

APPENDIX B  
U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV  
URANIUM RECOVERY FIELD OFFICE

NRC Inspection Report: 40-8904/89-03  
Docket No.: 40-8904

License: SUA-1472

Licensee: BP America  
200 Public Square, 7-3  
Cleveland, Ohio 44114-2375

Facility: L-Bar Mill

Inspection Conducted: September 20, 1989

Inspector:	<u><i>D. L. Jacoby</i></u> D. L. Jacoby, Project Manager and Team Leader	<u>10/6/89</u> Date
	<u><i>R. O. Gonzales</i></u> R. O. Gonzales, Project Manager	<u>10/6/89</u> Date
Approved:	<u><i>Edward F. Hawkins</i></u> Edward F. Hawkins Branch Chief	<u>10/13/89</u> Date

Inspection Summary

Inspection conducted on September 20, 1989 (Report No. 40-8904/89-03).

Areas Investigated: Special inspection regarding the review of reclamation construction activities at the L-Bar Mill. The inspection included independent inspection and the review of construction quality control documentation.

Results: An apparent violation was identified from the approved reclamation plan in the area of riprap and bedding placement and gradation. Additionally, eight unresolved items were identified based on a review of the construction records.

DETAILS1. Persons Contacted

\*Ed Michaels, Maintenance Supervisor

\*Denotes those present at the exit interview.

2. Radioactive Waste Management

An inspection was made of the surface water/erosion protection features of the reclaimed site to assure that the project has been constructed as designed. The following items were observed by the inspectors: (1) several areas have either no riprap or the riprap layer thicknesses are less than specified; (2) in some of the areas having no riprap, it is not evident that a bedding layer was placed over the bare soil; and (3) in some areas, the riprap is much larger than specified and the rock is segregated; i.e., there are pockets of small stones and/or clusters of larger stones.

This is considered an apparent violation of License Condition No. 33. License Condition No. 33 of Source Material License SUA-1472 requires the licensee to reclaim the disposal area in accordance with their submittals dated February 27, 1989 and April 20, 1989. Riprap and bedding are to be placed at all locations and depths indicated in calculations 84-103.H1C, 84-103.H2C, 84-103.H6, 84-103.C82, and figures 4-5, 4-7 and 4-8 and page 4-13 of the February 27, 1989 submittal, and calculation 84-103.H3, Revision 2, dated April 20, 1989. The required gradations are given in Table 5-1 of the February 27, 1989 submittal.

Construction records were reviewed to assure that the frequency of rock testing specified in the reclamation plan was adhered to. In addition, a review was made of the quality control records for tailings recontouring and cover placement. Based on this review, the staff was unable to verify that sufficient testing was performed in several areas. Compliance with the following testing requirements could not be verified.

- A. The average specific gravity of the riprap must be no less than 2.5.
- B. The average sodium sulfate soundness test weight loss of the riprap must not be more than 1.3 percent.
- C. The specific gravity and soundness tests specified above plus gradation testing must be performed at least once every 5,000 cubic yards or at least once for each size of rock.
- D. The field moisture of all accepted fill materials was to be no drier than minus 2 percent of optimum moisture content.
- E. The nuclear gauge was to have been calibrated against the sand cone at least once for every 10 nuclear gauge tests performed.

- F. Field density and moisture determinations were to be made for every 10,000 cubic yards of material placed and at least once per day or once per shift (radon barrier materials only).
- G. One laboratory maximum density test was to be performed for every three sand cone tests and at least once per 5 working days.
- H. One laboratory classification was to be performed on radon barrier materials for every 10,000 cubic yards of material placed.

The licensee's representative who was the only person available at the site was not totally familiar with the construction records and files and thus could not locate records that demonstrated that the above testing requirements had been complied with. Therefore, these eight items are considered unresolved items that will require more information to ascertain whether the matters are acceptable, a deviation, or a violation.

One apparent violation was identified by the inspectors.

### 3. Exit Interview

The inspectors met with Mr. Michaels at the conclusion of the inspection. The purpose, scope and findings of the inspection were summarized.

INSPECTOR'S REPORT

Office of Inspection and Enforcement

Jacoby, Dawn L.

REVIEWER

INSPECTORS

Gonzales, Raymond O.

