POWERTECH (USA) Inc.
Dewey – Burdock Project Pre-Mine Inspection

Operator:	Powertech (USA) Inc.
Permit Number:	Pending (Large Scale In Situ Uranium Mine Permit Application)
Project:	Pre-mine inspection and meeting
DENR Inspectors:	Roberta Hudson, Eric Holm, Mark Keenihan, Mike Cepak and Matt Hicks
Operators Present:	Mark Hollenbeck and John Mays
Others Present:	Stan Michals, SD Game, Fish and Parks Jack Fritz, WWC (Powertech Consultant)
Inspection Date:	October 25, 2012
Time In/Out:	8:25 am MDT to 11:45 am MDT
Weather:	Partly cloudy, snow on ground, temperature 25 to 32 degrees F, wind at 10 to 15 mph

In accordance with SDCL45-6B-20, a pre-mine inspection of Powertech's proposed in situ recovery (ISR) uranium mine was conducted on October 25, 2012 by the above mentioned individuals. The legal location of the proposed operation is as follows:

> E1/2 NE1/4, E1/2 SE1/4, SW1/4 SE1/4, S1/2 NW1/4 SE1/4, SE1/4 SW1/4, and S1/2 NE1/4 SW1/4 Section 20; W1/2, W1/2 W1/2 NE1/4, and W1/2 NW1/4 SE1/4 Section 21; S1/2 Section 27; N1/2 NW1/4, SW1/4 NW1/4, and SW1/4 Section 28; Section 29; Section 30; E1/2 Section 31; Section 32; NW1/4, SW1/4, SE1/4, and S1/2 NE1/4 Section 33; Section 34; and Section 35; T6S-R1E, Custer County
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> Section 1; Section 2; Section 3; W1/2 W1/2 Section 4, Section 5; Section 10; Section 11; Section 12; NW1/4, W1/2 NE1/4, and NE1/4 NE1/4 Section 14; and N1/2 Section 15; T7S-R1E, Fall River County
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> General Location: Approximately 13 miles northwest of Edgemont, South Dakota.

The proposed mine operation will involve in situ recovery (ISR) uranium mine. Powertech will use injection wells to pump groundwater fortified with oxygen and carbon dioxide into ore deposits to dissolve uranium. Production wells will be used to pump the uranium-laden fluids to the surface for recovery. The fluids from the production wells will be processed at two separate facilities at the mine site to extract and concentrate the uranium. A central processing plant (CPP) will be located in the Burdock area, and a satellite plant (SP) will be located in the Dewey area. Powertech may also recover vanadium in the future which will require additional processing equipment.

After uranium has been removed from a well field, the groundwater will be restored to meet water quality standards. Wastewater generated by the operation will be treated and disposed by injection in Class V injection wells permitted through the EPA Underground Injection Control Program, or disposed by land application permitted by a DENR Groundwater Discharge Permit. The proposed post-mining land uses are rangeland and agricultural or horticultural crops.

The total acreage within the proposed permit boundary is 10,580 acres, mostly on private land. About 240 acres of BLM land are included in the permit boundary. Powertech proposes to affect 2,528 to 3,792 acres depending upon whether deep well injection or the land application is used for wastewater disposal. Estimated production is one million pounds of uranium oxide (U_3O_8) per year.

Field Inspection

The group met at the Powertech office in Edgemont, South Dakota at 8:25 am MDT. Due to a snowfall the previous day and night, and concerns that warming temperatures could thaw the ground and turn the local roads to mud, the inspection began promptly at 8:40 am MDT.

Darrow Pit Area. The group drove from Edgemont to the mine area, arriving at the Darrow Pit area at 9:00 am. By this time, the temperature had risen to 30 degrees F and the local access roads were turning muddy. The Darrow area includes old mine pits and spoil piles that date back to the 1950s and 60s. Powertech is proposing to place well fields 6, 7, and 8 in this area. The inspectors asked about well field BWF-7 that was shown on the plans to be developed in this area. John Mays stated that the plans for this well field were conceptual and that some grading work may be necessary to install wells in the area. He added that the ore bodies in this area are in the Chilson member, a few hundred feet below the pits which were mined in the Fall River formation. The Chilson and Fall River are separated by the Fuson shale member. The well field for this area would skirt the old pits on the west and north, although some wells would be placed on the old spoil piles. Mr. Mays added that this well field would not be developed for several years, and that an amendment to the NRC license would be necessary to mine the area.
The department told Powertech that it needs to address in the mine permit application the feasibility of reclaiming and revegetating any well fields placed on spoil piles and pits in this area.

Burdock Area. At 9:15 am, the group traveled to an overlook area a short distance to the east of where the Burdock proposed central processing plant (CPP) would be sited. From the overlook area, the group could also see the areas were the land application pivots would be placed to the north and west of the plant. The area is fairly flat with Pass Creek meandering through the area, with a few intermittent stream channels. A herd of about 15 pronghorn antelope were noted in this area.

Eric Holm asked Jack Fritz about details on the catchment areas in the land application area. Mr. Fritz said berms would be constructed in the catchment areas. Mr. Holm told him Powertech will need to submit plans and specifications for the berms so that we can calculate costs to remove the berms and reclaim the area in the reclamation bond for the land application area. Mr. Fritz said they want to arrange a conference call to discuss Powertech's bond calculations for the land application area with the department during the week of October 29.

