SD DENR Information Related to Tribal Concerns
Richard Blubaugh
to:
Valois Shea
06/19/2012 03:15 PM
Hide Details
From: "Richard Blubaugh" <rblubaugh@powertechuranium.com>
To: Valois Shea/R8/USEPA/US@EPA,
History: This message has been replied to.

2 Attachments

AdelSteinReport.pdf DOHUraniumCancerStudy.pdf

Valois,

The attached 2006 Adelstein Report is DENR's response to an inquiry by Senator Adelstein that was prompted by tribal concerns regarding radiation and radionuclides. In addition, I have attached a cancer study performed by the SD DOH in 2006. I think you will find the documents illuminating.

Richard

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

May 15, 2006

The Honorable Stan Adelstein
South Dakota State Senator
500 East Capitol Avenue
Pierre, SD 57501-3851

Dear Senator Adelstein:

Thank you for your letter (copy enclosed as Attachment I) regarding concerns about radioactive pollution in the state and for the opportunity to address the State-Tribal Relations Committee. Since that hearing, we have spent considerable time researching this issue. We have also enlisted the assistance of the South Dakota Department of Health to evaluate cancer rates in South Dakota as you requested. As we promised at the committee hearing, the following is a summary of what we have learned about the issue, including background information, and our responses to the specific concerns outlined in your letter and the issues discussed during the State-Tribal Relations Committee meeting on February 27.

BACKGROUND

Historic Uranium Mining

Uranium mining began in the state during the 1950s and continued to the early 1970s. There were two main mining areas (see map enclosed as Attachment II). The first and most important in terms of production was the Edgemont District in Fall River and Custer counties. This district accounted for about 85 percent of the 3.2 million pounds of uranium produced in the state, the majority of it being extracted from sandstones in the Fall River and Lakota formations through open pit mines and several small underground mines.

The second uranium mining area was in Harding County in the Cave Hills and Slim Buttes and accounted for about 15 percent of the total production. The uranium there occurred primarily in thin lignite coal deposits located near the top of the buttes and was mined using surface mining methods. To concentrate the uranium, the lignite was burned on-site or hauled to special burning sites, and the ash was subsequently hauled to mills for processing.

All of the uranium mining done during this time occurred before there were state or federal reclamation laws and reclamation bonding requirements. Therefore, generally speaking, none of the mines were reclaimed and no reclamation bonds were submitted to guarantee reclamation.

Recent Cleanup of Abandoned Uranium Mines

Many of the abandoned uranium mine sites are located on property managed by the U.S. Forest Service (Forest Service). In the 1990s the Forest Service began to take steps to minimize impacts at some of these sites by constructing ponds to capture sediment, notably at the Riley Pass mine in the North Cave Hills. These ponds were cleaned periodically and the material stored in an on-site repository. The Forest Service also commissioned site evaluation and characterization studies in both uranium mining areas. Based on those studies, the Forest Service began working to reclaim a number of the sites through the federal Superfund laws. Some sites have already been reclaimed, such as the Blue Lagoon, Gladiator and Dead Horse mines in Fall River County,

The Forest Service is currently developing a plan to reclaim the abandoned uranium mines in the North Cave Hills in Harding County. In addition, we recently learned the Forest Service and the South Dakota School of Mines and Technology have entered into an agreement (enclosed as Attachment III), funded by the U.S. Environmental Protection Agency (EPA), to investigate off-site environmental impacts of the abandoned uranium mines in the North Cave Hills. The Oglala Lakota College will also be involved in the investigation as a subcontractor to the School of Mines and Technology. The purpose of the investigation is to evaluate impacts to air, water and soil resources, as well as potential impacts to human health stemming from the migration of contaminated material from past mining activities on or adjacent to lands in the North Cave Hills that the Forest Service administers. The investigation is scheduled to be complete by December 31, 2006.

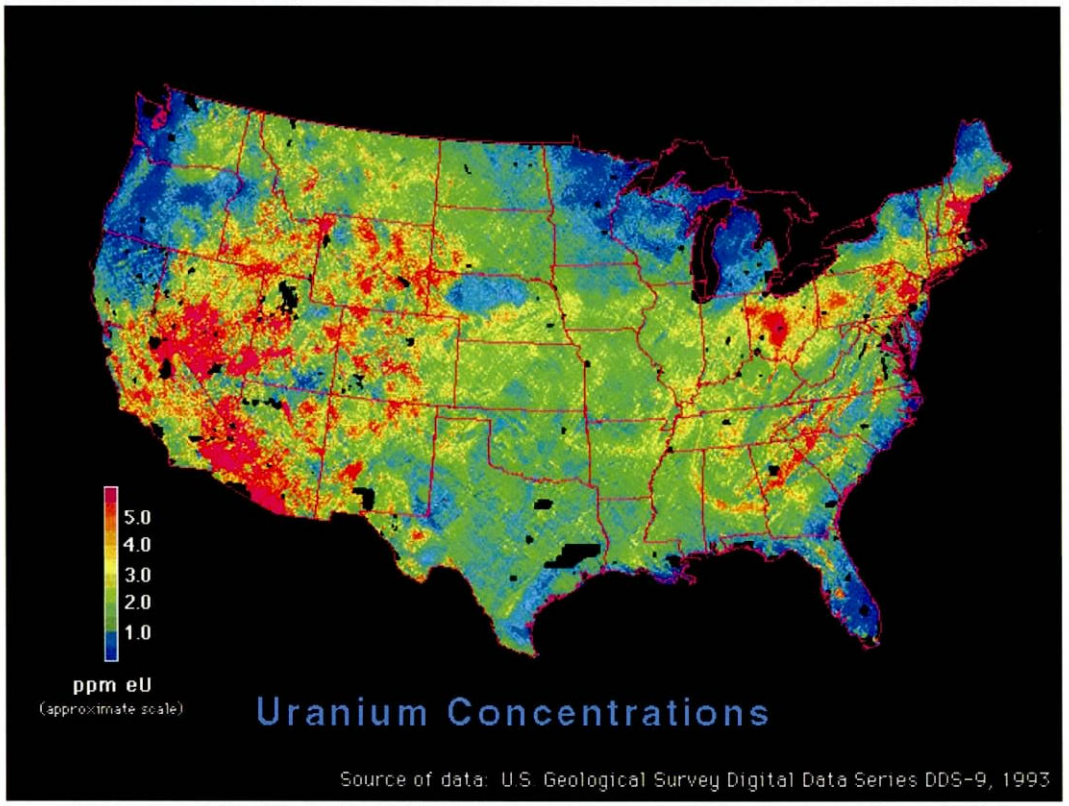
Historic Uranium Mill at Edgemont

In addition to the uranium mine areas, a uranium mill was constructed at Edgemont in the 1950s. The mill operated until 1974, when it was closed by the owner, the Tennessee Valley Authority (TVA). The U.S. Nuclear Regulatory Commission (Nuclear Regulatory Commission) approved TVA's closure plan for the mill, with work beginning in 1986 and reclamation completed by 1989. TVA removed contaminated uranium mill buildings, removed tailings sands and slimes, and removed the contaminated soil from the mill site and nearby areas. The areas excavated during mill site cleanup were backfilled with clean soil, graded for proper drainage, and revegetated. During this same time, the U.S. Department of Energy began a project to clean up 137 local properties at Edgemont. All the low level radioactive materials, including mill debris, tailings, and soil were impounded in an engineered disposal cell located about two and one-half miles southeast of Edgemont.

Natural Background Uranium in Western South Dakota

Uranium and its associated radioactive decay products are naturally occurring and there are trace amounts in most rock types, stream sediments and soils in the United States. The average uranium concentration in soils in the United States is about three parts per million (U.S. Department of Health and Human Services, 1999), ground water probably averages from one to two parts per billion (Webb and Rahn, 1994) and most natural waters range from one-tenth to ten

parts per billion (U.S. Geological Survey, Heakin, 2000). Some parts of the country, especially in the west, have higher than average uranium levels due to the geology. The U.S. Geological Survey map below shows this variation in uranium levels throughout the United States.



Generally speaking, the elevated natural uranium levels in the west are the result of volcanic activity and related mountain building in the geologic past. Both volcanic ash and granitic rock produced during this process contain uranium above average concentrations that can be mobilized into the environment through natural weathering processes.

The map shows several areas in western South Dakota that have elevated natural uranium levels including the Badlands area, the Black Hills, and several small areas in Harding County that correspond to the Cave Hills and Slim Buttes. The elevated uranium levels in the Badlands area and in Harding County can be attributed to beds of rock containing volcanic ash. These beds, which make up the topography of the Badlands, were deposited roughly between 20 and 40 million years ago as the result of intense volcanic activity to the west. These beds, known by geologists as the Arikaree and White River groups, have been largely removed by erosion in Harding County, but some remnants remain in the higher elevations. The elevated uranium in and around the Black Hills probably has several sources including the granitic core, metamorphic

rocks such as the uranium containing conglomerates near Nemo, volcanic ash, and secondary enrichments in the Inyan Kara group, the geologic formation mined historically near Edgemont.

It is no coincidence that the known uranium deposits mined historically near Edgemont and in Harding County occur in these areas of above average background levels. These deposits are the result of the weathering and release of uranium from parent materials, such as granite and volcanic ash, and subsequent transport by ground water to sites with favorable geochemical conditions that allowed for the precipitation and concentration of uranium over time.

It is also not surprising that ground water in these areas often contains elevated levels of naturally-occurring uranium. For example, a U.S. Geological Survey study by Bowles (1967) on using ground water as a guide to finding uranium deposits in the southern Black Hills, noted uranium concentrations in ground water were reduced from 12 to 13 parts per billion to 3 to 4 parts per billion as the water migrates from the Minnelusa and Lakota formations through the Lakota and Fall River formations, demonstrating ongoing deposition of uranium. Another U.S. Geological Survey report by Heakin (2000) on the water quality of springs and public supply wells on the Pine Ridge Indian Reservation found median values of uranium in nine springs ranged from 2.1 to 13 parts per billion. The study also found uranium levels in 44 wells that ranged from less than detection to 59 parts per billion, with an average of 15 parts per billion for all the wells. Three wells exceed the current EPA drinking water standard for uranium of 30 parts per billion. A study by Gill and Moore (1955) on the uranium deposits in the Slim Buttes of Harding County, found that uranium bearing lignites were associated with natural springs containing uranium in concentrations of 30 parts per billion or more and suggested ground water could be a useful tool to explore for such deposits.

In summary, the geologic history of western South Dakota has resulted in naturally elevated levels of uranium in soils and water in several areas. Natural weathering processes have released and mobilized uranium from parent materials into the environment. Oxygenated ground water containing this uranium is responsible for creating the known deposits of uranium and can contain concentrations higher than the current drinking water standard of 30 parts per billion. With that as background, the following responses are provided to the specific concerns contained in your letter that is enclosed as Attachment I.

(1) Radioactive isotopes in the Grand and Moreau rivers.
While DENR operates a surface water quality monitoring network on streams statewide, analyzing radioactive elements is not included in the laboratory analyses that are routinely performed on those samples. However, because the price of uranium has quadrupled during the last three years and that market increase has the potential to result in new uranium exploration and development projects in southwestern South Dakota, we developed a plan for additional monitoring on west river streams to document radioactive element concentrations. This plan, including sampling and testing protocols and the selected sites to be sampled, is enclosed as Attachment IV.

DENR also regulates public drinking water supply systems that have been delegated to us by EPA. These drinking water systems are required to periodically sample for radioactive substances in the drinking water they provide, including gross alpha, radium ^{226}, radium ^{228} and uranium. We reviewed the most recent sampling data available and found that, of the approximately 270 systems in the state required to monitor for radioactive substances, two exceed the standard for gross alpha, six exceed the standard for radium ^{226} and radium ^{228}, and only one exceeds the standard for uranium (see Attachment V for maps and tables that identify these systems). After you look at the maps, you will note that none of these systems are in the Grand or Moreau river basins. DENR has also provided in Attachment V the most recent radiological data from the drinking water systems that we regulate in the proximity of the Moreau, Grand, Cheyenne, and White rivers.

The only DENR regulated drinking water system in the state that exceeds the uranium standard of 30 parts per billion is Buffalo Gap. The source of the system's water is a well in the Fall River formation of the Inyan Kara aquifer, which is the same geologic formation mined historically for uranium near Edgemont. Due to the distances involved and the hydraulic gradient, DENR's geologists have concluded the higher level of uranium in Buffalo Gap's well is a result of naturally high concentrations that occur in the Inyan Kara aquifer and were not caused by historic mining activity..

(2) Is an active mine in Nebraska polluting the White River?
The mine being referred to is the Crow Butte mine, which is an active in situ uranium leach mine located near Crawford, Nebraska. In situ leach mining involves injection of substances through wells into an ore body that will leach the uranium out of the rock into a solution, then collecting the fluid through recovery wells, and processing it on the surface to remove the uranium. To answer this question, DENR staff first contacted the Nebraska Department of Environmental Quality. The Nebraska department told us they have no record of uranium contamination of the White River from the Crow Butte uranium mine, or any past uranium operation for that matter.

Next, DENR staff called Michael Griffin, the environmental manager at the Crow Butte mine. He told us that an extensive surface water quality monitoring program is required under their Source Materials License from the federal Nuclear Regulatory Commission. While the mine is not located on the White River, their permit area is within the White River drainage. Therefore, the company is required by the Nuclear Regulatory Commission to collect upstream and downstream surface water and sediment samples from all streams and impoundments in the active mining area on a quarterly basis and conduct analyses for radionuclides. Mr. Griffin told us that no downstream samples of any tributaries of the White River collected since the mining operation began in 1986 have ever shown any detectable radiological impact. The results of all environmental monitoring are reported to the Nuclear Regulatory Commission in semiannual reports as required under federal law.

As part of its initial licensing process in the early 1980s, Crow Butte was required to collect extensive baseline radiological data before the permit and license could be issued. This baseline sampling included at least one year of quarterly surface water quality samples. The baseline samples ranged from <0.001 to 0.008 mg/L natural uranium, which is consistent with natural background concentrations noted elsewhere in the western United States. In 2004 and 2005 the company collected samples from two locations on the White River in connection with potential expansion permitting. These samples ranged from 0.005 to 0.007 mg/L natural uranium, again within natural background range expected in the western United States.

We also discussed with Mr. Griffin the list of license violations at the Crow Butte mine that came up during the State-Tribal Relations Committee meeting. He told us this list, which we found in an Internet search on a Web site devoted to identifying issues at operating uranium mines in the United States, is a mischaracterization. The majority of the violations listed are monitoring well excursions, which means there is an indication in a monitoring well that injected process solutions may be moving outside the mining or in situ zone. To remedy excursions, Crow Butte's permits require them to begin recovery operations by over-pumping production wells. If they do not complete recovery operations within 90 days, they are required to cease mining in the area. According to Mr. Griffin, they have never had to shut down mining due to an excursion and excursions have never affected ground water outside the permit area. He said these are required to be reported to the Nuclear Regulatory Commission and the state of Nebraska, but do not represent violations of state or federal licensing or permitting requirements.

Based on this information, DENR found no evidence of current radiological contamination being contributed to the White River by the Crow Butte uranium mine in Nebraska.

(3) Are aquifers being polluted with radioactive isotopes that have come out of mines in Wyoming and are there overlapping areas of responsibility?
There has been considerable uranium mining in Wyoming over the past half century, including both open pit and underground mines. However, those mines have been mostly reclaimed. More recently uranium production in Wyoming has come from in situ leach mines. The primary concern of contamination occurring from these in situ mines comes from the reinjection of the waste product after uranium is removed from the recovered solution. This waste product is injected into a deep formation that is subject to strict federal regulations and is monitored to prevent contamination of ground water that may be used as drinking water supply.

