; "Any Area Within This Facility May Contain Radioactive Materials." This sign was placed on the concrete walk, leaning against the guard house. It was suggested that this sign be fastened to the side of the guard house above any possible deep snow that could cover the sign through the winter if it were left on the walk.

The inspectors noted that the licensee had postings on an accessible employee bulletin board in the main office complex in accordance with requirements of 10 CFR 19.11. Emergency phone numbers for medical assistance were also noted to be posted in bold type on the bulletin board.

No radiation work permits (RWPs) had been issued since the last inspection. It was noted by the inspectors that the last RWP was issued in 1985. This would seem appropriate considering the near completeness of reclamation and the covering of tailings.

No violations or deviations were noted by the inspectors.

6. Radiation Protection

The mill has been decommissioned since 1986. Through license amendments, surveillance programs have been deleted to reflect the overall decrease in radiologic concern. The only program regularly administered by the licensee is an external radiation program using thermoluminescent dosimeters (TLDs). The licensee issued a total of 27 TLDs during the year to employees and contractors. Exchanges were made on a monthly basis. The inspectors reviewed the data and noted that no employee or contractor exceeded 10 mrem for any month.

Surface alpha contamination surveys are conducted on all employees exiting the site at the guard house. Each individual frisks and signs out confirming that no contamination is present on their person above the action level of 100 counts per minutes. The inspectors reviewed the data and noted that there were no records of individuals contaminated above the action level.

The licensee conducts equipment surveys on all contractor equipment leaving the site. The inspectors reviewed the release forms and noted that all equipment was released in accordance with License Condition No. 16. The inspectors noted that wash facilities are available for both equipment and personnel if the need for decontamination should occur.

No violations or deviations were identified by the inspectors.

7. Radioactive Waste Management

As part of implementing the tailings impoundment reclamation program described in License Condition No. 49, the tailings impoundment has been completely covered with a 2-foot thick interim clay cover. When the criteria for settlement is met the licensee will place the radon barrier material over the clay.

Tailings dam inspections are performed monthly, with more detailed inspections performed on a quarterly basis. Elements evaluated during the licensee's inspection include the entire tailings dam, erosion, vegetation, seepage, and the amount of water pumped back. The inspection conducted by the licensee's RSO is documented and records are kept on file at the site.

The NRC inspectors reviewed these records and found them to be adequate. It was suggested to the RSO that, although not required, the NRC project manager could benefit from receiving copies of these inspections during the period of active mill tailings reclamation.

No violations or deviations were identified by the inspectors.

8. Emergency Preparedness

The inspectors reviewed the emergency procedure and found it to be adequate. The licensee stated that the Life Flight from Casper, Wyoming could be onsite in 20 minutes. First aid kits are available in the main office and company trucks. Fire extinguishers are available in the main office complex and select mobile equipment used onsite. The inspectors determined that the level of emergency preparedness was consistent with the facilities and activities onsite.

No violations or deviations were identified by the inspectors.

9. Environmental Protection

Two environmental monitoring stations are maintained by the licensee. Each station collects background gamma data using environmental TLDs and radon concentrations by using passive alpha track systems (Terradex Track Etch Cups). The downwind station was visited and the inspectors noted that the low volume air sampler was not operating. The licensee stated that the sampler was operating prior to the inspection and that the brushes may have gone bad. The licensee assured the inspectors that the sampler would be operable by end of shift.

The ground-water monitoring program consists of 25 monitoring wells. Each well is sampled for indicator parameters as specified by License Condition No. 47 on a quarterly frequency. Surface water samples were previously collected from Sand Draw, an ephemeral stream, whenever water was present. Sand Draw has been dry for the last few years due to drought.

No violations or deviations were identified by the inspectors.

10. Exit Briefing

The inspectors met with licensee personnel at the conclusion of the inspection and summarized the purpose, scope, and findings of the inspection.

bcc:

Docket File No. 40-6659

LFMB

PDR

Suspense File

*URFO r/f

*ABBeach, RJV

GSanborn, RIV

*RSTS Operator

*RITS Operator

*NMIS

*MIS System

*LYandell

RDMartin

RWise

LShea, RM/ALF (AR-2015)

DMB (IE-07)

LLO Branch, LLWM

* w/766

DWard

JGrimm

CDMCorbett

JHaes, RCPD, WY

WDEQ(if WY facility)

6659/90-01/90/09/21/INSP