



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

August 15, 2008

TO: Docket File 040-06622

THROUGH: Jack E. Whitten, Chief */RA/*
Nuclear Materials Safety Branch B

FROM: Linda Gersey, Health Physicist */RA/*
Nuclear Materials Safety Branch B

SUBJECT: PATHFINDER-SHIRLEY BASIN SITE VISIT

On June 4, 2008, NRC staff conducted a site visit of Pathfinder-Shirley Basin, a former conventional uranium mill located in Carbon County, Wyoming. Attached to this Memorandum is a trip report for this site visit. No regulatory issues or safety concerns were identified during the site visit.

Docket No.: 040-06622
License No.: SUA-442

Enclosure: NRC Trip Report

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SUNSI Review Completed: LMG ADAMS: Yes No Initials: LMG
 Publicly Available Non-Sensitive

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DATE	08/05/2008	08/ /2008	08/07/2008	08/15/2008

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NRC TRIP REPORT

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 040-06622

License No.: SUA-442

Report No.: None

Licensee: Pathfinder Mines Corporation

Facility: Pathfinder-Shirley Basin Site

Location: Carbon County, Wyoming

Date: June 4, 2008

Inspector: Linda M. Gersey, Health Physicist
Nuclear Materials Safety Branch B

Accompanied by: Richard Chang, General Scientist
Douglas T. Mandeville, PE, Geotechnical Engineer
Ted Johnson, NRC Consultant
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental
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Approved by: Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

ENCLOSURE

NRC Trip Report

1 Background

This site visit was conducted for the purpose of having the NRC observe the status of the licensee's reclamation construction.

2 Site Status

The licensee has completed all the grading, radon clay barrier installation, sand layer installation, topsoil installation, and most of the rock mulch installation for all ponds except for Pond 3 (*in situ* leach (ISL) disposal area). Pond 3 reclamation will not occur until the licensee discontinues operation of the 11e.(2) byproduct material disposal area, the date for which has not been determined. Reclamation of areas adjacent to Pond 3, such as access points and drainage features, will be deferred until the licensee discontinues the Pond 3 operations.

NRC staff noted that the rock in the bottom of the diversion channels appears to be adequately sized. Additionally, rock placement along the bottom of the diversion channels was good. However, the rock placement along the sides of the diversion channels does not appear to provide sufficient freeboard (see Figure 2). The licensee should consider reviewing the design of the diversion channels to identify the minimum required freeboard. The minimum required freeboard can be compared to the conditions in the field to determine if the diversion channels have been constructed correctly.

NRC staff agreed to request that a construction specialist from NRC headquarters accompany the NRC RIV inspectors during their next inspection of this licensee. The construction inspection should focus on the erosion protection and geotechnical engineering aspects of the reclamation.

3 Persons Contacted

Thomas Hardgrove, Manager, Environmental & Regulatory Services, Pathfinder Mines Corporation

Figure 1 - Pathfinder Shirley Basin



Figure 2 - Pathfinder Shirley Basin



Side of channel may be missing rock, may not provide sufficient freeboard

Example of good rock placement along bottom of drainage channel