To answer this question, we asked the geologists and hydrologists in our Geological Survey Program to evaluate the possibility of radioactive contamination in Wyoming impacting aquifers in South Dakota. Their evaluation included past and current uranium mining in Wyoming within the Powder River basin northeast of Casper, Wyoming. A map referred to as the "Geologic Map of the Powder River Basin and Surrounding Area" (Ellis and Colton, 1994), shows several sedimentary units in that area of the Powder River basin. These geologic formations are underlain by numerous, relatively thick formations (thousands of feet collectively) containing

significant quantities of low-permeability shale that would prevent hydrologic connection between uranium mining operations at or near land surface, and the first significant subsurface aquifer (the Inyan Kara aquifer) that could affect water quality in South Dakota. Furthermore, South Dakota aquifers are protected even more because the hydraulic gradient from the elevated strata in the Black Hills would prevent ground water movement toward the east. Therefore, our geologists and hydrologists conclude there is no evidence that these uranium operations in Wyoming threaten any aquifers in South Dakota.

While we have no reason to believe aquifers in South Dakota are being impacted by uranium mining in Wyoming, we do not see a problem with overlapping areas of responsibility. We have developed an excellent working relationship with the Wyoming Department of Environmental Quality. Even so, it is South Dakota's responsibility to protect water resources within our borders. While the uranium mining in the Powder River basin is not seen as a possible threat to aquifers in South Dakota, the surface water quality monitoring plan mentioned previously includes monitoring stations on both the Cheyenne and Belle Fourche rivers that will provide information on the levels of certain radioactive elements as these streams enter South Dakota.

(4) With the recent new drilling permits for oil, were there hazardous radioactivity warnings given in connection with the drilling?

While drilling for oil in Harding County has been ongoing since the 1950s, it is true; DENR and the Board of Minerals and Environment have recently issued a number of new drilling permits for oil wells. However, we are not aware of any radioactivity warnings in connection with these new wells, nor do we believe any are necessary. We base this on the following:

- Oil wells in Harding County generally are not located in the same areas where the uranium bearing lignite occurs and, therefore, the likelihood of an oil rig drilling through such a formation is low.
- Even if a drill rig did drill through such a formation, only a small amount of rock from the formation would be produced in the cuttings because the uranium bearing lignite beds are only a few feet thick.
- State requirements are that cuttings from drilling an oil well be contained in a lined pit.
- To ensure protection of fresh water aquifers in the area, all the oil wells are required by DENR to be cased and cemented.
- If a well is unproductive or no longer produces, it must be plugged with cement in accordance with state requirements.
- Any water produced from deep oil bearing formations is generally reinjected into the formation from which it came or into another formation that is not a potential source of drinking water.
- Reinjection is regulated through state and federal underground injection control permits.
- Continental Resources, Inc., the largest oil and gas operator in Harding County, responded to DENR that they have never had any problems with uranium or radium in water or sediments produced from their operations.

During the State-Tribal Relations Committee meeting, we learned that Ms.White Face's concern about radionuclide contamination associated with oil well drilling in Harding County stemmed from an Environmental Impact Statement the Forest Service prepared in 2004. The subject of the Environmental Impact Statement was oil and gas leasing in the Sioux Ranger District including the Cave Hills, Slim Buttes and Short Pine Hills in Harding County. She said the document indicated that oil well workers in these areas could not eat or drink in the area due to the radiation hazard and they had to wear full-body protective clothing.

DENR staff found the Environmental Impact Statement that Ms. White Face referenced and reviewed those portions that address radiation issues related to drilling for oil and gas in the areas of the Cave Hills and Slim Buttes where abandoned uranium mines exist. The analyses of the effects of oil well drilling in the areas of abandoned uranium mines does conclude that workers in these areas could be exposed to increased health risks. However, this conclusion was based primarily on the assumption that high levels of naturally-occurring radium will be entrained in water produced during drilling, but no samples were ever collected from any oil field water produced in Harding County. Because we question if this type of analysis is appropriate, we contacted the Forest Service to find out why the analysis was done this way. The Forest Service told us our concern is valid, and the analysis should either have been removed from the document or a reference should have been made that it was based only on this assumption.

Because DENR staff have been through the Cave Hills area many times and have never seen Forest Service or oil field workers wear protective clothing, we also asked the Forest Service about the conclusion that oil workers in these areas should wear full-body protection to protect them from radiation hazards. The Forest Service told us that their contractor who performed the recent site investigation of the abandoned uranium mines in the North Cave Hills identified the affected areas as Class D sites under federal regulations. A Class D site does not require workers to wear full-body protection, but instead a work uniform providing minimal protection to include coveralls, work gloves, hard hats, steel-toed boots, safety glasses, and other equipment appropriate to site conditions. The Forest Service also said the Class D designation only applies to the abandoned mine areas and does not apply to the entire Cave Hills.

Finally, the Forest Service told us about air and radiation monitoring it performed during a 2004 removal action at the Riley Pass abandoned uranium mine that involved cleaning out sediment ponds. During the project, personal air monitoring of construction workers was done for a 24-hour period to determine employee exposure to airborne arsenic, molybdenum, and radiation while they were excavating the sediment ponds. The monitoring determined that "personnel exposure to airborne arsenic and molybdenum were below the currently established applicable permissible exposure limits established by the Occupational Safety and Health Administration." Forest Service employees at the site also wore radiation dosimeter badges to determine levels of exposure. The badges were worn 100 percent of the time while on-site and doses were below permissible exposure limits.

Based on this information, we continue to believe that oil well drilling in Harding County poses very little, if any, radiation contamination risk. However, to further document if there is a concern to workers in the oil fields, we have developed a sampling plan in Attachment VI for documenting if there are radionuclides or radiation levels of concern at oil well operations in Harding County.

Additional Issues Raised at the State Tribal Relations Committee Meeting

(1) Uranium contamination from the abandoned uranium mines is causing increased cancer rates

After the State-Tribal Relations Committee meeting, DENR brought those concerns related to cancer rates back to the Department of Health. Secretary Doneen Hollingsworth asked her staff to conduct a review of cancer rates in nine counties in western South Dakota and the results of their review is enclosed as a separate report (See attachment VII).

(2) SB 62 will open up the state to additional uranium mining.

The historic mining that left the abandoned uranium mines occurred before there were state or federal requirements for mine permits, reclamation plans, or reclamation bonds. However, the 1982 Legislature passed bills that established permits and reclamation bonds for both uranium exploration and mining (see South Dakota Codified Laws 45-6B and 45-6D). Therefore, those activities can now be permitted under state law.

Although uranium mining or exploration has not been conducted in the state for many years, the recent rise in the market value of uranium has caused increased interest in the uranium resources in the Edgemont area that was mined from the 1950s to the early 1970s. Because we identified two regulatory gaps in existing state laws permitting exploration and mining of uranium, DENR decided to be proactive and ask the legislature to close those gaps before any new uranium exploration or mining applications are submitted. Senate Bill 62 was drafted to close those two gaps by requiring 100 percent bonding for uranium exploration operations; current law only requires bonding for plugging ten percent of test holes. Second, it gives the Board of Minerals and Environment authority to draft rules to address uranium and other types of in situ leach mining, a process that has never been used in the state before. Therefore, we do not view Senate Bill 62 as being an incentive to opening up the state to new uranium exploration and mining. Instead, we view it as a bill to close regulatory gaps in existing state law to ensure the state can regulate uranium exploration and in situ mining if those activities do come to South Dakota as a result of improved market conditions for uranium.

(3) Wind picks up uranium contaminated dust from the abandoned mine areas and spreads it downwind, creating a potential public health hazard.

While we believe that the potential impact of windblown dust from the abandoned uranium mine areas is localized as shown by Forest Service air and radiation monitoring at the Riley Pass mine mentioned above, we have no air quality monitoring data to confirm it. Therefore, DENR has

developed an air quality monitoring plan (see Attachment VIII) to collect data on airborne particulates in the North Cave Hills area, and compare that data to a control site in Pierre.

Summary:
In summary, after thoroughly researching this subject, DENR is taking the following actions in response to your inquiry:

1. Continue to provide staffing and resources to assist the Forest Service in its efforts to reclaim abandoned uranium mine sites in Harding and Fall River counties,
2. Implement Attachment IV which is the sampling plan for metals and radionuclides in surface waters in western South Dakota,
3. Continue to track water quality data collected by regulated drinking water systems throughout South Dakota to ensure all drinking water standards are met,
4. Implement Attachment VI which is the radiation and radionuclide sampling plan for oil and gas sites in Harding County,
5. Implement Attachment VIII which is the air quality monitoring plan for the North Cave Hills area, and
6. Begin implementation of Senate Bill 62 by drafting the regulations for in situ leach mining for eventual public hearing before the Board of Minerals and Environment.

I hope you and your committee agrees with DENR's review and proposed responses to follow up on the uranium concerns brought before the committee. We will share results as our follow-up actions are completed. Thank you, again, for allowing us to respond.

Sincerely,

Steven M. Pirner
Secretary

Enclosures

cc w/o enc: Robert E. Roberts, Regional Administrator, EPA Region VIII
Laurie Walters-Clark, On-Scene Coordinator, U.S. Forest Service

ATTACHMENT I

Letter from Senator Adelstein to DENR

STATE OF SOUTH DAKOTA
SENATOR STAN ADELSTEIN
STATE SENATE - DISTRICT 32

16 February 2006

Steven M. Pirner, P.E., Secretary
Department of Environment & Natural Resources
PMB 2020
Joe Foss Building
523 East Capitol Avenue
Pierre, South Dakota 57501

Dear Steve:

Charmaine White Face met with me to discuss a problem of radioactive pollution in this state. She came to me not only because I am a state senator, but also because I am Chair of the State-Tribal Relations Committee. A radioactive pollution problem would certainly affect our relationships with the tribes.

Frankly, a problem of radioactive pollution in South Dakota is something I had not heard of before. I was aware that the uranium mines had created a problem in Fall River County but, as far as I knew, all of them been sealed.

Ms. White Face told me there is evidence of high concentrations of radioactive isotopes in the Grand and Moreau Rivers that run through villages in the Cheyenne River and Standing Rock reservations. I also understand there is an active uranium mine in Nebraska that is polluting the White River.

Apparently, too, there is a problem with the possibility of aquifers being polluted with radioactive isotopes that have come out of mines in Wyoming. Ms. White Face believes the state has information about these problems and has not been able to do anything because of overlapping areas of responsibility.

I would very much appreciate your sharing what you know about this problem at your earliest convenience. Let's find out what needs to be done and what health hazards we are now facing.

I was given to understand that in connection with the recent new drilling permits for oil, that there were hazardous radioactivity warnings given in connection with the drilling, and the possibility of contaminants. I would appreciate any information you might have with regard to this as well.

Very truly yours,

Senator Stan Adelstein

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500 E. CAPITOL AVENUE
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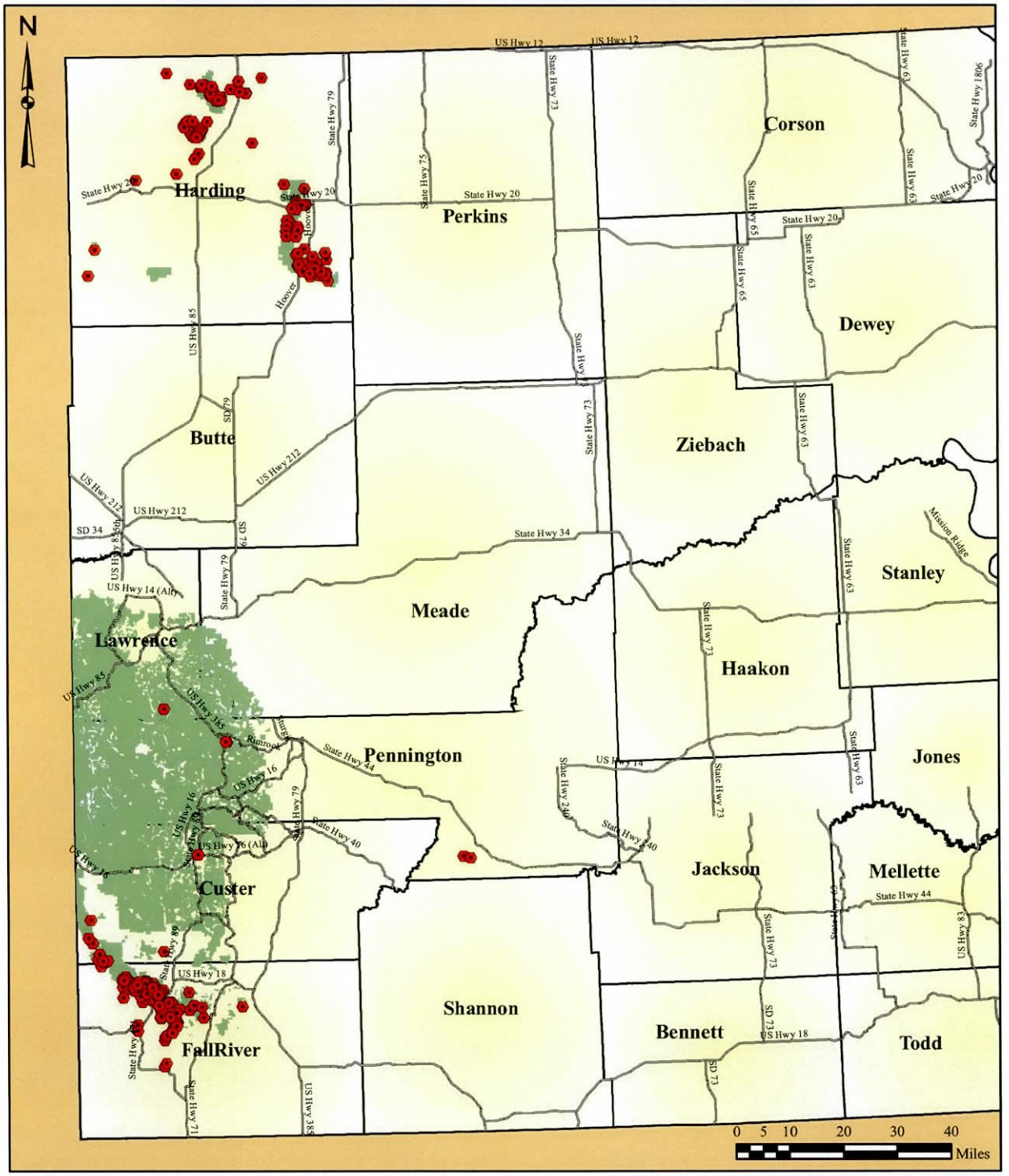
TELEPHONE: 605-394-3310 EXT. 11
E-MAIL: sen.adelstein@state.sd.us

ATTACHMENT II

Map of Western South Dakota Historic Uranium Mines and Prospects

Western South Dakota
Historic Uranium Mines and Prospects



Legend

- Uranium Mines & Prospects
- Primary Roads
- U.S. National Forest

South Dakota Department of Environment and Natural Resources

Protecting South Dakota's Tomorrow ... Today

ATTACHMENT III

JOINT VENTURE AGREEMENT between the USDA FOREST SERVICE, NORTHERN REGION, REGIONAL OFFICE and the SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

JOINT VENTURE AGREEMENT
between the
USDA FOREST SERVICE,
NORTHERN REGION, REGIONAL OFFICE
and the
SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

This JOINT VENTURE AGREEMENT is hereby made and entered into by and between the USDA Forest Service, Northern Region, hereinafter referred to as the Forest Service, and the South Dakota the School of Mines and Technology, hereafter referred to as the School of Mines and/or the Cooperator, under the provisions of the National Agricultural Research, Extension and Teaching Policy Act of 1977 (Pub.L. 95-113), as amended by the Food Security Act of 1985 (7 U.S.C., 3318 and3319, Pub. L. 99-198).

