September 12, 2001

Mark E. Hoffman, P.E., Project Manager
Exxon-Mobil Refining and Supply Company
3225 Gallows Road
Fairfax, Virginia 22037

SUBJECT: NRC INSPECTION REPORT 40-8102/01-01

Dear Mr. Hoffman:

On July 12, 2001, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of your former Exxon Highland Uranium Mill site located in Converse County, Wyoming. The enclosed report presents the results of that inspection.

The inspection included a review of site status, management organization and controls, site operations, construction, and the environmental monitoring program. Based on the results of this inspection, no violations or deviations were identified; therefore, no response to this letter is required. Although activities at the Highland site were limited during this inspection interval, activities appeared to have received an appropriate level of management oversight.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room **or** from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS)*. *ADAMS is accessible from* the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room)."

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

Sincerely,

/RA/

Melvyn N. Leach, Chief
Fuel Cycle Licensing Branch
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Docket No.: 40-8102
License No.: SUA-1139

Enclosure:

NRC Inspection Report
40-8102/01-01

cc w/enclosure:
Mr. Scott Blakeley
Prime Site Contractor
Exxon Coal and Minerals Company
c/o Pronghorn Pump Service
P.O. Box 1311
Glenrock, Wyoming 82637

Mr. David Finley
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Solid and Hazardous Waste Division
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Cheyenne, Wyoming 82002

Wyoming Department of Environmental Quality
Land Quality Division
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bcc w/enclosure to DCD (IE-07)

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FCDB
MIS System
RIV Docket File (5th Floor)

DOCUMENT NAME: G:\FCLB\Uranium Recovery Section\Exxon Mobil\10810201.wpd
final: Accession No ML012570068

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JHLusher		GSJanosko		MNLeach	
09/06/01		09/10/01		09/12/01	

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ENCLOSURE

U. S. NUCLEAR REGULATORY COMMISSION

Docket No.:	40-8102
License No.:	SUA-1139
Report No.:	40-8102/01-01
Licensee:	Exxon-Mobil Refining and Supply Company
Facility:	Exxon Highland Uranium Mill Site
Location:	Converse County, Wyoming
Date:	July 12, 2001
Inspector:	John H. Lusher, Health Physicist Division of Fuel Cycle Safety and Safeguards Fuel Cycle Licensing Branch Uranium Recovery Section
Accompanied by:	Terry Johnson, Surface Hydrologist Division of Fuel Cycle Safety and Safeguards Fuel Cycle Licensing Branch Uranium Recovery Section Dan Rom, Geotechnical Engineer Division of Fuel Cycle Safety and Safeguards Fuel Cycle Licensing Branch Uranium Recovery Section Carl Jacobson, Project Manager DOE, Grand Junction Office
Approved by:	Melvyn N. Leach, Chief Fuel Cycle Licensing Branch Division of Fuel Cycle Safety and Safeguards
Attachments:	Supplemental Inspection Information Photographs

EXECUTIVE SUMMARY

Former Exxon Highland Mill Site
NRC Inspection Report 40-8102/01-01

This inspection included a review of site status, management organization and controls, site operations, construction, and the environmental monitoring program.

Management Organization and Controls

- Because of the Exxon-Mobil merger, changes have been made to the organizational structure since the last inspection in July 1998. The licensee's organization and management controls met the requirements of the license (Section 2).

Operations Review, Radioactive Waste Management, and Environmental Monitoring

- Site activities were limited to reclamation maintenance, mill tailings seepage control, and groundwater monitoring. These activities appeared to have been conducted in accordance with the license and regulatory requirements (Section 3).

- Site equipment was operable with no malfunctions apparent. The licensee's level of site security was adequate for the amount of work in progress at the site. Site fences were in good condition, and perimeter postings were appropriate (Section 3).

- The licensee's environmental monitoring program had been implemented in accordance with license requirements (Section 3).

Onsite Construction

- Exxon-Mobil needs to provide additional information to the NRC staff concerning the placement of erosion protection materials to ensure that it was placed in a manner that all specifications and minimum rock layer thickness requirements are met (Section 4).

- Site reclamation had been accomplished in accordance with the approved reclamation plan. However, continued surveillance of settlement monuments was needed to assure that excessive tailings consolidation does not take place (Section 4).

Report Details

1 Decommissioning Inspection Procedure for Uranium Mill Sites (87654) and Site Status

Licensed activities at Exxon's former Highland Uranium Mill site have been accomplished by a contractor. No Exxon personnel were stationed at the site. Exxon's site project manager has visited the site on an as-needed basis. Routine activities at the site included groundwater monitoring, settlement monument monitoring, well maintenance, weed control, and filling in of the settled area on the tailings impoundment. Re-seeding of the reclamation area is planned for completion this fall. Additional work needs to be done to clean up sediment in the main drainage channel.

2 Management Organization and Controls (88005)

2.1 Inspection Scope

The inspector reviewed the licensee's organizational structure and management controls to determine: (1) whether functional responsibilities and personnel qualifications had been established and fulfilled in accordance with the license conditions, and (2) whether controls were in place to ensure review and compliance with license requirements.