Photo 1. Looking west, proposed location of Burdock Central Processing Plant. Land application areas would be to the north and west of the plant.

Photo 2. Another view of proposed location of Burdock land application area pivots.

Roberta Hudson asked Mr. Fritz about sampling any storm water that accumulates in the catchment areas. Mr. Fritz stated there were no plans to sample storm water within the catchment area nor were there any plans to pump this water from the basins. Ms. Hudson explained the storm water may rinse pollutants off of the land application areas and since there

was no plan to remove this water for treatment if needed due to water quality this may cause difficulties in the future. As the water evaporates the pollutants within the water will remain within the soils and may cause future difficulties with reclamation in the area as soils have increased chlorides and SAR values. Mr. Fritz acknowledged this could be a concern and mentioned the possibility of adding soil sampling within the catchment areas where water may pond to further address this issue.

We drove down into the Burdock area at 9:38 am (the roads were becoming very muddy at this point). We stopped at area where an intermittent stream was to be diverted around a land application pivot area. The terrain in this area is flat, and the diversion channel would be shallow, only about 8 feet deep.

At 9:45 am, we drove over to monitoring wells BC-2 and 708. These alluvial wells are being used to establish ambient conditions in the land application area as part of the Ground Water Discharge Permit application. Powertech has discovered an anomaly in water elevation and quality around well BC-2 (compliance point) and 708. After BC-2 was completed, the water level rose to its current static position which is 15.39 feet higher than well 708. Well 708 is a distance of 219 feet away from BC-2. This difference in static water level could mean groundwater mounding in the vicinity of B-2. Powertech is proposing to install three additional wells in the area of BC-2 and upgradient towards the land application areas to determine if this is a localized event connected with BC-2 or with 708, and to determine the validity of BC-2 as an accurate compliance point.

Photo 3. Well BC-2 with well 708 in the background.

Dewey Area. At 10:10 am, the group arrived in the Dewey area. By this time, all roads were extremely muddy which was inhibiting access to parts of the proposed mine area. We stopped a short distance to the west of the proposed satellite processing plant (SP). In this area, we could

also view the locations where the land application pivots in the Dewey would be placed. As with the Burdock land application area, the Dewey land application area would be on flat ground. A prairie dog town was noted in the area.

Photo 4. Looking east, proposed located of the Dewey Satellite Plant.

Photo 5. Looking west, proposed Dewey land application pivot areas.

From this point, we could also see in the distance two bald eagle nesting sites along Beaver Creek. A nest several hundred yards to the west towards the Wyoming border may be close to

some of the land application pivots in this area. The other nest was several hundred yards to the south. This nesting site appeared to be some distance away from the closest well field or land application pivot area (over 500 feet away).

Photo 6. Looking west, bald eagle nest along Beaver Creek in the Dewey area.

Due to the muddy conditions of the roads and fields (walking was difficult too), we decided to end the inspection at 10:15 am MDT and return to Edgemont.

On the trip back to Edgemont, John Mays asked about the hearing before the Board of Minerals and Environment on the mine permit application and who needs to attend for Powertech. We told Mr. Mays Powertech should plan to have several of its consultants give testimony on important items such as water quality, geochemistry, wildlife, and air quality. We added that Powertech's witnesses can be cross-examined by the department and any interveners. After Powertech presents it case, the department and interveners would present their cases before the board would make a decision on the application.

Closeout Meeting

At 10:50 am MDT the group reconvened in Edgemont. DENR staff discussed the possible permitting schedule over the few several months. DENR staff said that would be issuing a letter on October 31, 2012 (the 30-day deadline for DENR to respond to the Powertech large permit application). DENR staff said the application at this time is considered procedurally incomplete and Powertech would need to address additional items to complete the application. However, based on the nature of the incomplete items, Powertech could complete the application by early December. Figuring an early December filing, the 90-day technical review period and a 45-day extension, the hearing on this application could be heard in April 2013.

We also discussed the reclamation bond. In discussion with the Nuclear Regulatory Commission (NRC), we agreed that all of the bond required by the department (reclamation and ground water discharge), the NRC, EPA, and BLM should be combined into one bond. It has not been determined who would hold the bond, but NRC told us that states usually are the custodian of the bond. If the state holds the bond, we will need to develop a memorandum of understanding with the NRC and the other agencies.

Powertech gave an update on its Class V Permit application. It is still waiting for the draft permit and hopes to receive it soon. Powertech has a meeting with EPA during the week of October 29 to discuss the status of the permit application.

The DENR said the October 31 letter would address all the procedural completeness issues. As the review was still on-going and the letter was still being drafted, only a few completeness issues were discussed. The items discussed included:

1. Regarding mineral ownership, Powertech listed the BLM as a mineral owner. However, Powertech needs to identify the unpatented mineral claim holders instead of listing BLM as the mineral owner. These unpatented claims need to be shown on Plate 2.2-1, similar to how the claims are shown in Figure B-4 in Appendix 3.4- A.

2. Powertech needs to submit copies of all mineral leases or other agreement with mineral owners to provide proof of its legal right to enter and initiate operations. This would need to include unpatented claim also. The leases or agreements can be marked confidential to protect sensitive information.

3. Powertech will need to submit proof of consultation with surface owners and with adjacent landowners in accordance with SDCL 45-6B-12 and SDCL 45-6B-44.

The meeting ended at 12:15 pm MDT.

Inspectors: \S/

Date: October 25, 2012