BACKGROUND: During the late 1950s and early 1960s a substantial amount of prospecting and mining of uranium resources occurred in western South Dakota, southeastern Montana, and northeast Wyoming. These lands are located in the Grand, Moreau, and Belle Fouche/Cheyenne watersheds of the Missouri River drainage. As a result of this historic activity degradation of both land and water resources have occurred as a result of the migration of the contaminated material by water and wind erosion. In addition, the remnants of these impacts pose a risk to human health. Over the past eight years the Forest Service has completed a number of Preliminary Assessments and Site Investigations at locations on lands administered by the Forest Service. However, the overall extent of the impacts to the Upper Grand and Moreau River drainages from these sites, as well as, sites adjacent to lands administered by the Forest Service need to be further investigated. In order to meet its responsibilities under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended, CERCLA, (42 U.S.C. 1251) Region One of the Forest Service looking to other partners, including universities, to help in the evaluation of human health and environmental impact resulting from the past mining and prospecting of Uranium resources in the watersheds.

A. PURPOSE:

The specific purpose of this Agreement is to work cooperatively with the School of Mines to improve the ability of the Forest Service to evaluate impacts to air, water and soil resources, as well as, potential impacts to human health stemming from the migration of contaminated material from past mining activities on or adjacent to lands in the North Cave Hills that it administers. It is anticipated that the North Cave Hills project shall be completed by December 31, 2006. Other areas, such as South Cave Hills and Slim Buttes, may be added to this agreement as mutually agreed to (*ref provisions E-8 & E-12*). It is also the intent of this endeavor to: (1) develop a technical process for the evaluation of mining related impacts associated with historic uranium mining; (2) evaluate the physical and chemical characteristics at a limited number of sub-drainages near the Forest Service Administrative boundary; (3) develop educational opportunities

for students and Forest Service personnel pertaining the remediation of historical mine and milling sites.

B. STATEMENT OF MUTUAL BENEFIT AND INTERESTS:

1) The Forest Service is responsible for the mitigation of human health and negative impacts to the environment as the result of historic activities that have occurred on or adjacent to lands that it administrators. Through this agreement the Forest Service will develop and implement better and more effective remediation efforts on lands that it administers in western South Dakota and provide education and training opportunities related to this topic for existing employees, potential future employees, partners, and interested members of the general public.

2) The School of Mines is responsible for creating knowledge, providing an active learning environment for students, and offering programs and services responsive to the needs of the people of South Dakota. The Institution's dedication to education for and throughout life reflects the commitment to service learning and community building on and off the School of Mines campus. The Institution's interest in this agreement is: to develop or improve coursework that would serve primarily students of South Dakota involved in the study of the natural sciences and engineering; to engage students in the theoretical and practical issues surrounding the development of reclamation protocols; sampling and testing criteria as well as evaluation methodologies for the identification, prioritization and monitoring of abandoned and inactive mines sites within the Region.

3) The parties mutual benefit and interest is: to evaluate and assess impacts stemming from historically mined sites; identification of background water, soil and air conditions within the western South Dakota area; sharing of this information with other agencies, students, and the public-at-large; and to train students and others on the extent of impacts stemming from historic uranium mining and prospecting.

C. FOREST SERVICE SHALL:

1. Provide leadership for planning and technical expertise in the implementation of the Statement of Work.

2. Have final approval of selected sites and or areas for study.

3. Provide the Cooperator information and materials pertaining to the impacts associated with past uranium prospecting and mining, including data bases, electronic information, paper records, public documents, aerial photographs, remote sensing imagery, maps, and when available, access to Forest Service Specialists.

4. Review courses proposed and/or developed by the School of Mines that are pertinent to the issue of the effectiveness of evaluating impacts on the natural resources watersheds where the Forest Service has administered lands.

5. PAYMENT/REIMBURSEMENT. Reimburse the cooperator for the Forest Service's proportionate share (80 percent) of actual expenses incurred, not to exceed $175,000, reduced by program income, and other Federal and nonfederal cash contributions, as shown in the incorporated Financial Plan. The cooperator is approved to submit monthly billing(s). The Forest Service will make payment for its share of project costs upon receipt of an invoice. Each invoice shall display the cooperator's actual expenditures to date of the invoice (not just the Forest Service share of actual expenditures), displayed by separate cost elements as documented in the Financial Plan, less other Federal and nonfederal cash contributions and previous Forest Service payments. The invoice should be forwarded as follows:

a. Send an original to: Bob Wintergerst
USDA Forest Service, Northern Region RO
P.O. Box 7669
Missoula, MT 59801

b. Send a copy to: Elaine Hilliard
USDA Forest Service, Northern Region RO
P.O. Box 7669
Missoula, MT 59801

D. THE SCHOOL OF MINES SHALL:

1. Perform in accordance with the Statement of Work for Calendar year 2006 for the North Cave Hills area, **(SEE APPENDIX A).**

2. Bill the Forest Service for their share of actual costs incurred to date, including those cost incurred by the Cooperator through sub-contracts to other entities such as the Oglala Lakota College. Such billings will exclude any previous Forest Service payment(s) made on this instrument to the date of the invoice.

E. IT IS MUTUALLY AGREED AND UNDERSTOOD BY ALL PARTIES THAT:

1. PRINCIPAL CONTACT. The principal contacts for this instrument are:

Forest Service Project Contact	Cooperator Project Contact
Bob Wintergerst	Dr. James Stone
USDA Forest Service, Region 1 RO	Department of Civil and Environmental Engineering
P.O. Box 7669	South Dakota School of Mines and Technology
Missoula, MT 59801	501 E. St. Joseph St. Rapid City, SD 57701

Phone: 406 329-3036	Phone: 605 394-2443
FAX: 406 329-3198	FAX: 605 394-5171
E-Mail: rwintergerst@fs.fed.us	E-Mail: james.stone@sdsmt.edu

Forest Service Administrative Contact	Cooperator Administrative Contact
Roger Henderson	Sharon Reid
USDA Forest Service, Region 1 RO	Office of Sponsored Programs
P.O. Box 7669	South Dakota School of Mines and Technology
Missoula, MT 59801	501 E. St. Joseph St. Rapid City, SD 57701
Phone: 406 329-3264	Phone: 605 394-1205
FAX: 406 329-3682	FAX: 605 394-5360
E-Mail: rmhenderson@fs.fed.us	E-Mail: sharon.reid@sdsmt.edu

2. FOREST SERVICE ACKNOWLEDGED IN PUBLICATIONS AND AUDIOVISUALS. Forest Service support shall be acknowledged in any publications and audiovisuals developed as a result of this instrument.

3. COLLECTION OF AMOUNTS DUE THE FEDERAL GOVERNMENT. Any funds paid to a cooperator in excess of the amount to which the cooperator is finally determined to be entitled under the terms and conditions of the award constitute a debt to the Federal Government. If not paid within a reasonable period after the demand for payment, the Federal awarding agency may reduce the debt by:

(1) Making an administrative offset against other requests for reimbursements.

(2) Withholding advance payments otherwise due to the cooperator

(3) Taking other action permitted by statute.

Except as otherwise provided by law, the Federal awarding agency shall charge interest on an overdue debt.

4. TAXPAYER IDENTIFICATION NUMBER The cooperator's number is 46-6000364.

5. FUNDING EQUIPMENT. Federal funding under this instrument is not available for reimbursement of Cooperator's purchase of equipment.

6. FREEDOM OF INFORMATION ACT (FOIA). Any information furnished to the Forest Service under this instrument is subject to the Freedom of Information Act (5 U.S.C. 552).

7. RETENTION AND ACCESS REQUIREMENTS FOR RECORDS. The Forest Service, Inspector General, or Comptroller General, through any authorized representative, shall have access to and the right to examine all records related to this instrument. As used in the provision, "records" includes books, documents, accounting procedures and practices, and other data, regardless of type and regardless of whether such items are in written form, in the form of computer data, or in any other form. All records pertinent to the award shall be retained for a period of 3 years.

8. MODIFICATION. Specific items to be completed will be developed annually and incorporated into this Agreement through an attached Annual Operating Plan (AOP) that is signed by both parties. Modifications within the scope of the instrument shall be made by mutual consent of the parties, by the issuance of a written modification, signed, and dated by all parties, prior to any changes being performed. The Forest Service is not obligated to fund any changes not properly approved in advance.

9.NONDISCRIMINATION. The Cooperator shall comply with all Federal statutes relating to nondiscrimination and all applicable requirements of all other Federal laws, Executive orders, regulations, and policies. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d, 2000e-16), which prohibits discrimination on the basis of race, color, disability, or national origin; (b) Title IX of the Education amendments of 1972, as amended (20 U.S.C. 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; and Section 504 of the Rehabilitation Act of 1973 as amended (29 U.S.C. 794) which prohibits discrimination on the basis of disabilities. The nondiscrimination statement which follows shall be posted in primary and secondary Cooperator offices, at the pubic service delivery contact point and included, in full, on all materials regarding such Cooperators' programs that are produced by the Cooperator for public information, public education, or public distribution:

> "In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)
>
> To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer."

If the material is too small to permit the full statement to be included, the material will at minimum include the statement, in print size no smaller than the text, that "This institution is an equal opportunity provider."

10. LEGAL AUTHORITY. The Cooperator has the legal authority to enter into this instrument, and the institutional, managerial and financial capability (including funds sufficient to pay nonfederal share of project costs) to ensure proper planning, management, and completion of the project.

11. PARTICIPATION IN SIMILAR ACTIVITIES. This instrument in no way restricts the Forest Service or the Cooperator(s) from participating in similar activities with other public or private agencies, organizations, and individuals.

12. AVAILABILITY OF FUNDS. Funds in the amount of 175,000.00 are currently available for performance of this instrument through December 31, 2006. The Forest Service's obligation for performance of this instrument beyond this date is contingent upon the availability of appropriated funds from which payment can be made. No legal liability on the part of the Forest Service for any payment may arise for performance under this instrument beyond December 31, 2006, until funds are made available to the Forest Service for performance and until the Cooperator receives notice of availability by written modification by the Forest Service.

13. DAVIS-BACON OR SERVICE CONTRACT ACT. Federal wage provisions (Davis-Bacon or Service Contract Act) are applicable to any contract developed and awarded under this instrument where all or part of the funding is provided with Federal funds. Davis-Bacon wage rates apply on all public works contracts in excess of $2,000 and Service Contract Act wage provisions apply to service contracts in excess of $2,500. The Forest Service will award contracts in all situations where their contribution exceeds 50 percent of the costs of the contract. If a cooperator is approved to issue a contract it shall be awarded on a competitive basis.

14. ELECTRONIC FUNDS TRANSFER. The Cooperator shall designate a financial institution or an authorized payment agent through which a Federal payment may be made in accordance with U.S. Treasury Regulations, Money and Finance at 31 CFR 208, which requires that Federal payments are to be made by electronic funds transfer (EFT) to the maximum extent possible. A waiver may be requested and payment received by check by certifying in writing that one of the following situations apply:

1. The payment Cooperator does not have an account at a financial institution.

2. EFT creates a financial hardship because direct deposit will cost the payment recipient more than receiving check.

3. The payment recipient/cooperator has a physical or mental disability, or a geographic, language, or literacy barrier.

To initiate receiving your payment(s) by electronic transfer, contact the National Finance Center (NFC) on the worldwide web at www.nfc.usda.gov, or call the NFC at 1-800-421-0323, or (504) 255-4647. Upon enrollment in the program you may begin to receive payment by electronic funds transfer directly into your account.

15. PROGRAM PERFORMANCE REPORTS. A final performance report shall be submitted either with your final payment request, or not later than 90 days from the expiration date of the instrument.

16. ALTERNATE DISPUTE RESOLUTION. In the event of any issue of controversy under this Agreement, the parties may pursue Alternate Dispute Resolution procedures to voluntarily resolve those issues. These procedures may include, but are not limited to conciliation, facilitation, mediation, and fact finding.

17. DUNS NUMBER (5/04): The cooperator shall furnish their DUNS number upon execution of this instrument. You may obtain a DUNS number by contacting Dun and Bradstreet at 800-234-3867 or 866-794-1580. A DUNS number will be provided immediately by telephone at no charge.

18. TERMINATION. Any of the parties, in writing, may terminate the instrument is whole, or in part, at any time before the date of expiration. Neither party shall incur any new obligations for the terminated portion of the instrument after the effective date and shall cancel as many obligations as possible. Full credit shall be allowed for each Party's expenses and all non-cancelable obligations properly incurred up to the effective date of termination

19. COMMENCEMENT/EXPIRATION DATE. The instrument is executed as of the date of the last signature and is effective for **five (5) years after the date of the execution by both parties** at which time it will expire unless extended.

20. AUTHORIZED REPRESENTATIVES: By signature below, each Cooperator certifies that the individuals listed in this document as representatives of the individual Cooperator are authorized to act in their respective areas for matters related to this agreement.

The authority and format of this instrument has been reviewed and approved for signature.

ROGER M. HENDERSON DATE
Grants and Agreements Specialist

In WITNESS WHEREOF, the parties hereto have executed this agreement as of the date listed below.

TIMOTHY G. HENDERSON DATE
Vice President, Business and Administration
South Dakota School of Mines and Technology

ABIGAIL R. KIMBELL DATE
Regional Forester
USDA Forest Service, Region 1

Forest Service Use

Job Code:_____

APPENDIX A

USFS-SOUTH DAKOTA SCHOOL OF MINES and TECHNOLOGY Agreement
Statement of Work for 2006
NORTH CAVE HILLS

Scope of Work

The following tasks were identified by the Forest Service in the Draft Statement of Work provided to the School of Mines in mid-November of 2005 and have been modified based on discussions occurring after the notification of the Scope of Work. Direct quotes from the Request for Proposal (RFP) are reiterated in *italic* text. Implementation of some of these tasks maybe considered optional (designated "**") and would be implemented only if funding remains after the execution of the primary tasks specified (reference Availability of Funds Clause- Item E12) .

Goal of Work

The goal of the work to be completed under this agreement is to collect and analyze field data from the North Cave Hills area of Custer National Forest within northwestern South Dakota. Note, should additional funding become available and it is mutually agreed to, South Cave Hills and Slim Buttes may also be added as projects (*ref provision E-8 & E-12 of the agreement*). The data for each project will be assessed to determine the offsite impacts onto private lands due to soil and water erosion and to wind transported dust originating from abandoned uranium mining sites on Forest Service administered lands. Data collection procedures and analytical methods will be adjusted as necessary during the project to best reflect true contaminant dispersion and concentrations, and this study will also serve as proof-of-concept investigation for future work.

The project will be completed through collaboration between the School of Mines and the Oglala Lakota College with each institution having an integral role in the development of project objectives and outcomes.

Task #1 - Review of Information

This task will require the review of all environmental documents and technical reports pertaining to past uranium mining activities that have occurred in western South Dakota, as well as, all water, soil, and air monitoring reports and monitoring data related to western South Dakota.

The School of Mines concurs that existing information must be utilized prior to an evaluation of each watershed. The chemical makeup of the water, the mineral composition and physical characteristics of the elements designated as contaminates moving through a watershed, as well as, the natural background of the same elements will vary by locations within the watersheds. The seriousness of the contaminates migrating form each of the historic mining sites through the watersheds and air sheds must therefore

be compared to the natural or established background (if available), as well as, risk-based and legislated values for specific contaminates. Some situations, (i.e., air quality) may have issues related solely on human health exposure assessments, while others may have issues related jointly on human health, as well as, environmental concerns. The evaluation of each watershed and airshed needs to be referenced to the proper decision making end points.

Task #2a – Development of a Technical Process for the Evaluation of the Migration of Contaminants by Water within a given Watershed.

This task will require the development of a technical methodology for the evaluation of the movement of contaminant streams generated from historic uranium mining sites through a watershed and to a point where the elements making up the contaminant stream can not be distinguished form the same elements that are found within the natural background. This developed methodology will give the Forest Service and other entities direction to evaluate the extent and effectiveness of future cleanup response actions that maybe taken in the region.