2.2 Observations and Findings

a. Organization Structure

Because of the Exxon-Mobil merger, changes have been made to the organizational structure since the last inspection in July of 1998. Exxon-Mobil Corporation's Corporate Vice President of Safety, Health, and Environment, has ultimate stewardship of environmental activities at facilities that no longer have ties to existing business units (orphan sites), such as the former Highland uranium mine. The Global Remediation Manager within Exxon-Mobil Refining and Supply Company oversees environmental remediation activities at sites throughout the world for Exxon-Mobil Corporation and its affiliates. The Regional Manager within the Exxon-Mobil Refining and Supply Company oversees environmental remediation and mine reclamation activities at all facilities (excluding retail service stations) within the United States.

The Area Manager for Upstream and Coal and Mineral Sites within Exxon-Mobil Refining and Supply Company has direct supervision over project managers that perform environmental remediation activities at upstream sites and mine reclamation at former mining facilities. The Project Manager for the Highland Reclamation Project within Exxon-Mobil Refining and Supply Company has the day-to-day responsibility for interacting with regulatory agencies, implementing environmental protection programs,

establishing work tasks, and supervising contractors that perform work at the Highland site. The licensee had utilized a contractor to perform routine activities at the site. The inspector determined that the contractor's environmental and radiation protection training adequately qualified the contractor to maintain the site.

c. Management Controls

License Condition 38 requires, in part, the establishment of standard operating procedures (SOPs) for environmental monitoring and instrument calibrations. The licensee started a review of SOPs during the inspection. The inspector reviewed the SOPs developed for the current site activities and found them to be of sufficient detail given the scope of work in progress at the site. The licensee finalized the SOP review on July 16, 2001, and informed the inspector that the SOPs were still adequate.

2.3 Conclusion

The licensee's organization and management controls met the requirements of the license.

3 Operations Review (88020), Radioactive Waste Management (88035) and Environmental Protection (88045)

3.1 Inspection Scope

A site tour was performed to verify that site activities were being conducted in accordance with applicable requirements. The inspector also determined if the environmental and groundwater monitoring programs were reviewed by the licensee. Activities at the site included inspections of site security, pump maintenance, groundwater seepage mitigation, and tailings basin erosion observations. The inspector reviewed documentation relating to monthly inspections conducted since July 1998. Also during the site tour, the inspectors took ambient exposure rate readings using a micro-Roentgen (μR) meter, NRC Serial Number 33035, that was calibrated on November 29, 2000, with radium-226.

3.2 Observations and Findings

Records indicated that the site groundwater monitor wells, seepage mitigation, and tailings basin had been inspected routinely. The monthly Highland compliance reports detailed the condition of the tailings basin, vegetation, groundwater monitor wells, seepage mitigation system, fences, and radioactive material signs. The groundwater mitigation system was found to be in adequate condition.

During the site tour, the licensee noted that earth work had been done during the spring 2001 to fill a settlement area on the tailings impoundment and that new settlement monument sites had been established. Additionally, the licensee stated that vegetation

seeding of the cover would be accomplished in fall 2001. Radioactive material signs had been replaced and were conspicuously posted as required by 10 CFR Part 20. Groundwater monitoring wells appeared to be operating normally. The licensee's surveillance reports were complete and indicated no unusual site conditions.

Exposure rate measurements varied from 13 to 15 μR/hour.

3.3 Conclusions

Site activities were limited to reclamation maintenance, mill tailings seepage control, and groundwater monitoring. These activities appeared to have been conducted in accordance with applicable license and regulatory requirements. Equipment was in service with no malfunctions apparent. Security at the site was adequate for the amount of work in progress. Site fences were in good condition, and perimeter postings were appropriate. The licensee's environmental monitoring program was in compliance with license requirements.

4 Onsite Construction Activities (88001)

4.1 Scope

The NRC conducted an erosion control and geotechnical review to determine whether problems existed to the tailings impoundment or erosion controls such that damage or deterioration needed reconstruction. The geotechnical engineering evaluation included both physical observations of the reclaimed impoundment and dam, and reviews of testing and inspection records.

The inspector reviewed onsite construction related to the erosion protection requirements identified in applicable license conditions. The inspector toured the site with licensee representatives and discussed the production, placement, and testing of the erosion protection materials. Representatives of the licensee were questioned regarding the techniques used to evaluate rock gradation and placement in various areas of the site.

4.2 Observations and Findings

a. Erosion Control

Records associated with the testing of riprap and filter zone quality, gradation, and placement were not available at the site. Additional review will be necessary to determine if all tests were performed as required. A review is also needed to determine if all specifications were met.

Where visible, staff observations indicated that the rock had been placed in a manner that the minimum rock layer thickness requirements were met. However, some of the rock had been covered with sediment, and it was not possible to confirm that specifications had been met. The inspectors indicated that additional information would be needed, and that it may be necessary for the licensee to perform some additional confirmatory testing.