LICENSEE/VENDOR

TRANSACTION TYPE

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)

REPORT NO.

NEXT INSPEC DATE

bf America

- I - INITIATE
- M - MODIFY
- D - DELETE
- R - REPLACE

04008904

8903

PERIOD OF INVESTIGATION/INSPECTION

INSPECTION PERFORMED BY

ORGANIZATION CODE (IF REGION/HQ CONDUCTING ACTIVITY (file 15MC 0530 Manpower Reporting - Weekly Manpower Reporting for code)

FROM			TO		
MO.	DAY	YR.	MO.	DAY	YR.
09	20	89	09	20	89
20			25	26	31

- 1 - REGIONAL OFFICE STAFF
- 2 - RESIDENT INSPECTOR
- 3 - PERFORMANCE APPRAISAL TEAM
- OTHER

REGION	DIVISION	BRANCH
4	4	2

REGIONAL ACTION (Check one box only)

TYPE OF ACTIVITY CONDUCTED (Check one box only)

- 1 - NRC FORM 591
- 2 - REGIONAL OFFICE LETTER

- 02 - SAFETY
- 03 - INCIDENT
- 04 - ENFORCEMENT
- 05 - MGMT AUDIT
- 06 - MGMT VISIT
- 07 - SPECIAL
- 08 - VENDOR
- 09 - MAT ACCT
- 10 - PLANT SEC.
- 11 - INQUIRY
- 12 - PLANT VER.
- 13 - SHIPMENT/EXPORT
- 14 - IMPORT
- 15 - INVESTIGATION

INSPECTION INVESTIGATION FINDINGS (Check one box only)

TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS

ENFORCEMENT CONFERENCE HELD

REPORT (FORM 2790) INFORMATION

LETTER OF REPORT TRANSMITTAL DATE

A	B	C	D
<input checked="" type="checkbox"/>			

A	B	C	D
0	1		

A	B	C	D

A	B	C	D

NRC FORM 591 OR REPLY LETTER ISSUED			REPORT SENT TO HQ FOR ACTION		
MO.	DAY	YR.	MO.	DAY	YR.

MODULE INFORMATION

MODULE INFORMATION

REC. ORD.	MODULE NUMBER INSP.					PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED	TO DATE	STATUS	MODULE REC FOLLOWUP								
	TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER						LEVEL	TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL		
B	530703					A	001				B								
Management Entrance/Exit Interviews																			
B	588035					A	003	100	P		B								
Radioactive Waste Management																			
B						A					B								
B						A					B								

CIRCLE SEQUENCE IF... (Small text)

**INSPECTOR'S REPORT  
(Continuation)**

Office of Inspection and Enforcement

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)										REPORT		MODULE NUMBER						SITE RELATED				
										NO	SEQ	VIOLATION SEVERITY OR DEVIATION						A	B			
0	4	0	0	8	9	0	4			8	9	0	3	A	1	2	3	4	5	6		
														B								
														C								
														D								

VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 50 characters each.)

1.

2. License Condition No. 33 of Source Material License SUA-1472 requires the licensee to

3. reclaim the disposal area in accordance with their submittals dated February 27, 1989

4. and April 20, 1989. Riprap and bedding are to be placed at all locations and depths

5. indicated in calculations 84-103.H1C, 84-103.H2C, 84-103.H6, 84-103.C82, and figures 4-5,

6. 4-7 and 4-8 and page 4-13 of the February 27, 1989 submittal, and calculation 84-103.H3,

7. Revision 2, dated April 20, 1989. The required gradations are given in Table 5-1 of

8. the February 27, 1989 submittal.

9.

10. Contrary to these requirements; (1) several areas designed to be riprapped were

11. observed to have either no riprap or the riprap layer thickness was less than specified,

12. (2) in areas with no riprap, it was observed that a bedding layer had not been placed

13. over the bare soil, and (3) several areas were observed where riprap is much larger

14. than specified and segregation had occurred during placement.

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LLO Branch, LLWM

Suspense File

URFO r/f

CONCURRENCE:

DATE:

DJacoby/URFO/1/

DLJ

10/1/89

RGonzales/URFO

R

10/6/89

EHawkins/URFO

E

10/13/89

REHall/URFO

R

10/16/89