The School of Mines will create a field sampling protocol for the study areas based on pre-existing scientific, engineering, and legislated processes. From this protocol, quantitative and qualitative measurements of surface water will be collected in order to characterize the changing chemical composition of the water resources that flow through a watershed from areas historically mined for uranium to areas were the elements considered contaminates cannot be distinguished from natural background. During 2006, the primary focus of this investigation will be the North Cave Hills watershed. The South Cave Hills and Slime Buttes watersheds may be included dependant upon funding availability.

Task #2b - Development of a Technical Process for the Evaluation of the Migration of Contaminated Sediment within a given Watershed.

This task will require the development of a technical methodology for the evaluation of the movement of contaminated sediment generated from historic uranium mining sites through a watershed and to a point where the elements making up the contaminant sediment can not be distinguished form the same elements that are found within the natural sediment within the watershed. As with Task #2a, this developed methodology will give the Forest Service and other entities direction to evaluate the extent and effectiveness of future cleanup response actions that maybe taken in the Region.

The School of Mines will create a field sampling protocol based on pre-existing scientific, engineering, and legislated processes. From this protocol quantitative and qualitative measurements will be collected in order to characterize the changing chemical composition of the sediment that is moving through a watershed from areas historically mined for uranium to areas were the elements considered contaminates cannot be distinguished from natural background. During 2006, the primary focus of this investigation will be the North Cave Hills watershed. The South Cave Hills and Slime

Buttes watersheds may be included dependant upon funding availability.

Task #2c - Development of a Technical Process for the Evaluation Air Quality within a given Airshed.

This task will require the development of a technical methodology for the evaluation of the airborne movement of contaminated sediment generated from historic uranium mining sites through an air shed. This task will allow for the measure of air quality so that the Forest Service and other entities can determine the extent of movement of sediment by wind and the its potential impact to human health within the region.

The School of Mines will create a field sampling protocol for the air shed based on pre-existing scientific, engineering, and legislated processes. From this protocol, quantitative and qualitative air measurements will be collected in order to characterize the movement of sediment by wind from areas historically mined for uranium to areas down wind of these sites. During 2006, the primary focus of this investigation will be the North Cave Hills watershed. The South Cave Hills and Slime Buttes watersheds may be included dependant upon funding availability.

Task #3a - Field Sampling and Testing of Water and Sediment

This task will involve traveling to various mining areas and watersheds within the Riley Pass area agreed to by the Northern Region of the Forest Service and the School of Mines (See enclosed list of sites and watersheds-Table 1) in order to gather various scientific and engineering data, measurements, and observations pertaining to the variation of water quality and sediment composition.

The School of Mines concurs that site-specific observations and analyses are required to more fully understand the movement of chemical contaminants through a watershed identified by the Forest Service. The number of and type of samples collected will necessarily conform with the number and complexity of historic uranium mining sites within a given watershed. Further refinement of the scope of this task will occur at the direction of the Forest Service as the mining areas and watersheds are prioritized.

Task #3b – Air Monitoring within the Airshed

This task will involve traveling to various mining areas agreed to by the Northern Region of the Forest Service and the School of Mines in order to gather various scientific and engineering data, measurements, and observations pertaining to air quality.

The School of Mines concurs that site-specific observations and analyses are required more fully understand the movement of contaminated sediment by wind erosion. The number of samples collected and type of air monitoring conducted will necessarily conform with the number and complexity of historic uranium mining sites within a given air shed. Definition of the air sheds will determine sampling methodology. Further refinement of the scope of this task will occur at the direction of the Forest Service as the

historic uranium mining areas are prioritized.

Task # 4 - Documentation and Reporting on the Field Findings

This task consists of documenting the various findings noted during the field evaluation of the water, soil, and air resources within the various watersheds and air sheds. This includes an interpretation of the analytical results generated from the samples taken during the field evaluation portion of this project. The focus of the report is to determine if the human health and environmental impacts associated with the historic uranium extend for great distances within and area.

The School of Mines will generate a report describing the findings of the field evaluation including an interpretation of the results in the context of the goals stated for this project. It is the intent of the project PIs that the research performed will provide a basis upon which to evaluate 1) the efficacy of the methods employed in determining offsite uranium impacts from the North Cave Hills air and water sheds; 2) the best scientific approach to expand the study into the other old mining areas in the region; and 3) a preliminary assessment of the potential impact that the historic uranium sites in the North Cave Hills area have had on human health and the environment. In addition to the field evaluation, findings contained in the report will also include supporting analytical data. The report will be provided as a hard copy with backup electronic version. The electronic version will also include images taken at the site during the field evaluation.

The PIs plan to provide opportunities for graduate students to complete theses which would be completed by May 2007. A copy of these theses, bound and electronic, will be provided to the Forest Service.

Task #5 - Educational Integration

Communication of the findings resulting from this project to a larger audience is necessary. Education of Forest Service employees and others will provide a broader knowledge base of those conditions required to achieve effective mine land remediation with a context for integration of these elements into future project work. Learning from this endeavor is fundamental to future reclamation work within the area. A number of possibilities exist that allow for communication of the project outcome that is consistent with the educational mission of the Forest Service and School of Mines. Each of the educational concepts is presented below:

1. ***University Education*** – Various aspects of the project will be incorporated into undergraduate and graduate courses at both the School of Mines and Oglala Lakota College.

    a. The School of Mines will integrate the project within *CEE 733: Techniques of Surface Water Resource and Water Quality Investigations.* CEE 733 is a graduate level Water Resources Engineering course that focuses on the theory, design and techniques used in hydrologic and water

quality investigations. The project will be included within a field-sampling module where water quality and sediment loading measurements and data analysis will be performed. The course will be offered during the Fall 2006 academic term;

b. **Oglala Lakota College faculty will integrate suitable parts of this project as modules into the appropriate environmental courses offered during the Spring and Fall semesters 2006. These modules will emphasize hands-on learning of various field methods commonly employed within the environmental sciences;

2. ***Graduate Student Project/Thesis*** - This project includes funding for at least one graduate student from the School of Mines and at least one undergraduate student from Oglala Lakota College. This student team will become integral members of the scientific effort and be responsible for collection of substantial portions of the data and interpretation of the findings under the guidance of the project PIs. The graduate student projects will occur from January 2006 through May 2007 at which time an engineering thesis will be produced;

3. ***Project Website*** - Several web-based approaches exist for serving as a community educational tool. The project website will be hosted and periodically updated by Oglala Lakota College staff. The website will contain site history, maps, sampling procedures, current water and airshed sampling results, relevant literature and presentations, and contact information;

4. ***Outdoor Classroom*** - The individual water and airsheds will be used as an outdoor classroom to provide tailored learning opportunities to Forest Service staff, students or interested community participants. Project learning opportunities will be provided through the following efforts:
   a. **Utilizing this project as part of a continuing education workshop for regional geologists and engineers;
   b. **Providing 6-12th grade science teacher educational opportunities by utilizing this project within the School of Mines NSF-Research Experience for Teachers (RET) program (http://ret.sdsmt.edu). We plan to host at least one science teacher from rural South Dakota schools during July 2006 to activity participate in the sampling, analysis and evaluation components of this project. In turn, the teacher participants will integrate their research experience within their 6-12th grade science curriculum to better instill science and engineering fundamentals within their classroom;

5. ***Conference Participation and Publications*** – The PIs plan to present relevant research findings from this study at regional or national scientific conferences and will produce at least 1 peer-reviewed journal publication as a result of this research. All data included in these efforts will be cleared by the project sponsor prior to submission;

6. ***Community Outreach*** – The PIs plan to lead field trips for interested citizens to

demonstrate field sampling techniques and to educate the public on the project monitoring program. Informational brochures or fliers will be printed and distributed within the local community providing monitoring objectives and results.

Work Schedule

The work tasks described above will be completed over a one year period (January 1, 2006 through December 31, 2006) and will primarily focus on the abandoned uranium mines within the North Cave Hills water and air sheds. The project will consist of collaboration between the School of Mines and Oglala Lakota College, with both institutions having an active role in the development of project objectives and outcomes. This initial study will produce significant scientific data on the generation and off-site migration of uranium from the old mining claims. This study will also provide a proof-of-concept for the various sampling and analytical techniques that can or will be employed for future studies. Based on these initial findings, it is the intent of the School of Mines to enter into a longer-term Joint Venture Agreement with the Forest Service, dependant upon the number of watersheds evaluated, Forest Service management recommendations, availability and interest of additional research partners, and available funding, to perform similar and expanded research across the entire area of abandoned uranium mines in northwestern South Dakota. The Joint Venture Agreement between the Forest Service and School of Mines will expire 5 years after signature by both parties, unless extended. During the January 2006 to December 2006 work period, the project will focus on the tasks identified above. A brief description of each task and scope of work for the 2006 work period is presented below.

Task #1 - Review of Information

This task will be completed during January and February 2006. The Forest Service will provide all information at its disposal pertaining to this endeavor. Additional information will be gathered from other sources including relevant local, regional, and national governmental and tribal agencies including the South Dakota Department of Environment and Natural Resources, South Dakota Geological Survey, the U.S. Geological Survey, the U.S. Environmental Protection Agency, and non-governmental consultant studies (e.g., Pioneer Technical Services, Knight Piezold). Previous School of Mines theses will also be reviewed.

Task #2a–Development of a Technical Process for the Evaluation of the Migration of Contaminants by Water within a given Watershed

A Sampling and Analysis Plan (SAP) will be developed prior to field activities pertaining to water monitoring and sampling. This SAP will be developed specifically for those mining sites and watersheds that will be sampled during the 2006 field season at the North Cave Hills area. It is envisioned that this document will be developed in February 2006. The Forest Service will review the SAP prior to implementation.

Task #2b - Development of a Technical Process for the Evaluation of the Migration of Contaminated Sediment within a given Watershed

A Sampling and Analysis Plan (SAP) will be developed prior to field activities pertaining to sediment sampling. This SAP will be developed specifically for those mining sites and watersheds that will be sampled during the 2006 field season within the North Cave Hills area. It is envisioned that this document will be developed during February 2006. The Forest Service will review the SAP prior to implementation.

Task #2c - Development of a Technical Process for the Evaluation Air Quality within a given Airshed

A Sampling and Analysis Plan (SAP) will be developed prior to any field activity pertaining to air monitoring and sampling. This SAP will be developed specifically for those mining sites and air sheds that will be sampled during the 2006 field season and will be focused in the North Cave Hills area. It is envisioned that this document will be developed starting January 2006. The Forest will review the SAP prior to implementation.

Task #3a - Field Sampling and Testing of Water and Sediment

It is anticipated that the field sampling program for water and sediments will begin in April 2006, weather conditions allowing, and will continue through October 2006. Sampling will be based on developed SAP. Multiple trips to the designated areas will be necessary to capture samples and collect data during various water flow conditions as part of a continuous and discrete watershed monitoring program.

Water and sediment monitoring will occur within the local drainages adjacent and/or downstream of the abandoned uranium mines located within the North Cave Hills watershed. It is anticipated that the focus within the North Cave Hills area will include Devils Canyon, Schleichart Draw, Pete's Creek, with the intent of monitoring physical and chemical contaminant concentrations entering private lands adjacent to Forest Service administered land boundaries. Specific monitoring locations will be developed as part of the SAP and will be coordinated and prioritized in concert with the Forest Service.

Organic, inorganic, and radionuclide content of both water and sediments will be determined using both field and laboratory-based techniques, including: X-ray fluoresce spectroscopy (XRF), inductively coupled mass spectrometry (ICP-MS), flame atomic adsorption spectroscopy (AAS), and other analytical methods specified within the SAP.

Task #3b – Air Monitoring within the Airshed

The airshed sampling and monitoring program for the North Cave Hills area will commence January 2006, and will continue through October 2006. Data will be collected on a specific time line as specified by the SAP and will consist of background and down-

gradient sampling during natural wind events. Multiple trips to the designated areas will be necessary to collect samples and monitor conditions for different weather conditions and patterns.

Air quality sampling will involve the use of aspirated samplers that collect aerosol dusts $<PM_{10}$ on a filter that is subsequently analyzed for mass and composition. Sampler locations will depend on the air shed analysis and location access. Sampling times will follow established EPA methodology to define natural background air quality and aerosol composition. In addition, samplers will be run during natural wind events, or storms, to collect data used to define natural loading and changes in aerosol composition between natural and storm events. All filter analysis from the PM samplers will be performed at the School of Mines using existing instrumentation.

Complementary soil sampling activities will also be performed to evaluate the wind erosion potential of the various soils through particle size analysis as well as monitoring ambient dust-fall using field samplers. Wind tunnel tests at critical soil sampling sites will also be conducted beginning April 2006.

Task # 4 - Documentation and Reporting on the Field Findings

An interim report will be written describing the data collection procedures and observations accrued during the 2006 field season. The report will include all data and interpretations applicable to the water, sediment, and air activities that occurred during this time period for the areas identified by the Forest Service. This report will subsequently be augmented in following years by new evaluations and assessments that are derived as the research continues into other abandoned mine areas.

Task #5 - Educational Integration

The six educational components described above will be integrated into the project during 2006. Discussions between the School of Mines and the Forest Service to further refine the project educational components will be on-going.

Budget

The total budget amount for the January 1, 2006 (estimated) – December 31, 2006 period is $175,000. A spreadsheet has been attached providing the detailed budget itemization for the School of Mines and the sub-award to Oglala Lakota College, Lakota Center for Science and Technology, for the work activities proposed.

Deliverables

Work products resulting from tasks identified above principally include both an interim and final technical report describing the development of the evaluation protocol (Tasks 2a through 2c, and 4). In addition, MS theses will be provided by May 2007 and a journal manuscript will be produced after the data analysis has been completed.

TABLE #1-

Historic Uranium Mines and Prospects within the North Cave Hills Area

DEP_ID	SITE_NAME	Drainage	Sub-Drainage
10128980	Mink Group	North Fork Grand	Pete's
10129724	Darky Claims	North Fork Grand	Pete's
10153869	Riley Group	North Fork Grand	Pete's
10202259	Last Chance	North Fork Grand	Pete's
10202298	Cedar Butte Claims	North Fork Grand	Pete's
10226144	Susan, Becky	North Fork Grand	Pete's
10226272	Lars Group	North Fork Grand	Pete's
10226378	Jim Claims	North Fork Grand	Pete's
10232709	Table Mountain Claims	North Fork Grand	Pete's
10250296	Riley 1 & 3 Claims	North Fork Grand	Pete's
10250396	Riley Spring Mine	North Fork Grand	Pete's
10250726	Mccurdy Lease	North Fork Grand	Pete's
10250744	L And L Claims	North Fork Grand	Pete's
10274857	Bone Group	North Fork Grand	Pete's
10299641	Snake Eye	North Fork Grand	Pete's
10177556	Windy Claims	North Fork Grand	Pete's
10129612	Last Chance Group	North Fork Grand	Crooked
10202174	Jack Claims	North Fork Grand	Crooked
10250811	Hoop And Holler	North Fork Grand	Crooked
10274970	Jones Claims	North Fork Grand	Crooked
10055405	Pickpocket Mine	South Fork Grand	Bull
10099358	Relf Mine	South Fork Grand	Bull
10177509	Hawk Eye No. 1	South Fork Grand	Bull
10202226	Jayhawk Group	South Fork Grand	Bull
10250702	Lindahl	South Fork Grand	Bull

ATTACHMENT IV

Sampling Plan for Metals and Radionuclides in Surface Water in Western South Dakota

South Dakota Department of Environment and Natural Resources
Surface Water Quality Program
Sampling Plan for Metals and Radionuclides in Surface Water in Western South Dakota

Purpose

The price of uranium has more than tripled during the past several years and that market increase has the potential to result in new uranium exploration and development projects in southwestern South Dakota. The purpose of this sampling plan is to collect additional water quality data from streams in western South Dakota to establish current levels of radioactive elements and metals concentrations. This will not only document current conditions, but also allow us to track long-term trends in surface water quality.