During a walking tour of the site, significant sedimentation was observed in the diversion channel adjacent to the site. The NRC inspectors had concerns regarding the adequacy of the current erosion protection design in light of the decreased capacity of the diversion channel. NRC staff stated that the licensee would be informed by letter concerning further information needed by the NRC on the current erosion protection design.

b. Geotechnical Dam Review

Although no cover cracking or distress was observed, it appeared that settlement may be continuing at portions of the cover. The earthen cover showed only minor undulation to an extent consistent with the fact that the tailings were reclaimed in place. During this inspection, the NRC considered that the sideslopes and diversion ditches were stable.

The records appeared to be complete, and indicated that areas which initially failed to meet required compaction criteria were re-worked until a satisfactory density could be attained. The inspector determined that density test frequencies met the requirements of the reclamation plan.

Records of the potentiometric surface within the tailings indicated that the potentiometric surface was well below levels of concern. For this reason, the tailings were considered to be unsaturated, thus the reclaimed embankment would no longer be considered a dam. The unsaturated nature of the tailings were consistent with the minimal undulation now observable at the surface.

4.3 Conclusions

Exxon-Mobil needs to provide additional information to the staff concerning the placement of erosion protection materials to ensure that it was placed in a manner that all specifications and minimum rock layer thickness requirements were met.

The inspector determined that site reclamation had been accomplished in accordance with the approved reclamation plan. However, continued surveillance of settlement monuments was needed to assure that excessive tailings consolidation does not take place.

6 Exit Meeting Summary

The inspector presented the inspection results to the representatives of the licensee at the conclusion of the inspection on July 12, 2001. Licensee representatives acknowledged the findings as presented. The participants did not identify as proprietary any information provided to, or reviewed by, the inspectors.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Mark E. Hoffman, P.E., Project Manager

Other

Scott Blakeley, Owner, Pronghorn Pump and Repair

INSPECTION PROCEDURES USED

IP 87654:	Decommissioning Procedure for Uranium Mill Sites
IP 88005:	Management Organization and Controls
IP 88020:	Operations Review
IP 88035:	Radioactive Waste Management
IP 88045:	Environmental Protection
IP 88001:	Onsite Construction

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

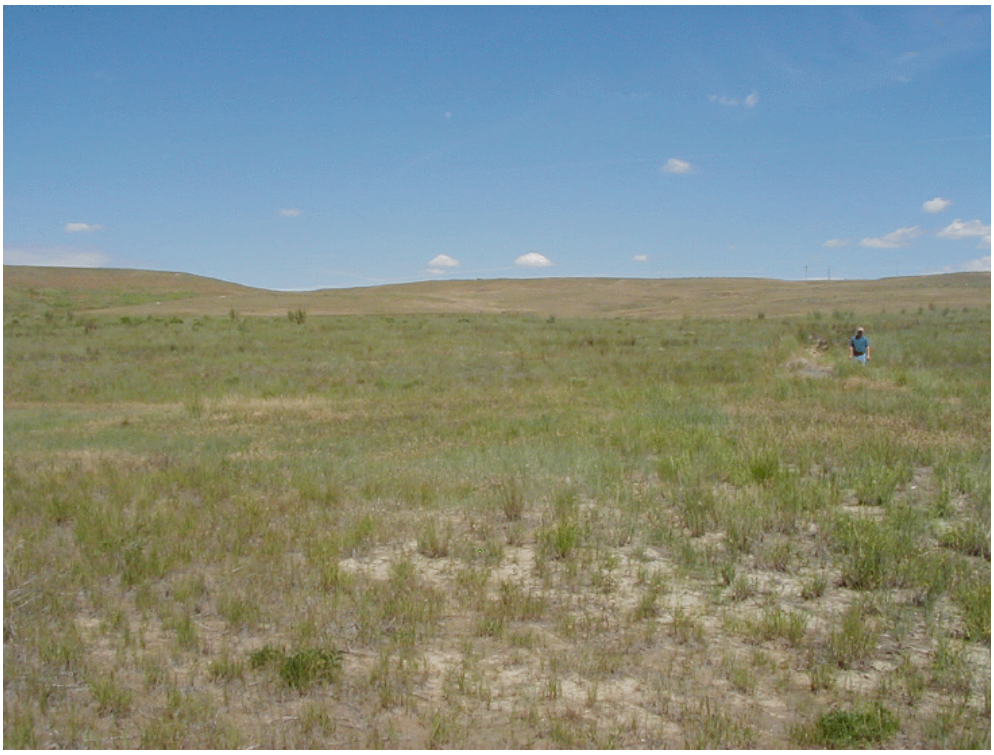
PDR	Public Document Room
SOP	Standard Operating Procedures

ATTACHMENT 2

Exxon Highlands Tailings Impoundment Looking East North East

Drainage Ditch Located in Center of Tailings Impoundment Looking North

On top of Exxon Highlands Impoundment Looking West at one of the Settlement Monuments



Look North Showing Gully and Sediment in Main Drainage Chanel