

May 30, 2002

Donna Wichers, General Manager  
Pathfinder Mines Corporation  
P.O. Box 831  
Riverton, Wyoming 82501

SUBJECT: NRC INSPECTION REPORT 40-2259/2002-201

Dear Ms. Wichers:

On May 1, 2002, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your former Lucky Mc Uranium Mill site in Fremont County, Wyoming. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations of activities in progress. The inspection findings were presented to members of your staff at the conclusion of the onsite inspection. The enclosed report presents the results of that inspection. The inspection determined that you have continued to make progress in remediating the site. Due to inclement weather conditions, it was not possible to reach specific conclusions regarding construction of erosion protection in many areas. In those areas where large rock was being placed in channels, the inspectors determined that additional work was needed for the rock to meet construction specifications.

No violations or deviations were identified, therefore, no response to this letter is required.

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 (PDR) or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.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/**

Gary S. Janosko, Chief  
Uranium Processing Section  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 40-2259  
License No.: SUA-672

Enclosure:  
NRC Inspection Report 40-2259/2002-201

cc w/enclosure:

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COGEMA

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Bethesda, Maryland 20814-3416

Mr. David Finley

Wyoming Department of Environmental Quality

Solid and Hazardous Waste Division

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2597 B  $\frac{3}{4}$  Road

Grand Junction, Colorado 81503

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U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
INSPECTION REPORT

Docket No. 40-2259

License No. SUA-672

Report No. 40-2259/2002-201

Licensee: Pathfinder Mines Corporation

Facility: Former Lucky Mc Uranium Mill

Location: Fremont County, Wyoming

Date: May 1, 2002

Inspector: John H. Lusher, Health Physicist  
Uranium Processing Section  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards

Accompanied by: Terry Johnson, Surface Hydrologist  
Uranium Processing Section  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards

Art Kleinrath, Project Manager  
DOE, Grand Junction Office

Mark Plessinger, Project Manager  
MACTER-ERS, DOE contractor

Approved By: Gary S. Janosko, Chief  
Uranium Processing Section  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards

Enclosures: Supplemental Information  
Photographs

Enclosure

## **EXECUTIVE SUMMARY**

Site of Former Lucky Mc Uranium Mill  
NRC Inspection Report 40-2259/2002-201

This inspection included a review of the on-site construction status.

### **Site Decommissioning Status**

- Site activities and decommissioning programs were being conducted in accordance with the reclamation plan, the license, and applicable NRC regulations (Section 1).
- Site fences were in good condition. Site security and perimeter postings were appropriate (Section 1).

## Report Details

### **1 Site Status and Decommissioning for Uranium Mill Sites (87654)**

#### **1.1 Inspection Scope**

The site status and decommissioning activities were reviewed to determine if licensee activities were being conducted in accordance with the reclamation plan, NRC regulations, and the license. A facility tour was performed to verify that site activities were being conducted in accordance with applicable regulations and license SUA-672, and to ensure that controls were adequate to protect the health and safety of workers and the public.

#### **1.2 Observations and Findings**

##### **a. Site Status**

Pathfinder's Lucky Mc facility operated from February 1958 until 1988. Decommissioning of the mill site began in July 1993. As part of the reclamation process, 210 acres were characterized as the affected windblown contaminated soil area. Windblown soil cleanup activities, confirmatory surveys, and soil analyses for radium-226 were completed in May 1997. Approximately 550,000 cubic yards of windblown material had been removed and placed at the toe of Tailings Pond 2A. The site has six tailings ponds, three of which (1, 2, and 2A) are used for solid waste tailings disposal, and the other three (3, 3A and 4) are used for solution disposal. A temporary pond is in use as a pump back treatment system for receiving solutions from excursion well cleanup and groundwater sweep, surface water runoff, and solution water for construction and dust control within the cells. Tailings Ponds 1 and 2 had been regraded, and the interim radon cover was in place. Tailings Pond 2A reached 90 percent consolidation in May 2001 such that regrading, interim covering installation, and radon barrier work were proceeding. The licensee had placed an interim cover on Solution Pond No. 3, and Ponds 1, 2, and 3A were at various stages of having the final radon barrier installed.

Reclamation activities in progress during this inspection included: (1) placing radon barriers, (2) maintenance of tailings impoundments and disposal cells, and (3) construction of tailings impoundment drainage channels.

##### **b. Site Tour**

During the inspector's tour, fences and gates were observed to be in good condition and were properly posted. The inspector determined that licensed material was secure within the site property as required by 10 CFR 20.1801 and fences were posted with radioactive material signs as required by 10 CFR 20.1902.

### 1.3 Conclusions

Site decommissioning activities were reviewed and found to have been conducted in accordance with the reclamation plan, applicable license conditions, and regulatory requirements. Site fences and perimeter postings were in good condition. No health or safety hazards were identified.

## **2 On-site Construction (88001)**

### 2.1 Inspection Scope

The NRC conducted an erosion control review to determine whether problems with the tailings impoundment construction or erosion controls existed such that damage or deterioration needed repair.

The inspector observed on-site conditions related to the erosion protection requirements identified in applicable license conditions. The inspectors toured the site with licensee representatives and discussed the placement of the erosion protection materials. Additionally, the inspectors evaluated several channel sections that had been constructed by the licensee and discussed future design changes that the licensee plans to submit for staff review.

### 2.2 Observations and Findings

#### a. Erosion Protection

Based on visual observations of the riprap in the channels the inspectors indicated that the rock placement should be more uniform, with less segregation of fine materials.

The licensee indicated that changes will be made to the construction in several areas. No commitments were made regarding schedules during these discussions.

### 2.3 Conclusions

On the basis of limited observations of the placement of the rock in the channels, the inspector determined that additional efforts are needed for placed riprap to meet construction specifications.

## **3 Exit Meeting Summary**

The inspectors presented the inspection results to licensee representatives at the conclusion of the inspection on May 1, 2002. The licensee representatives acknowledged the findings as presented. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspector.

## **PARTIAL LIST OF PERSONS CONTACTED**

### Licensee

R. Mark Owens, Manager, Technical Services

Thomas Michel, Ph.D., Hydrologist, Hydro - Engineering, LLC

George L. Hoffman, P.E., Hydrologist, Hydro - Engineering, LLC

## **ITEMS OPENED, CLOSED AND DISCUSSED**

### Opened

None

### Closed

None

### Discussed

None

## **INSPECTION PROCEDURES USED**

87654	Decommissioning of Uranium Mills
88001	On-site Construction

## **LIST OF ACRONYMS USED**

DOE	Department of Energy
CFR	Code of Federal Regulations
LC	License Condition
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PDR	Public Document Room
PLM	Pathfinder Lucky Mc





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Channel Rip  
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