Task and Objective

Excluding the Black Hills, the Department of Environment and Natural Resources (DENR) will sample the other 42 existing state water quality monitoring (WQM) sites listed in the chart below. DENR already regularly collects water quality samples from water quality monitoring sites that are established on streams statewide. This data is used to track long-term trends in surface water quality, and is used by DENR to supply the U.S. Environmental Protection Agency with the Integrated 305(b) and 303(d) water quality reports as required by the federal Clean Water Act. However, radioactive elements and metals were not previously included in the laboratory analyses of these samples. Therefore, this sampling plan included those laboratory analyses during the next two rounds of collecting water samples from our west river water quality monitoring stations. The first sampling round was done in mid-March 2006 and the second in late April 2006.

Surface Water Sampling Protocol

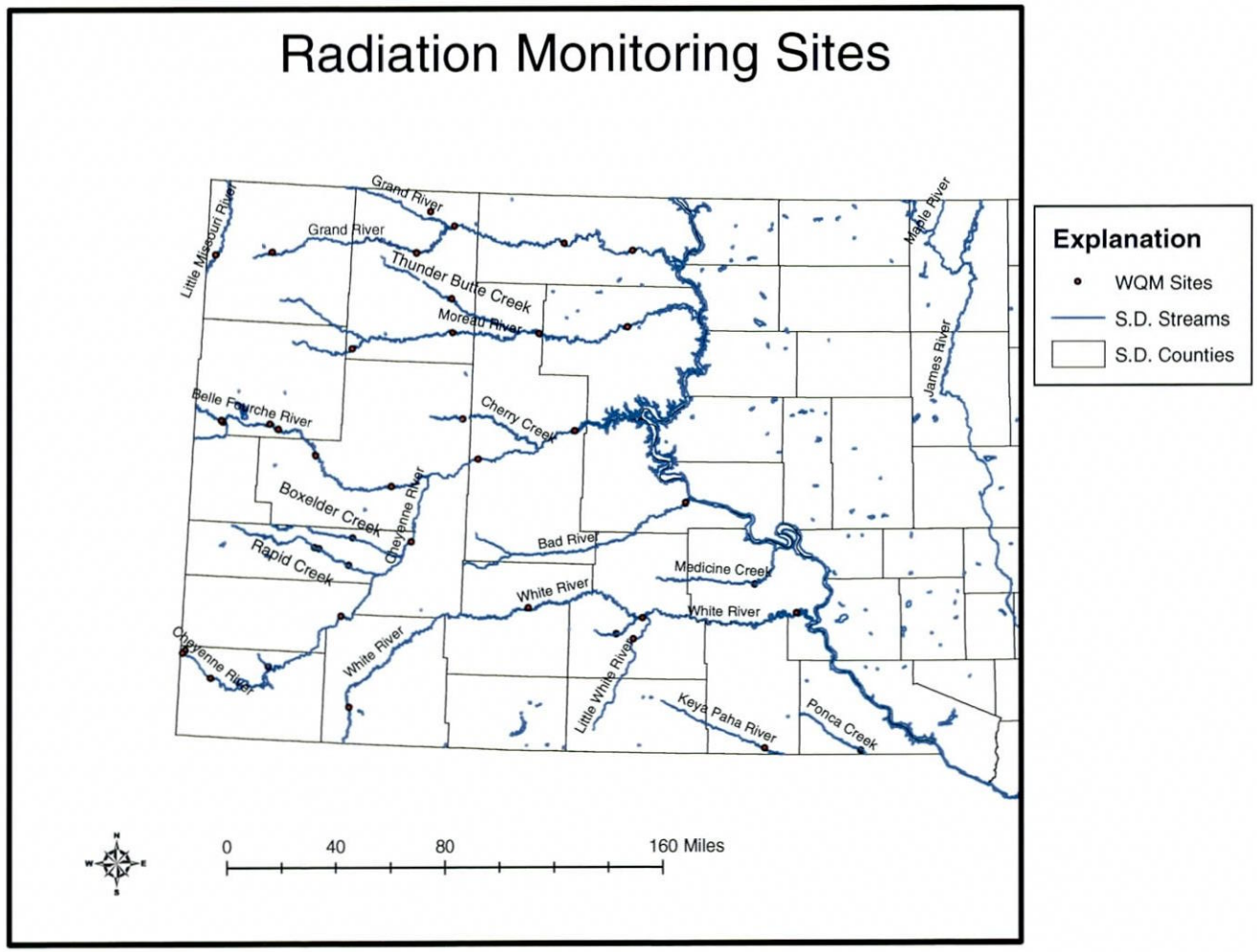
Samples will be gathered from each of the 42 water quality monitoring sites listed below for metals and radioactive analysis. Each sample bottle will be labeled and preserved (if needed). Water will be gathered by placing the sample bottle approximately six inches under the surface of the water in the deepest area of the river/stream. For dissolved metals analyses, sample water will be filtered through a 0.45 micron filter and preserved (pH<2) with nitric acid. For the radium analyses and total metal analyses, sample water will be placed in a one-gallon cubitainer. The samples will be immediately placed on ice and delivered to the laboratory as soon as possible. DENR samplers will follow department standard operating procedures in obtaining and handling the samples and quality assurance. A sample from each water quality monitoring location from both sampling episodes will be analyzed by a certified laboratory using EPA approved methods. The samples will be analyzed for total and dissolved metals including arsenic, vanadium, molybdenum, selenium, copper, lead, antimony, barium, beryllium, cadmium, chromium, mercury, nickel, thallium, and uranium. A sample from each location from both sampling episodes will also be analyzed for radium ^{226} and radium ^{228} isotopes.

Data Analysis

Results from the two sampling episodes will be analyzed by DENR personnel to determine if metals and/or other elements are present above levels of concern.

Site Name	River Stream Name	County
WQM 10	Keya Paha River	Tripp
WQM 11	White River	Jackson
WQM 110	Rapid Creek	Pennington
WQM 12	White River	Lyman
WQM 13	Little White River	Mellette
WQM 14	Cheyenne River	Fall River
WQM 15	Cheyenne River	Pennington
WQM 16	Cheyenne River	Haakon
WQM 19	Rapid Creek	Pennington
WQM 21	Belle Fourche River	Meade
WQM 23	Redwater River	Butte
WQM 24	Moreau River	Dewey
WQM 25	Grand River	Corson
WQM 29	Bad River	Stanley
WQM 39	Moreau River	Perkins
WQM 40	Grand River	Perkins
WQM 42	White River	Shannon
WQM 77	Grand River, N Fork	Perkins
WQM 78	Grand River, S Fork	Perkins
WQM 79	Box Elder Creek	Pennington
WQM 81	Belle Fourche River	Butte
WQM 82	Whitewood Creek	Butte
WQM 83	Belle Fourche River	Butte
WQM 92	Rapid Creek	Pennington
WQM 26	Little Missouri River	Harding
WQM 139	Grand River, S Fork	Harding
WQM 147	Thunder Butte Creek	Perkins
WQM 138	Grand River	Corson
WQM 130	Belle Fourche River	Butte
WQM 143	Moreau River	Ziebach
WQM 133	Cheyenne River	Haakon
WQM 76	Belle Fourche River	Meade
WQM 132	Cheyenne River	Custer
WQM 57	Fall River	Fall River
WQM 131	Cherry Creek	Meade
WQM 144	Moreau River, S Fork	Perkins
WQM 128	Beaver Creek	Fall River
WQM 141	Medicine Creek	Lyman
WQM 153	Cottonwood Creek	Mellette
WQM 152	White River	Mellette
WQM 156	Cheyenne River	Lawrence
WQM 70	Ponca Creek	Gregory

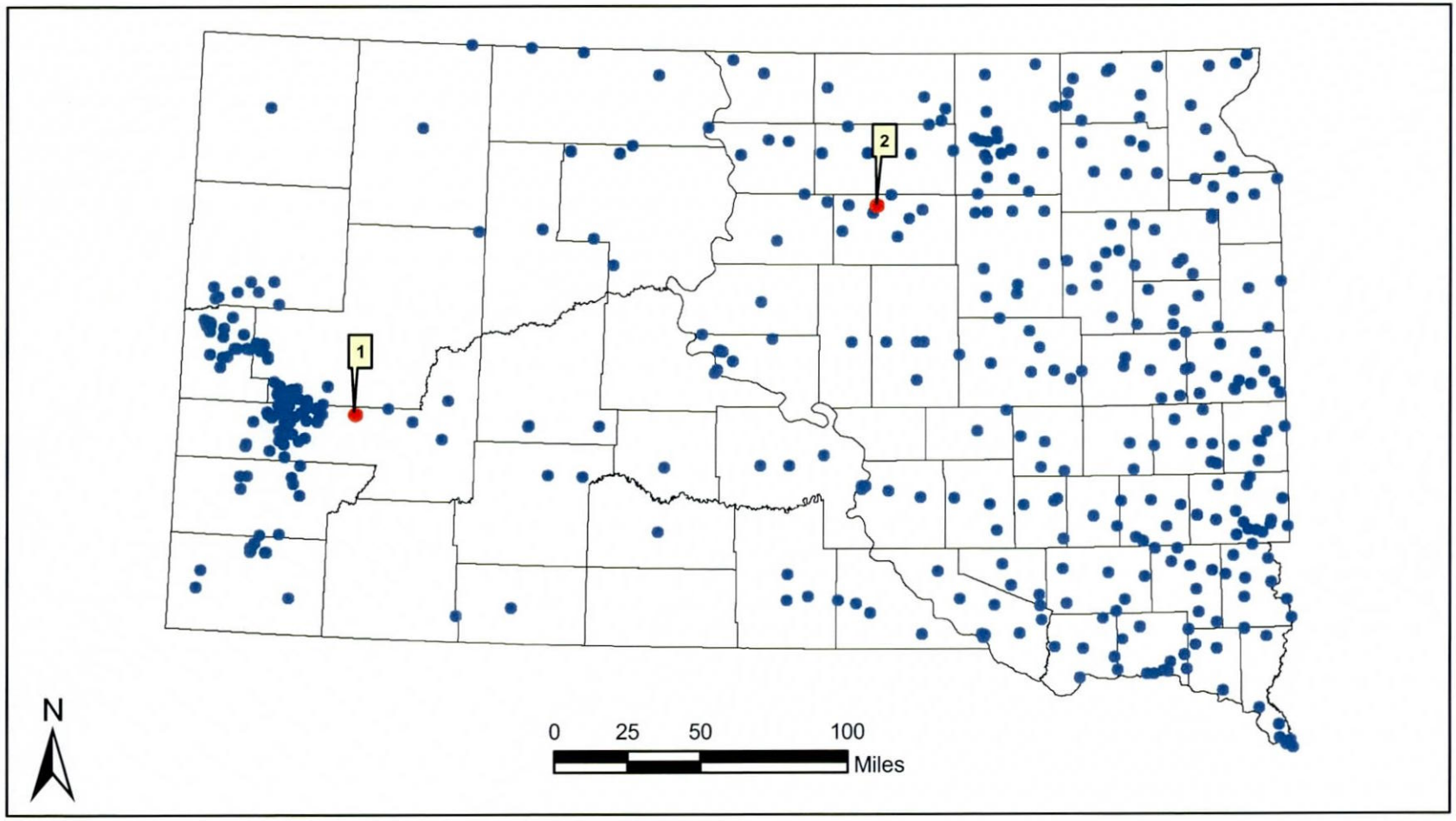
Radiation Monitoring Sites



ATTACHMENT V

SUMMARY OF DRINKING WATER DATA FROM SYSTEMS REGULATED BY DENR

Gross Alpha Violations

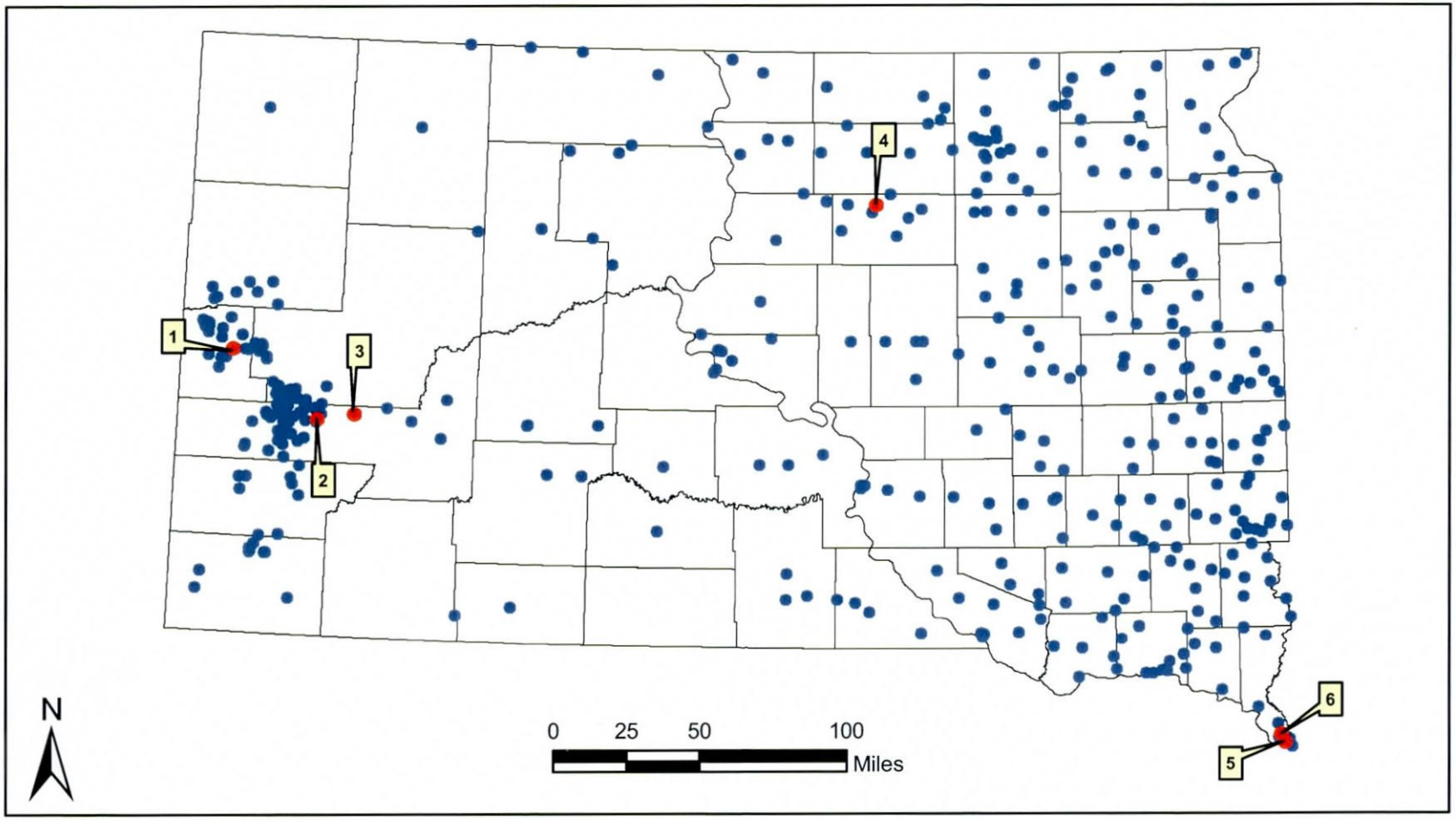


Number	System	Level(pCi/L)	Standard(pCi/L)	Population	Aquifer
1	New Underwood	17	15	616	Lakota
2	Thunderbird HB Inc	16	15	120	Dakota

