DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES
PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

Uranium Exploration Permit Field Inspection

Operator:	Powertech (USA) Incorporated
Project :	Uranium Exploration Pre-Inspection
DENR Inspectors:	Mike Cepak, Eric Holm, Mike Lees, Roberta Fivecoate, Mark Keenihan, Gary Haag, Tom Bradner, and Matt Hicks
Operators Present:	Richard Blubaugh, Richard Clement, Mark Hollenbeck, Frank Lichnovsky, Amy Thurlkill, Jim Munro, Wyatt Van Eaton, and Len Eakin
Others Present:	Stan Michals (Game Fish and Parks) Mike Fosha (State Archaeologist Office) Jason Kruse and Rob Bozell (Augustana College) Cory Foreman (RESPEC) Dan Benoit, Russ Pigors, and Elizabeth Stiller (Bureau of Land Management) Rusty Wilder, Laura Burns, and Lea (US Forest Service) Keith McConnel, William von Till, Gregory Suber, Alan Bjornson, James Park, and Joan Olmstead (Nuclear Regulatory Commission) Gary Walter, Patrick LaPlante, and Edgar Huber (Southwest Research Institute)
Inspection Date:	August 26 and October 8, 2008
Time In/Out:	August 26 9:40 am to 4:00 pm MDT October 8 9:50 am to 4:30 pm pm MDT

A pre-inspection of Powertech's proposed 30-hole uranium exploration project was conducted on August 26 and October 8, 2008. The following persons attended the August 26 inspection:

Mike Cepak, Eric Holm, Roberta Fivecoate, Mark Keenihan, Gary Haag, and Tom Bradner (DENR);
Richard Clement, Frank Lichnovsky, Jim Munro, Wyatt Van Eaton, and Len Eakin (Powertech);
Stan Michals (Game Fish and Parks);
Cory Foreman (RESPEC);
Dan Benoit, Russ Pigors, and Elizabeth Stiller (Bureau of Land Management (BLM));
Rusty Wilder, Laura Burns, and Lea (US Forest Service);
Keith McConnel, William von Till, Gregory Suber, Alan Bjornson, James Park, and Joan Olmstead (Nuclear Regulatory Commission (NRC)); and
Gary Walter, Patrick LaPlante, and Edgar Huber (Southwest Research Institute).

The following persons attended the October 8 inspection:

Mike Cepak, Eric Holm, Roberta Fivecoate, Mike Lees, and Matt Hicks (DENR);
Richard Blubaugh, Frank Lichnovsky, Jim Munro, Amy Thurlkill, Mark Hollenbeck, and Len Eakin (Powertech);
Mike Fosha (State Archaeologist Office)
Jason Kruse and Rob Bozell (Augustana College)
Stan Michals (Game Fish and Parks); and
Cory Foreman (RESPEC).

August 26, 2008 Inspection

On August 26, 2008 at 9:40 am MDT, the inspectors met with the above mentioned representatives at the Powertech office in Edgemont, South Dakota. Representatives of the US Forest Service met us in the field later in the day. Frank Lichnovsky of Powertech gave a brief presentation of the proposed mining operation to the group. He showed the location of the Dewey satellite processing facility and the main processing facility near Burdock where some condemnation drilling under the 30-hole exploration project will be conducted.

After the meeting, we drove to the proposed exploration areas. The group stopped at numerous sites to cover the various interests of all the parties attending. For purposes of this report, however, only those stops applicable to the proposed exploration project are covered in detail.

We arrived at the Burdock area at 11:37 am MDT. The first stop was an area just inside the gate just to the west of the county road. Powertech has conducted uranium exploration activities in the Burdock area under EXNI-404. Mr. Lichnovsky showed the ore trend in the area which extends from east of where the group stopped towards the southwest.

We next stopped at 12:05 pm MDT in the Burdock area at the area where the May 2008 pump test was conducted. Powertech plans to drill just to the east of this area under the proposed 30-hole project to further delineate ore bodies in this area (Photo 1). The company installed steel ranch style fence panels around the wells that were used in the pump test. A small pond was constructed to contain water from the pump test. Mr. Lichnovsky said this would be the area where the first well field would be established during mining. Gypsum was noted in the disturbed soils around the pump test area. Vegetation consisted of greasewood, sage brush, prickly pear, wheatgrasses, and gumweed.

