



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

August 1, 2008

TO: Docket File 040-09075

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

FROM: Robert Evans, CHP, PE, Senior Health Physicist /RA/
Linda Gersey, Health Physicist
Nuclear Materials Safety Branch B

SUBJECT: DEWEY BURDOCK PROJECT SITE VISIT

On July 17, 2008, NRC staff conducted a site visit of the Dewey Burdock Project, an in-situ recovery uranium mining project being developed by Powertech Uranium Corporation. The site is located near Edgemont, South Dakota. 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.: 040-09075
License No.: None

Enclosure: NRC Trip Report

bcc w/Enclosure:

AHowell
 JEWhitten
 LMGersey
 RJEvans
 JFKatanic
 SJCohen, FSME/DWMEP/DURLD
 BvonTill, FSME/DWMEP/DURLD
 RITS Coordinator
 NMSB-B
 RIV Nuclear Materials File - 5th Floor

ML0

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

: S:\DNMS\NMSB-B\RJE\Powertech Uranium Site Visit.doc final: r:_dnms\

OFFICE	RIV:DNMS/NMSB-B	DNMS/NMSB-B	C:NMSB-B
NAME	RJEvans	LMGersey	JEWhitten
	/RA/	/RA/	/RA/
DATE	07/24/2008	07/29/2008	08/01/2008

OFFICIAL RECORD COPY

NRC TRIP REPORT

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 040-09075

License No.: None

Report No.: None

Licensee: Powertech Uranium Corp.

Facility: Dewey Burdock Uranium In-Situ Recovery Project

Location: Fall River and Custer Counties, South Dakota

Date: July 17, 2008

Inspectors: Robert Evans, PE, CHP, Senior Health Physicist
Linda Gersey, Health Physicist
Nuclear Materials Safety Branch B

Accompanied by: Stephen J. Cohen, Team Leader/Project Manager
James Webb, Health Physicist
Ronald Burrows, Senior Health Physicist
Ernesto Quinones, Project Manager
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental
Management Programs

Approved by: Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

NRC Trip Report

1 Background

By letter dated January 26, 2007, Powertech Uranium Corporation (Powertech) submitted a Notice of Intent letter to the NRC for a source material license. Powertech plans to construct an in-situ recovery facility at the Dewey Burdock Project site in Fall River and Custer Counties, South Dakota. The target date for the license application is October 1, 2008.

The site had been previously explored by Tennessee Valley Authority (TVA) during the 1970s and is part of the former Edgemont Mining District. Silver King Mines explored the area in conjunction with TVA during the early 1980s. Energy Fuels Nuclear acquired the project for a period of time. Powertech subsequently acquired the property in 2005.

The site is about 12,000 acres (4,856 hectares) in size. A previous technical report estimated that the area contains about 7.6 million pounds of U_3O_8 in the host rock. Uranium reserves are located in two deposits that range from 400-800 feet (122-244 meters) below ground surface. The formations consist of permeable sandstones amenable to in-situ recovery operations. Almost 4,000 exploration and delineation holes have been drilled on the property, primarily by the previous operators.

2 Site Status

The licensee plans to construct an in-situ recovery mill near Burdock and a satellite facility near Dewey. The licensee plans to request a total annual production rate of 1 million pounds of yellowcake product. The main plant site and the satellite facility are both anticipated to have operational flow rates of about 2,000 gallons each. The plant is expected to employ 120 people when fully operational. Three staff members were currently assigned to the Edgemont office—project manager, office manager, and well logging supervisor.

Criterion 7 to 10 CFR Part 40, Appendix A, requires the implementation of a preoperational monitoring program to establish baseline data. As part of the license application process, Powertech conducted baseline environmental monitoring including sampling of surface water, groundwater, meteorology, geology, radiological, soils, and vegetation. Powertech also conducted the land use, demographic, wildlife, and cultural resource reviews. At the time of the site visit, the licensee had completed the quarterly groundwater sampling. Air particulate, gamma radiation, and vegetation sampling was still in progress.

The inspectors toured the two properties. Activities in progress included environmental radiological sampling. The meteorological tower was installed and in service. No plant construction activities were in progress. The inspectors observed several open pit mines from previous mining operations, but Powertech officials stated that they will not be conducting in-situ recovery operations in these areas.

3 Persons Contacted

Mark Hollenbeck, Project Manager, Powertech Uranium
Lisa Scheinost, Office Manager, Powertech Uranium

Figure 1: Site of Future Mill near Burdock



Figure 2: Site of Future Satellite Facility near Dewey