Legend

- Community Water Systems
- Gross Alpha Violations
- Counties - CENSUS

Radium 226-228 Violations

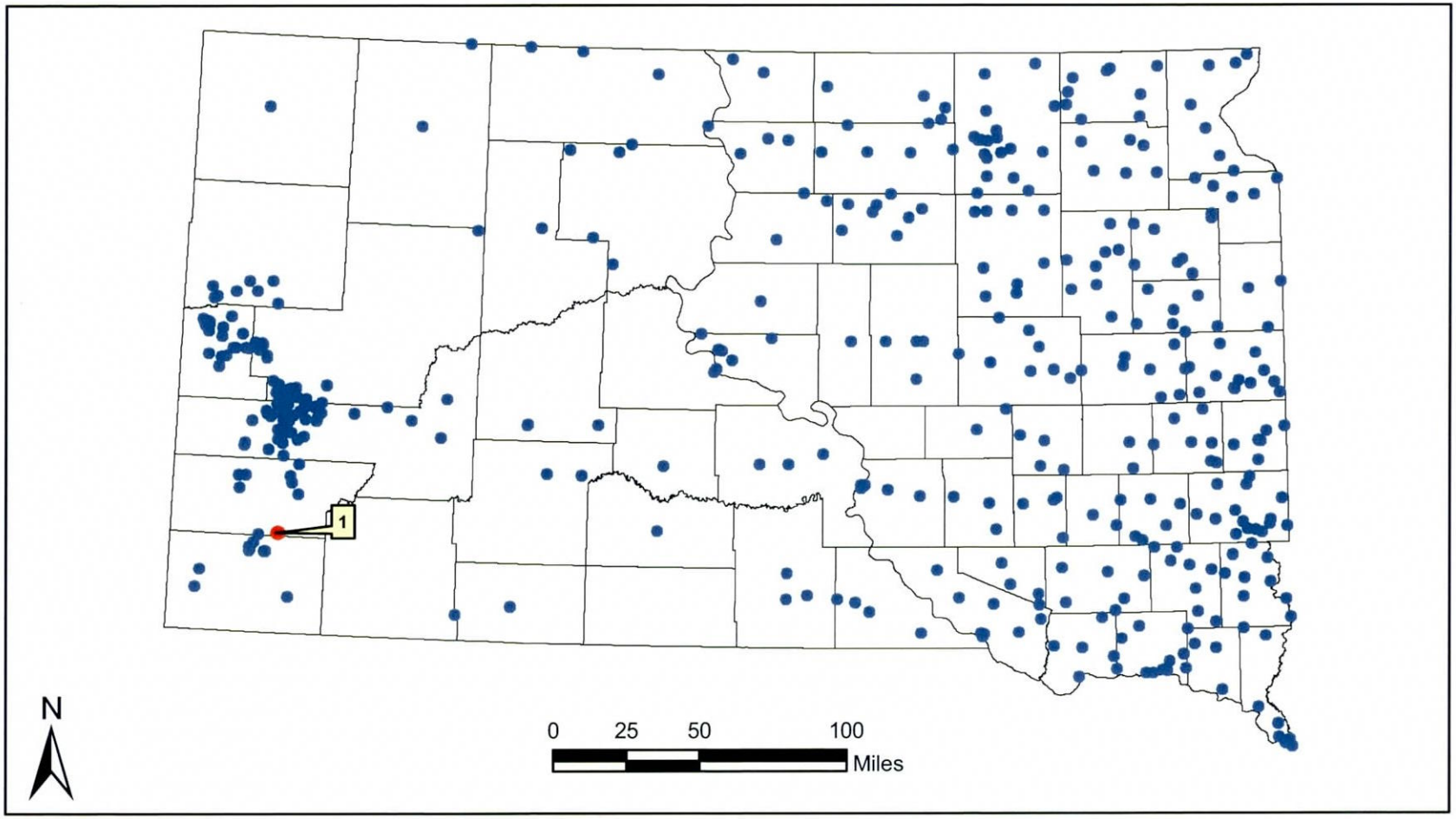


Number	System	Level(pCi/L)	Standard(pCi/L)	Population	Aquifer
1	Shirt Tail Gulch	10	5	25	Deadwood
2	Rainbow Water Co	6	5	162	Inyan Kara
3	New Underwood	7	5	616	Lakota
4	Thunderbird HB Inc	6	5	120	Dakota
5	Riv-R-Land	10	5	175	Missouri
6	Deer Run	14	5	65	Dakota Sandstone

Legend

- Community Water Systems
- Radium 226-228 Violations
- Counties - CENSUS

Uranium Violations



Number	System	Level(ug/L)	Standard(ug/L)	Population	Aquifer
1	Buffalo Gap	46	30	164	Fall River

Legend

- Community Water Systems
- Uranium Violations
- Counties - CENSUS

Drinking Water Systems
Radiological Chemical Data
Proximity of Grand River

Source	Sample Date	Parameter		
		Gross Alpha pCi/l	Radium 226/228 pCi/l	Uranium µg/l
Buffalo, SD				
Well #3	3/4/2002	1.8	0	0
Well #4	3/4/2002	0	2.3	0
Well #5	4/21/2005	1.2	0	0
Well #6	4/21/2005	7.7	0	0
Bison, SD				
Well	4/22/2002	1.1	0	NT
Well	7/9/2001	3.5	NT	NT
Lemmon, SD				
Well #5	7/16/2002	0.8	0.4	NT
Well #8	7/17/2002	0.9	0	NT
Well #9	7/16/2002	0	0	NT
Well #10	7/16/2002	1.6	0.8	NT
Well #11	7/16/2002	2.6	0	NT
McLaughlin, SD				
Well #5	6/10/2002	2.1	0	0
Public Health	6/10/2002	0.9	0	0
Well #4	6/10/2002	0.6	0.3	0
Well SW#2 & SW#3	6/10/2002	1.4	0	0
McIntosh, SD				
Well #1	3/1/2002	0.4	0	0
Well #2	3/1/2002	0	1.3	0
Well #3	3/17/2005	1.5	0.8	0

Drinking Water Standards:		
Gross Alpha:	15	pCi/l
Radium 226/228:	5	pCi/l
Uranium:	30	µg/l

*Note - NT means not tested

Drinking Water Systems
Radiological Chemical Data
Proximity of Moreau River

Source	Sample Date	Parameter		
		Gross Alpha pCi/l	Radium 226/228 pCi/l	Uranium µg/l
Faith, SD				
Served by Tri-County RWS				
Dupree, SD				
Served by Tri-County RWS				
Eagle Butte, SD				
Served by Tri-County RWS				
TC&G Rural Water System				
Well #1 & #2	7/15/2002	0	0.5	0
Well #4	12/20/2004	0.5	0	0
Well #5	9/14/2005	1.7	0	0
Drinking Water Standards:				
Gross Alpha:		15	pCi/l	
Radium 226/228:		5	pCi/l	
Uranium:		30	µg/l	

Drinking Water Systems
Radiological Chemical Data
Proximity of Cheyenne River

Source	Sample Date	Parameter		
		Gross Alpha pCi/l	Radium 226/228 pCi/l	Uranium µg/l
Edgemont, SD				
RR/BN Well	12/14/2005	11	3	0
TVA Well	12/14/2005	13	2	0
Well #2 & #4	12/14/2005	14	3	9
Provo, SD				
Well #2	6/27/2005	12.6	4	0
Hot Springs,SD				
Hot Brook	12/15/2005	4	0	0
Evans Well	5/6/2002	3.1	0.8	0
Oelrichs, SD				
Served by Fall River RWS (same as Hot Springs)				
Buffalo Gap, SD				
Well #1	12/6/2004	14.4	0.4	45.7
Wasta, SD				
Springs	10/6/2003	9.1	0.7	0
Tri-County RWS				
Plant (Missouri River)	11/19/2002	5.7	0	0
Drinking Water Standards:				
Gross Alpha:		15	pCi/l	
Radium 226/228:		5	pCi/l	
Uranium:		30	µg/l	

Drinking Water Systems
Radiological Chemical Data
Proximity of White River

Source	Sample Date	Parameter		
		Gross Alpha pCi/l	Radium 226/228 pCi/l	Uranium µg/l
Kadoka, SD				
Plant	6/14/2005	1.3	3.4	0
Belvidere, SD				
Served by Mni Wiconi RWS				
Murdo, SD				
Served by Mni Wiconi RWS				
Drinking Water Standards:				
	Gross Alpha:	15	pCi/l	
	Radium 226/228:	5	pCi/l	
	Uranium:	30	µg/l	

ATTACHMENT VI

Sampling Plan for Radiation and Radionuclides from Oil and Gas Sites in Harding County, South Dakota

South Dakota Department of Environment and Natural Resources
Minerals and Mining Program

Sampling Plan for Radiation and Radionuclides from Oil and Gas Sites in Harding County, South Dakota

Purpose

The following sampling plan was developed in response to concerns over whether oil and gas development in Harding County, South Dakota, is causing radiation or radionuclide contamination. The purpose of this plan is to obtain and document radiation and radionuclide levels at representative oil and gas sites, and to sample and analyze stored and produced water at these sites to determine if there are levels above concern present.

Levels at Land Surface

The Department of Environment and Natural Resources field inspectors will use an Integral Spectrometer to obtain and document radiation levels at the following representative sites and locations:

1) **Producing oil and gas wells:** wellhead, tanks, heat treaters, and any pipe or equipment that may be stacked or stored on-site.
2) **Water injection wells:** wellhead, tanks, and any pipe or equipment that may be stacked or stored on-site.
3) **Centralized tank batteries:** tanks, heater treaters, pumps, piping, and other equipment.
4) **Pipe storage yards:** new and used pipe and any other equipment that may be on-site.

Levels in Stored and Produced Water

DENR field inspectors will obtain water samples from the following representative sites and have them analyzed for radionuclides at a certified lab.

1) Produced water from operating oil wells.
2) Water to be injected in operating injection wells.
3) Drilling mud/water from reserve pits (if available).
4) Water from permitted surface water evaporation and discharge pits and facilities.

ATTACHMENT VII

Sampling Plan for Uranium and Radionuclide Levels in Ambient Air in Harding County, South Dakota

South Dakota Department of Environment and Natural Resources
Air Quality Program

Sampling Plan for Uranium and Radionuclide Levels in Ambient Air in Harding County, South Dakota

Purpose

This past year has seen an increase in public concern about the potential for contamination in the form of radioactive dust blowing from areas in Harding County where uranium mining has occurred in the past. Most of the mining was on public land and occurred before there were state or federal reclamation requirements. Some of these locations have no or minimal vegetative cover and have the potential to erode during high wind conditions.

Task and Objective

The Department of Environment and Natural Resources (DENR) will locate an air quality monitoring site east of the North Cave Hills in Harding County. It is anticipated the site will be located near the school at Ludlow. This location would provide an assessment of concentrations in an area children use. The monitoring site, still to be determined, will be located following guidance documents from the U. S. Environmental Protection Agency (EPA).

DENR will locate a second air quality monitoring site in Pierre that will be used to provide a background comparison site to the air quality site in Harding County. At both sites, monitors will operate on the same sampling schedule, samples will be analyzed for the same parameters, and the same sampling equipment will be used.

Dust samples will be collected on a glass fiber filter over a 24-hour period. Flow rates of the monitors will be controlled using a volumetric throat that will control the flow rate of 1.13 m^3/ minute. Samples will be collected on an every sixth day sampling schedule for one year. A schedule of this type will provide random sampling and give an indication of exposure to the people attending school at Ludlow and living in the surrounding area. The air monitors will be operated following EPA requirements in 40 Code of Federal Regulations Part 50 Appendix G and the standard operating procedures for a high volume monitor for total suspended particulate method.

Meteorological data for wind speed and wind direction will be obtained from the U.S. Forest Service Camp Crook site or National Weather Service site in Hettinger, North Dakota.

Sample Analysis and Sampling Parameters

Samples from each air monitoring site will be analyzed by a certified laboratory using EPA approved methods. The samples will be analyzed for uranium ^{235}, uranium ^{238}, radium ^{226}, and radium ^{228} isotopes.

Data Analysis

Results from the two sampling sites will be compared to determine if there is a significant difference in the uranium and radionuclide concentrations of suspended particulates. A comparison of concentration to wind direction and speed will also be completed.

South Dakota Department of Health

OFFICE OF THE SECRETARY

600 East Capitol Avenue
Pierre, South Dakota 57501-2536
605/773-3361 FAX: 605/773-5683
www.state.sd.us/doh

May 4, 2006

Steve Pirner, Secretary
Department of Environment and Natural Resources
523 East Capitol
Pierre, SD 57501

RE: Uranium mining: concerns on cancer mortality and incidence

Dear Steve:

Overview. Cancer is a major public health problem in South Dakota and the United States. Cancer is a neoplastic disease marked by uncontrolled growth of cells, often with invasion of normal tissue. Cancer is the second leading cause of death in South Dakota. In 2004 there were 6,811 deaths reported in South Dakota, with 1,559 (23%) of these deaths due to cancer. Cancer deaths have been reported in residents of every county in South Dakota. Cancer evolves from a complicated combination of multiple exposures or risks. The most commonly attributable risk factors for cancer are tobacco use 30%, diet/obesity 30%, sedentary lifestyle 5%, occupational factors 5%, family history of cancer 5%, viruses-biological agents 5%, perinatal factors/growth 5%, reproductive factors 5%, alcohol 3%, socioeconomic status 3%, environmental pollution 2%, ionizing/ultraviolet radiation 2%, prescription drugs/medical procedures 1% and salt/food additives/contaminants 1%[1]. Prevention, early detection and prompt and appropriate treatment are the keys to addressing the cancer burden.

Question: Concerns about uranium mines and radioactive pollution in western South Dakota prompted the Department of Health to review cancer death rates and cancer incidence[2] for counties with uranium mines and counties in the Standing Rock and Cheyenne River Reservations.

Cancer death rates. A one-year snapshot of cancer deaths would give a limited picture of the over-all cancer burden, especially in low population counties such as are common in western South Dakota. A 33-year, 1969–2002, cancer death review of the nine counties and comparisons to the state and national cancer death rates offers a larger-scope evaluation of the cancer burden in the counties under question (Butte, Corson, Custer, Dewey, Fall River, Harding, Lawrence, Pennington, and Ziebach).

The population of the nine counties at the 2000 census was 148,214, representing 20% of the states population. During the 33-year period, 1969-2002, there were 46,060 deaths due to cancer reported among South Dakota residents.

Cancer deaths and rates, 1969-2002, South Dakota select counties, (age-adjusted)

County (2000 population)	Number of cancer deaths	Cancer death rate* (±95%CI)
United States	15,500,586	206.4 (206.3-206.5)
South Dakota	46,060	187 (185.3-188.8)
Butte (9094)	623	201 (185.1-217.4)
Corson (4181)	242	209 (182.1-239.2)
Custer (7275)	389	175 (158.1-194.1)
Dewey (5972)	280	229 (202.2 – 259.1)
Fall River (7453)	744	197 (183.0-212.6)
Harding (1353)	89	166 (132.6-205.3)
Lawrence (21802)	1,258	188 (177.3-198.4)
Pennington (88565)	3,938	198 (191.3-203.8)
Ziebach (2519)	89	206 (162.7-258.8)

*Rates are per 100,000 persons age adjusted to the 2000 US standard population.
Source: SEER-(Surveillance, Epidemiology and End Results Program) Statistical Review, 1969-2002,

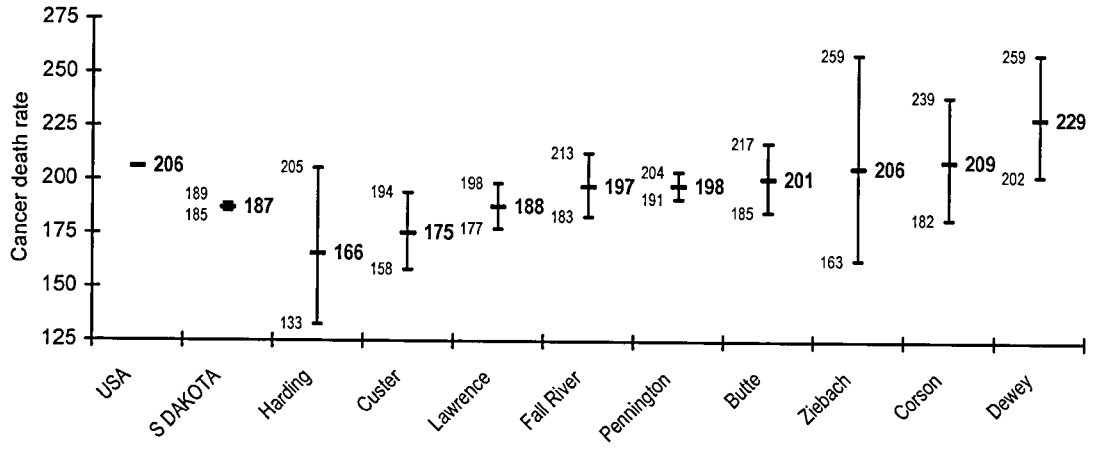
[1] Harvard Reports on Cancer Prevention, 1996, (www.hsph.harvard.edu/cancer/resources_materials/reports/HCCPreport_1fulltext.htm)

[2] Incidence rate is the number of new cancer cases occurring in a population over a given period of time, expressed as cases per 100,000 population.