At this point, personnel from the Forest Service arrived. The group then proceeded to the Darrow-Neville abandoned uranium mine. The abandoned mine has unreclaimed pits and waste rock piles and low pH water is some of the ponds in the pits.

At 12:40 pm MDT we stopped on a small hill in the Burdock area that overlooked the proposed central processing plant area (Photo 2). Powertech plans to conduct condemnation drilling in this area under the 30 hole exploration project. This area will have a processing facility where the uranium ore in solution will be converted into a uranium oxide product.

Photo 1 – Proposed exploration area.

Photo 2 – Proposed exploration area.

There were signs that burrowing animals are using the area. Vegetation consisted of sagebrush, prickly pear, little bluestem, blue grama, and wheatgrasses. The Darrow-Neville waste piles could be seen to the east and southeast of this area. Personnel from the US Forest Service decided to stay behind and inspect the Darrow-Neville Pit.

The group then proceeded to the Dewey area at 1:20 pm MDT. At this point the NRC personnel departed to attend a prior commitment. As we drove north to the Dewey area, we drove over the Pass Creek bridge and noted the debris field from the recent Pass Creek flood. As we entered the Dewey area, we noted some signs that indicated that the area was a Cooperative Management Area between the Department of Game, Fish and Parks and GCC Dakotah, the surface owner.

At 1:40 pm MDT we inspected the proposed satellite processing facility site. Powertech plans to conduct condemnation drilling in this area under the 30-hole exploration project. A prairie dog town was noted, and portions of it will be disturbed during construction of the satellite facility. One of the sites drilled under EXNI-404 (DB07-29-5) was plugged and regraded, but did not appear to be seeded. Vegetative cover was sparse in this area and consisted of buffalograss and greasewood.

The last stop on the inspection was where the Dewey pump test was recently conducted. Powertech plans to drill just to the east of the pump test area under the 30-hole exploration project (Photo 3).

Photo 3 – Proposed exploration area.

As with the pump test in the Dewey area, Powertech installed steel ranch style fence panels around the wells that were used in the pump test. A small pond was constructed to contain

water from the pump test. Vegetative cover was also sparse in this area and consisted mainly of buffalograss and weeds. The prairie dog town previously mentioned extends into this area.

We left the Dewey area at 2:15 pm MDT and headed back to the Hollenbeck Ranch for a final meeting on issues relating to the proposed mining operation and permitting requirements.

We left the site at 4:00 pm MDT.

October 8, 2008 Inspection

On October 8 at 9:50 am MDT, a second inspection of the proposed 30-hole exploration area was conducted to discuss with Mike Fosha of the State Archaeologist office and consultants from Augustana College the potential for archaeologic sites in the proposed exploration areas. We also wanted to look at some bird nesting areas in and near the proposed exploration areas. The inspectors met with the above mentioned representatives at the Powertech office in Edgemont. We first discussed the timetable for the hearing on the 30-hole exploration permit application which will be held in Pierre on November 19, 2008. The department told Powertech that the meeting time was changed from 1:00 pm CST to 10:30 am CST. Also, we anticipate that Powertech will go first and present the application to the board. We will then cover the various completeness items and the proposed bond for the permit.

We discussed the department's draft bond calculation for the 30-hole project. A draft copy of the department's $131,600 calculation was given to Powertech. We told Powertech that the hole plugging calculations were much higher that those calculated for EXNI-404 since the time to plug each hole with cement was increased from ½ hour to 3 hours and drill rig and cement costs increased. Powertech was concerned with the calculated amount. The department told Powertech it could provide its costs to plug holes with cement if they are lower. Also, since not all of the holes will have artesian flow and will not have to be plugged with cement, we could modify the bond to reflect that difference. Mr. Hollenbeck indicated Powertech would put together a potentiometric surface map of the area to calculate how many holes would need to be plugged with cement.

On a related matter, we discussed the reduction of the reclamation bond for EXNI-404. Powertech said that because it appears the bond for the permit will need to be recalculated to account for increased cement plugging costs, it will put its request on hold. The department said if Powertech decides to go ahead and request release of the plugged holes, it will need to inspect each hole to ensure that the plugs have not collapsed or water is seeping out of the plugged holes.