This is expressed as a state cancer death rate of 187 deaths per 100,000. The national cancer death rate during that same period was 206 deaths per 100,000.

There were 7,652 cancer deaths reported in residents of the nine counties during the 33-year period, which is 17% of the cancer deaths in the state. The cancer rates in Custer and Harding County are below the state and national death rates. Butte, Corson, Fall River, Lawrence and Ziebach counties have death rates higher than the state rate, but are within the 95% confidence interval and are not considered statistically significant. The cancer death rates in Dewey and Pennington counties are higher than the state rate, and outside the 95% confidence interval for the state rate. None of the counties in question have cancer death rates significantly higher than the national rate. Although Pennington and Dewey counties have a higher rate of cancer deaths compared to the state rate, the data do not indicate an association between uranium mines and the cancer deaths.

Cancer death rates* (±95%CI) in nine South Dakota counties, 1969 – 2002



*Cases per 100,000 population, SEER rates

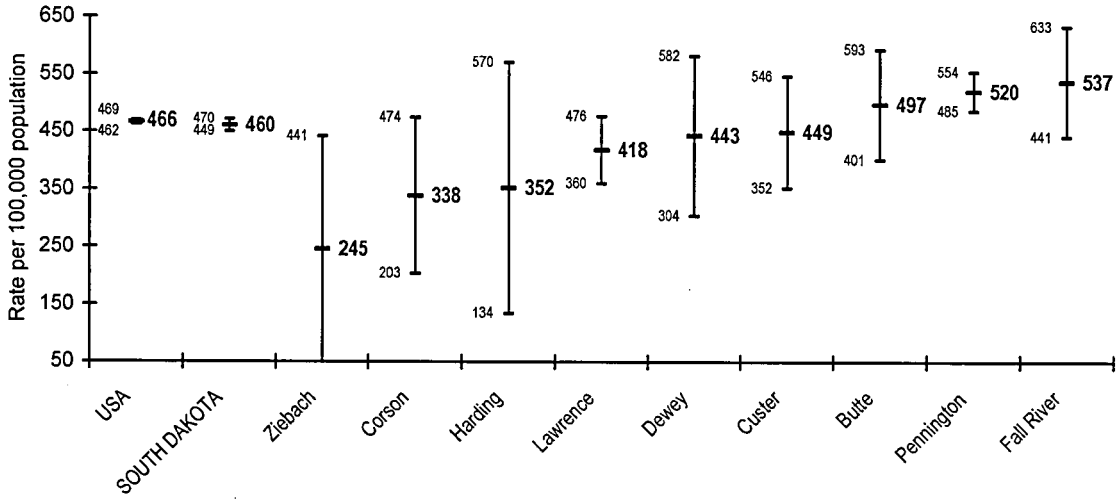
Cancer incidence. The Department of Health has been collecting data on newly diagnosed cases of cancer (not deaths) starting in 2001. The full state cancer incidence during 2001-2002 was 460 cases per 100,000 population. Cancer incidence for the United States was 466 cases per 100,000 population. Data from 2001–2002 show that six of the counties under concern have incidence rates lower than the full state. Three counties (Butte 497, Pennington 520, Fall River 537) have higher incidence, and of these Pennington County has a cancer incidence significantly higher than the state and national rates.

Cancer deaths by site. In the next sequence of analysis 33-years, 1969-2002, of cancer death data were examined for any unusual occurrences of site-specific cancers. A recent international scientific literature review[3] cites examples of links between radiation and cancers of the bladder, bone, brain, breast, liver, lung, ovary, skin and thyroid, as well as leukemia and myeloma. This analysis summary includes the following cancer sites in South Dakota (see Table for detail):

- oral cavity and pharynx,
- respiratory system,
- soft tissue including heart,
- breast,
- male genital system,
- eye and orbit,
- endocrine system,
- lymphoma,
- leukemia
- digestive system,
- bones and joints,
- skin excluding basal and squamous,
- female genital system,
- urinary system,
- brain and other nervous system,
- thyroid,
- myeloma,

[3] Clapp, R, et al. 2005. Environmental and Occupational Causes of Cancer: A Review of Recent Scientific Literature. Lowell Center for Sustainable Production, University of Massachusetts Lowell.

Cancer incidence rates* (±95%CI) in nine South Dakota counties, 2001 – 2002



*Cases per 100,000 population, age-adjusted for 2000 US standard population. SD Dept of Health and SEER-Stat

The most commonly reported cancers deaths in South Dakota are of the digestive system (primarily colon and rectum, pancreas and stomach) and respiratory system (primarily lung and bronchus) in men and women. Cancers of the digestive and respiratory systems account for 50% of cancer deaths in South Dakota. Among male-only cancers, genital system cancer deaths (primarily prostate) are most common. Among women breast cancer deaths are most common.

South Dakota, select counties cancer deaths and rates 1969-2002 by cancer sites, age-adjusted rates

	South Dakota		USA	Harding		Custer		Lawrence		Fall River		Pennington		Butte		Ziebach		Corson		Dewey	
Cancer site	Count	Rate	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
All Malignant Cancers	**46,060**	**187**	206	**89**	**166**	**389**	**175**	**1,258**	**188**	**744**	**197**	**3,938**	**198**	**623**	**201**	**89**	**206**	**242**	**209**	**280**	**229**
Oral cavity & pharynx	**612**	**2.5**	3.6	0	0	3	1.3	18	2.6	16	4.2	58	2.8	8	2.5	2	6	2	2.7	5	4.9
Digestive system	**12,476**	**50.3**	52.8	29	53.9	82	37.2	311	46.5	173	45.3	915	46.5	145	46.9	27	61.1	62	50.7	74	63.3
Respiratory system	**10,505**	**42.6**	54.7	17	31.3	122	52.8	323	47.6	197	50.6	1,054	51.9	184	58.4	20	50.7	53	45.8	81	63
Bones and joints	**163**	**0.7**	0.6	0	0	0	0	4	0.5	3	0.9	14	0.7	1	0.3	1	0.8	4	3.2	2	1.6
Soft tissue including heart	**306**	**1.3**	1.3	1	2.3	5	2.4	9	1.3	5	1.6	37	1.8	6	1.9	0	0	6	4.5	2	1.4
Skin, excluding basal & squamous	**714**	**3**	3.4	1	1.4	7	3.7	19	2.8	16	4.3	63	3	10	3.1	2	5.8	1	0.9	0	0
Breast (female)	**3,831**	**29.5**	30.9	6	22.5	24	20.9	105	29.8	60	36.4	335	29.8	44	26.2	6	25.1	20	34.9	20	30.4
Female genital system	**2,409**	**18.1**	19.1	4	14.9	28	24.6	63	17.7	36	20.9	180	15.9	29	17.9	2	9.2	13	19.9	9	12.7
Male genital system	**3,522**	**35.1**	34.6	10	43.8	28	31.9	82	32	74	39.1	277	28.4	52	40.7	8	40.9	19	46.7	13	27.2
Urinary system	**2,235**	**9**	9.0	1	1.9	18	8.2	66	9.7	27	6.6	186	9.6	35	11.2	4	7.5	8	8.6	17	15
Eye and orbit	**43**	**0.2**	0.1	0	0	0	0	2	0.3	1	0.3	6	0.3	0	0	0	0	0	0	0	0
Brain and other nervous system	**1,179**	**5**	4.5	3	5.5	9	3.9	31	4.8	12	3.1	114	5.4	17	6	2	3.7	9	6.4	8	5.2
Endocrine system	**218**	**0.9**	0.8	1	1.9	1	0.5	6	0.8	3	0.7	18	0.9	2	0.6	0	0	0	0	3	2.4
Thyroid	**138**	**0.6**	0.5	0	0	1	0.5	4	0.6	2	0.5	10	0.5	1	0.3	0	0	0	0	3	2.4
Lymphoma	**2,165**	**8.8**	8.2	4	7.1	12	5.4	52	7.7	32	9.4	193	9.6	25	8.1	0	0	9	8.7	11	8.8
Myeloma	**878**	**3.5**	3.5	2	4	9	4.2	24	3.5	17	4.3	72	3.7	14	4.3	2	4.3	5	3.8	2	1.4
Leukemia	**2,078**	**8.4**	8.0	8	14.6	12	5.7	55	8.2	22	6.2	163	7.9	17	5.4	5	8.9	12	10.5	7	5.5
Misc. malignant cancer	**2,693**	**10.8**	14.5	2	3.8	29	12.6	88	13.2	50	13.6	251	12.9	33	10.7	8	20.2	18	13.6	26	22.4

Rates are per 100,000 and age-adjusted to 2000 US Standard Population. Underlying mortality data provided by NCHS (www.cdc.gov/nchs).
Source: SD Department of Health, SEER Statistics Review 1969-2002

The respiratory system cancer death rate in Dewey County and bone/joint cancer death rate in Corson County were substantially higher than the state rate (outside the 95% confidence interval) for these particular cancer sites.

Over the 33-year period there were 81 respiratory system cancer deaths in Dewey County, rate 63.0 (95%CI ± 49.7-79.5) per 100,000, compared to 10,505 respiratory cancer deaths in the whole state, rate 42.6 (95%CI ± 41.8-43.4). The Dewey County rate is not statistically higher than the national rate for respiratory system cancer deaths (54.7). In Corson County there were 4 bone/joint cancer deaths, rate 3.2 (95%CI ± 0.9-10.1), compared to 163 bone/joint cancer deaths statewide, rate 0.7 (95%CI ± 0.6-.08).

Summary. This review of cancer rates in nine South Dakota counties shows:

- these counties have 20% of the state's population and account for 17% of the state's cancer deaths;
- increased cancer death rates in Pennington and Dewey counties compared to the state, but not increased over the national cancer death rate;
- increased cancer incidence in Pennington County compared to state and national rates;
- increased respiratory system cancer death rate in Dewey compared to the state rate, but not higher the national death rate;
- increased bone/joint cancer death rate in Corson County compared to state and national rates;
- these data do not indicate an association between uranium mines and cancer deaths;
- a more detailed study would be necessary to account for tobacco use, access to health care, obesity, lifestyle and other contributions to the local cancer burden.

Thank you for the opportunity to respond to these question and concerns. I hope this information is helpful. If you have further questions please let us know.

Sincerely,

Doneen B. Hollingsworth
Secretary of Health

cc: Dr. Sara Dye, MD, Chief Medical Officer, Aberdeen Area Indian Health Service
Dr. Beverly S. Kingsley, PhD, MPH, National Center for Environmental Health, Division of Environmental Hazards and Health Effects, Centers for Disease Control and Prevention

Powertech Comments on Draft NRC License SUA-1600
Richard Blubaugh
to:
'Burrows, Ronald', 'Cohen, Stephen'
08/10/2012 03:52 PM
Cc:
"'Clement, Richard'", "'Mays, John'", "'Mark Hollenbeck'", "'Marian Atkins'", Mike.Cepak, Valois Shea, "'Jack Fritz'", "'Hal Demuth'", "'Mike Schierman'"
Hide Details
From: "Richard Blubaugh" <rblubaugh@powertechuranium.com> Sort List...
To: "'Burrows, Ronald'" <Ronald.Burrows@nrc.gov>, "'Cohen, Stephen'" <Stephen.Cohen@nrc.gov>,
Cc: "'Clement, Richard'" <rfclement@powertechuranium.com>, "'Mays, John'" <jmays@powertechuranium.com>, "'Mark Hollenbeck'" <mhollenbeck@powertechuranium.com>, "'Marian Atkins'" <Marian_Atkins@blm.gov>, <Mike.Cepak@state.sd.us>, Valois Shea/R8/USEPA/US@EPA, "'Jack Fritz'" <jfritz@wwcengineering.com>, "'Hal Demuth'" <hdemuth@petrotek.com>, "'Mike Schierman'" <MikeSchierman@ERGOFFICE.COM>

1 Attachment

Comments_DraftLicense_120810.doc

Ron;

Transmitted with this email are Powertech's comments regarding the NRC draft License SUA-1600 for the Dewey-Burdock Project located in Custer and Fall River Counties, South Dakota. A letter version will also be sent for your review.

Richard Blubaugh
Vice President
Powertech (USA) Inc.
5575 DTC Parkway
Suite 140
Greenwood Village, CO 80111
303-790-7528

RICHARD BLUBAUGH
Vice President – Environmental
Health and Safety Resources

August 10, 2012

Office of Federal and State Materials and
Uranium Recovery Licensing Branch
Division of Waste Management and Environmental Protection
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTN: Ron Burrows, Project Manager

Re: Powertech (USA) Inc.'s Comments on Draft License SUA-1600; Dewey-Burdock Project; Docket No. 40-9075; TAC No. J 00606

Dear Mr. Burrows:

This letter and the enclosed comments regarding the draft NRC License SUA-1600 are being provided in response to the draft license and transmittal letter dated July 31, 2012. We have enclosed herewith a table showing the draft license condition in the left column with Powertech's comments in the right column. Powertech believes the comments reflect the clarifications provided in the PM-to-PM conference of August 8, 2012. Powertech appreciates the opportunity to review and comment on the draft license.

This letter and enclosure is being transmitted by email and letter.

We look forward to hearing from you at your earliest convenience should you have additional license conditions or need further clarification from us in this regard.

Sincerely,

Richard E. Blubaugh
Vice President – Environmental, Health & Safety Resources

Enclosures

5575 DTC Parkway, Ste. 140
Greenwood Village, CO 80111
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cc: R.F. Clement
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FW: Powertech Comments on Draft NRC License SUA-1600
Richard Blubaugh
to:
'Burrows, Ronald', 'Cohen, Stephen'
08/13/2012 09:15 AM
Cc:
"'Clement, Richard'", "'Mays, John'", "'Mark Hollenbeck'"
Hide Details
From: "Richard Blubaugh" <rblubaugh@powertechuranium.com>
To: "'Burrows, Ronald'" <Ronald.Burrows@nrc.gov>, "'Cohen, Stephen'" <Stephen.Cohen@nrc.gov>,
Cc: "'Clement, Richard'" <rfclement@powertechuranium.com>, "'Mays, John'" <jmays@powertechuranium.com>, "'Mark Hollenbeck'" <mhollenbeck@powertechuranium.com>

1 Attachment

NRCDraftLicense_CovLtr_120731.pdf

Ron,

My apologies for not including the attachment. It is attached hereto.