Stan Michals of Game, Fish and Parks said when he compared wildlife studies of the area to the locations of the proposed drill areas, a bald eagle nest was located within ½ to 1 mile of a drill location in the Dewey area. Mr. Michals informed Powertech the presence of the bald eagle nest will limit the times when the company would be able to drill the area if the drilling is conducted within ½ mile of the nest. According to Mr. Michals,

activity within this drilling area may not be allowed from February to September each year. The restriction in drilling activity will prevent the eagles from becoming nervous of activity occurring near the nest and abandoning it. Mr. Michals agreed to work with Powertech on this issue and would make recommendations regarding this issue to the department for inclusion as a restriction in the permit.

Michael Fosha with the South Dakota State Historical Society mentioned that five archaeological sites in the 30-hole exploration area will need further study to determine whether the company should avoid these areas while drilling. Powertech's archaeologic consultants from Augustana College thought that the sites could be evaluated during one week of field work. It was determined that this may be able to be handled through restrictions in the permit which would require Powertech to obtain clearance from Mr. Fosha's office prior to drilling.

Powertech's "Request for Determination of Special, Exceptional, Critical or Unique Lands" and the submittal of the large scale mine permit application were also discussed during the meeting, and a summary of the discussion can be found in Powertech's "Scenic and Unique" inspection report.

At 11:30 am MDT, we took a short break for lunch and resumed the meeting at 12:15 pm MDT. The meeting ended at 12:30 pm MDT, and we proceeded to the proposed exploration area.

We arrived at the Burdock area at 12:57 pm MDT. The first exploration area we stopped at is a grassy flat basin and is fenced on the north side (Photo 4). This area is to be drilled as condemnation drilling for a secondary location of the proposed central processing plant planned for the mining operation. Powertech is currently planning for the Burdock area to hold the primary processing facility for an in-situ leach mining operation.

Photo 4. Proposed exploration area.

The next proposed drilling area inspected by the group has also been designated for condemnation drilling (Photo 5). The area appeared very similar to the previous exploration area and is also located along a basin though a small, dry drainage lies along the western edge of the site. A water filled stock dam is located at the southwest corner of the site. The area also contains a prairie dog town. The group drove around to the west side of the site where a possible gravesite is located near the planned drilling area. This site is not located within the drilling area however and will not be impacted by the exploration activities.

Photo 5. Proposed exploration area.

Dewey Area
The group left the Burdock region and drove north to the Dewey region at 2:35 PM MDT.

The first area inspected was just to the north of the proposed satellite processing facility (Photo 6). As we look to the south, we could see two areas where condemnation drilling will take place during the 30-hole exploration project. These areas were inspected on August 26, 2008 and are discussed earlier in the report. The exploration area is located to the north of the area where the Dewey pump test was performed in May 2008 and where four other holes will be drilled (Photo 7).

Photo 6. Proposed exploration area.

As we looked to the west, we could see another exploration area. The area is planned for further exploration drilling to better define ore bodies found within this region.

Photo 7. Proposed exploration area.

The next area inspected was the proposed drill area that is within one-half mile of a bald eagle nest (Photos 8). The vegetative cover was similar to other areas inspected and consisted of sagebrush, greasewood, prickly pear, and various prairie grasses. Some antelope were noted to the east of the exploration area. The prairie dog town noted in the other exploration areas extended into this area. Mr. Hollenbeck indicated the landowner had contracted a third party to poison the prairie dogs.

We stopped near the eagle nest. There is an unoccupied house just to the north of the nest. The area around the nest was very weedy with some sagebrush and prickly pear scattered through the area. Stan Michals (GF&P) indicated there would be restrictions on drilling requested from his agency to protect the nesting habitat of the eagle. These restrictions would prohibit drilling from February through September. Mr. Michals said the time frame could change depending on the nesting schedule of the eagles. For the best protection, once an eagle begins nesting at this site, activity within this drilling area should cease until the eagle has ended its nesting cycle.

Photo 8. Tree with Bald Eagle nest to west of area in previous photo.

The inspection ended at 3:40 pm MDT. We then proceeded to Mark Hollenbeck's ranch to conduct a close-out meeting. The consultants from Augustana said five archaeologic sites will need to be evaluated before drilling can begin. As mentioned earlier in the day, they thought that the work could be completed in one week. After discussing several scenic and permitting issues (which are summarized in the scenic and unique inspection report), the close-out meeting ended at 4:30 pm MDT.

Inspectors: \s/ Date: 11/7/08

\s/ Date: 11/7/08

\s/ Date: 11/7/08

\s/ Date: 11/7/08