Richard Blubaugh

From: Richard Blubaugh [mailto:rblubaugh@powertechuranium.com]
Sent: Friday, August 10, 2012 3:50 PM
To: 'Burrows, Ronald'; 'Cohen, Stephen'
Cc: 'Clement, Richard'; 'Mays, John'; 'Mark Hollenbeck'; 'Marian Atkins (Marian_Atkins@blm.gov)'; 'Mike.Cepak@state.sd.us'; 'Valois Shea'; 'Jack Fritz'; 'Hal Demuth'; 'Mike Schierman'
Subject: Powertech Comments on Draft NRC License SUA-1600

Ron;

Transmitted with this email are Powertech's comments regarding the NRC draft License SUA-1600 for the Dewey-Burdock Project located in Custer and Fall River Counties, South Dakota. A letter version will also be sent for your review.

Richard Blubaugh
Vice President
Powertech (USA) Inc.
5575 DTC Parkway
Suite 140
Greenwood Village, CO 80111
303-790-7528

POWERTECH (USA) INC.

RICHARD E. BLUBAUGH
Vice President – Environmental
Health and Safety Resources

August 10, 2012

Office of Federal and State Materials and
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U.S. Nuclear Regulatory Commission
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ATTN: Ron Burrows, Project Manager

Re: Powertech (USA) Inc.'s Comments on Draft License SUA-1600; Dewey-Burdock Project; Docket No. 40-9075; TAC No. J 00606

Dear Mr. Burrows:

This letter and the enclosed comments regarding the draft NRC License SUA-1600 are being provided in response to the draft license and transmittal letter dated July 31, 2012. We have enclosed herewith a table showing the draft license condition in the left column with Powertech's comments in the right column. Powertech believes the comments reflect the clarifications provided in the PM-to-PM conference of August 8, 2012. Powertech appreciates the opportunity to review and comment on the draft license.

This letter and Adams-compliant enclosure is being transmitted by email and letter.

We look forward to hearing from you at your earliest convenience should you have additional license conditions or need further clarification from us in this regard.

Sincerely,

Richard E. Blubaugh
Vice President – Environmental, Health & Safety Resources

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Draft LC #	Draft License Condition	Powertech Comments
9.1	The authorized place of use shall be the licensee's Dewey-Burdock Project in Fall River and Custer Counties, South Dakota. The licensee shall conduct operations within the license area boundaries shown in Figure 1.4-1 of the approved license application.	No comment
9.2	The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated February 29, 2009 (Accession No. ML091200014), which is supplemented by the submittals dated August 10, 2009 (Accession No. ML092870160), December 23, 2010 (Accession No. ML110030730), August 1, 2011 (Accession No. ML112071064), February 27, 2012 (Accession No. ML120620195), April 11, 2012 (Accession No. ML121030013), June 13, 2012 (Accession No. ML12173A038), and June 27, 2012 (Accession No. ML12179A534). The approved application and supplements are, hereby, incorporated by reference, except where superseded by specific conditions in this license. The licensee must maintain at least one complete, updated, and approved license application at the licensed facility. Whenever the word "will" or "shall" is used in the above referenced documents, it shall denote a requirement.	Powertech suggests omitting the December 23, 2010 TR RAI responses (ML110030730), since the June 2011 TR RAI responses (ML112071064) were provided as a complete replacement to the December 2010 and February 2011 (ML110590650) TR RAI responses. Powertech also suggests correcting the submittal dates of ML112071064 and ML091200014 to June 28, 2011 and February 28, 2009, respectively (cover letter dates). Suggested revisions to the first sentence follow. The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated February 28~~9~~, 2009 (Accession No. ML091200014), which is supplemented by the submittals dated August 10, 2009 (Accession No. ML092870160), ~~December 23, 2010 (Accession No. ML110030730)~~, June 28~~August 1~~, 2011 (Accession No. ML112071064), February 27, 2012 (Accession No. ML120620195), April 11, 2012 (Accession No. ML121030013), June 13, 2012 (Accession No. ML12173A038), and June 27, 2012 (Accession No. ML12179A534).
9.3	All written notices and reports sent to the U.S. Nuclear Regulatory Commission (NRC) as required under this license and by regulation shall be addressed as follows: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. An additional copy shall be submitted to: Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Two White Flint North, 11545 Rockville Pike, Mail Stop T-8F5, Rockville, MD 20852-2738. Incidents and events that require telephone notification shall be made to the NRC Operations Center at (301) 816-5100 (collect calls accepted).	No comment

Draft LC #	Draft License Condition	Powertech Comments
9.4	Change, Test, and Experiment License Condition A) The licensee may, without obtaining a license amendment pursuant to 10 CFR 40.44, and subject to conditions specified in (B) of this condition: i Make changes to the facility as described in the license application (as updated); ii Make changes to the procedures as described in the license application (as updated); and iii Conduct tests or experiments not described in the license application (as updated).	No comment
9.4	B) The licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: i Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated); ii Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a facility structure, equipment, or monitoring system (SEMS) important to safety previously evaluated in the license application (as updated); iii Result in more than a minimal increase in the consequences of an accident previously evaluated in the license application (as updated); iv Result in more than a minimal increase in the consequences of a malfunction of an SEMS previously evaluated in the license application (as updated); v Create a possibility for an accident of a different type than any previously evaluated in the license application (as updated); vi Create a possibility for a malfunction of an SEMS	No comment

Draft LC #	Draft License Condition	Powertech Comments
	with a different result than previously evaluated in the license application (as updated); vii Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER), environmental impact statement (EIS), environmental assessment (EA) or technical evaluation reports (TERs) or other analysis and evaluations for license amendments. viii For purposes of this paragraph as applied to this license, SEMS means any SEMS that has been referenced in a staff SER, TER, EA, or EIS and supplements and amendments thereof.	
9.4	C) Additionally, the licensee must obtain a license amendment unless the change, test, or experiment is consistent with the NRC's previous conclusions, or the basis of or analysis leading to those conclusions, regarding actions, designs, or design configurations analyzed and selected in the site or facility SER, TER, and EIS or EA. This includes all supplements and amendments, and SERs, TERs, EAs, and EISs issued with amendments to this license.	No comment
9.4	D) The licensee's determinations concerning (B) and (C) of this condition shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management (e.g., a Plant Manager) and shall be responsible for financial approval for changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and one member shall be the radiation safety officer (RSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP, as appropriate, to address technical aspects such as groundwater or surface water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.	No comment

Draft LC #	Draft License Condition	Powertech Comments
9.4	E) The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with (B) of this condition. The licensee shall furnish, in an annual report to the NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC changed pages, which shall include both a change indicator for the area changed (e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed) and a page change identification (date of change, change number, or both), to the operations plan and reclamation plan of the approved license application (as updated) to reflect changes made under this condition.	No comment
9.5	Financial Assurance. The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR Part 40, Appendix A, Criterion 9, to adequately cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination, which includes offsite disposal of radioactive solid process or evaporation pond residues, and groundwater restoration as warranted. The surety shall also include the costs associated with all soil and water sampling analyses necessary to confirm the accomplishment of decontamination. Proposed annual updates to the financial assurance amount, consistent with 10 CFR Part 40, Appendix A, Criterion 9, shall be provided to the NRC 90 days prior to the anniversary date. The financial assurance anniversary date for the Dewey-Burdock Project will be the date on which the first surety instrument is submitted to the NRC. If the NRC staff has not approved a proposed revision 30 days prior to the expiration date of the existing financial assurance arrangement, the licensee shall extend the existing arrangement, prior to expiration, for 1 year. Along with each proposed revision or annual update of the financial assurance estimate, the licensee shall submit supporting documentation, showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15-percent contingency of the financial assurance estimate, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for	In the second paragraph, Powertech requests that the financial assurance anniversary date be changed to the anniversary of NRC staff approval, since there will be no initial instrument in place upon which to base the 12-month update requirement in Criterion 9 until the initial approval. By using the term "submitted" the LC imposes an initial update period that is shorter than the Criterion 9 requirement. Based on meetings with EPA Region 8, the BLM South Dakota Field Office, and the South Dakota Department of Environment and Natural Resources (DENR), Powertech anticipates that financial assurance estimates will be submitted to EPA, BLM, and DENR in addition to NRC. This is consistent with 10 CFR 40, Appendix A, Criterion 9, which says the NRC may accept financial assurance arrangements established to meet the requirements of other Federal or state agencies provided such arrangements are adequate to satisfy the requirements and that the NRC-related portion of the financial assurance is clearly identified and committed for use in accomplishing these activities. Powertech suggests modifying the last sentence in this LC as shown below. Powertech proposes that sufficient information has been provided with the June 2011 TR RAI responses (ML112071064) to demonstrate a "reasonable estimate for the

Draft LC #	Draft License Condition	Powertech Comments
	site closure. Within 90 days of NRC approval of a revised closure (decommissioning) plan and its cost estimate, the licensee shall submit, for NRC review and approval, a proposed revision to the financial assurance arrangement if estimated costs exceed the amount covered in the existing arrangement. The revised financial assurance instrument shall then be in effect within 30 days of written NRC approval of the documents. At least 90 days prior to beginning construction associated with any planned expansion or operational change that was not included in the annual financial assurance update, the licensee shall provide, for NRC staff review and approval, an updated estimate to cover the expansion or change. The licensee shall also provide the NRC with copies of financial-assurance-related correspondence submitted to the _____, a copy of the _____ financial assurance review, and the final approved financial assurance arrangement. The licensee also must ensure that the financial assurance instrument, where authorized to be held by a state or other Federal agency, identifies the NRC-related portion of the instrument and covers the activities discussed earlier in this license condition. The basis for the cost estimate is the NRC-approved site decommissioning and reclamation plan and any NRC-approved revisions to the plan. Reclamation and decommissioning cost estimates and annual updates should follow the outline in Appendix C, "Recommended Outline for Site-Specific In Situ Leach Facility Reclamation and Stabilization Cost Estimates," to NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications—Final Report." The licensee shall continuously maintain an approved surety instrument for the Dewey-Burdock Project, in favor of the _____. The initial surety estimate shall be submitted for NRC staff review and approval within 90 days of license issuance, and the surety instrument shall be submitted for NRC staff review and approval 90 days prior to commencing operations. The initial surety estimate shall include a reasonable estimate for the duration of groundwater restoration based on current experiences at licensed ISR facilities.	duration of groundwater restoration." Specifically, the responses to TR RAI 6.1-6 and 6.1-7 describe how Powertech will use best practicable technology that that has proven effective at achieving groundwater restoration goals and includes timely groundwater restoration (occurring as soon as is reasonably possible following the cessation of recovery operations). These RAI responses describe experiences at licensed ISR facilities and describe how the methods and timing of some of the early uranium ISR projects likely contributed to larger restoration extraction volumes. The phrase "based on current experiences at licensed ISR facilities" fails to account for the site-specific conditions at these facilities, which are not necessarily indicative of Dewey-Burdock site conditions, new processes such as concurrent uranium recovery and groundwater restoration (including construction of groundwater restoration equipment prior to operation so groundwater restoration will not be delayed) as required by NRC's interpretation of 10 CFR 40.42, and the current state of technology for groundwater restoration. Suggested revisions to LC 9.5 are shown below. Financial Assurance. The licensee shall maintain ~~an~~ NRC-approved financial surety arrangements, consistent with 10 CFR Part 40, Appendix A, Criterion 9, to adequately cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination, which includes offsite disposal of radioactive solid process or evaporation pond residues, and groundwater restoration consistent with 10 CFR 40, Appendix A, Criterion 5(B)(5)~~as warranted~~. The surety shall also include the costs associated with all soil and water sampling analyses necessary to confirm the accomplishment of decontamination and groundwater restoration. Proposed annual updates to the financial assurance amount, consistent with 10 CFR Part 40, Appendix A, Criterion 9, shall be provided to the NRC 90 days prior to the anniversary date. The financial assurance anniversary date for the Dewey-Burdock Project will be the date on which the first surety instrument is approved by ~~submitted to the~~ NRC. If ~~the~~ NRC staff has not approved a proposed revision 30 days prior to the expiration date

Draft LC #	Draft License Condition	Powertech Comments
		of the existing financial assurance arrangements, the licensee shall extend the existing arrangements, prior to expiration, for 1 year. Along with each proposed revision or annual update of the financial assurance estimate, the licensee shall submit supporting documentation, showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15-percent contingency of the financial assurance estimate, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for site closure. Within 90 days of NRC approval of a revised closure (decommissioning) plan and its cost estimate, the licensee shall submit, for NRC review and approval, a proposed revision to the financial assurance arrangement if estimated costs exceed the amount covered in the existing arrangement. The revised financial assurance instrument shall then be in effect within 30 days of written NRC approval of the documents. At least 90 days prior to beginning construction associated with any planned expansion or operational change that was not included in the annual financial assurance update, the licensee shall provide, for NRC staff review and approval, an updated estimate to cover the expansion or change. The licensee shall also provide the NRC with copies of financial-assurance-related correspondence submitted to the EPA, BLM and/or South Dakota Department of Environment and Natural Resources (DENR), a copy of the Federal and/or state agency financial assurance review, and the final approved financial assurance arrangements. The licensee also must ensure that the financial assurance instrument, where authorized to be held by a state or other Federal agency, identifies the NRC-related portion of the instrument and covers the activities discussed earlier in this license condition. The basis for the cost estimate is the NRC-approved site decommissioning and reclamation plan and any NRC-approved revisions to the plan. Reclamation and decommissioning cost estimates and annual updates should follow the outline in Appendix C, "Recommended Outline for Site-Specific In Situ Leach Facility Reclamation and Stabilization Cost Estimates," to NUREG-1569, "Standard Review Plan for In Situ

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		Leach Uranium Extraction License Applications— Final Report." The licensee shall continuously maintain ~~an~~ approved surety instrument(s) for the Dewey-Burdock Project, in favor of the appropriate regulatory agencies. The initial surety estimate shall be submitted for NRC staff review and approval within 90 days of license issuance, and the surety instrument shall be submitted for NRC staff review and approval 90 days prior to commencing operations. The initial surety estimate shall include a reasonable estimate for the duration of groundwater restoration based on best available technology as approved in the license application and based on best available knowledge of Dewey-Burdock site-specific hydrogeological conditions. ~~current experiences at licensed ISR facilities.~~
9.6	Release of surficially contaminated equipment, materials, or packages from restricted areas shall be in accordance with the NRC guidance document entitled, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," (the Guidelines) dated April 1993 (Accession No. ML003745526) or suitable alternative procedures approved by NRC prior to any such release. The Guidelines shall also apply to the removal of equipment, materials, or packages from restricted areas that have the potential for accessible surface contamination levels above background regardless of the intent to release these items for unrestricted use. The licensee shall document their survey of equipment, materials, or packages prior to removing them from a restricted area. Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides shall apply independently. Personnel performing these contamination surveys for items released for unrestricted use or from restricted areas shall meet the qualifications as health physics technicians or radiation safety officer as defined in Regulatory Guide 8.31. Personal effects (e.g., notebooks and flash lights) which are hand carried need not be subjected to the qualified individual survey or evaluation, but these	Powertech requests the elimination of the second paragraph or further clarification on the intent of this paragraph, since it appears to contradict a common practice of allowing tools or equipment with minimal potential for contamination to be utilized on site at non-connected restricted areas without the need to survey upon exit, as long as these tools or equipment remain under the control of the licensee. This is particularly important for common tools that are located at isolated places within well field areas, including header houses. The second paragraph would potentially create an undue burden on the licensee and provide little benefit in the reduction of potential radiological exposure to site personnel or the public.

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	items should be subjected to the same survey requirements as the individual possessing the items.	
9.7	The licensee shall follow the guidance set forth in NRC Regulatory Guides (as revised) 8.22, "Bioassay at Uranium Recovery Facilities," 8.30, "Health Physics Surveys in Uranium Recovery Facilities," and 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable (ALARA)" or NRC-approved equivalent.	No comment
9.8	Cultural Resources. Before engaging in any developmental activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory if such survey has not been previously conducted and submitted to the NRC. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR Part 800), and the Archaeological Resources Protection Act (as amended) and its implementing regulations (43 CFR Part 7). In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance of the area shall occur until the licensee has received authorization from the NRC, South Dakota State Historic Preservation Officer, or Bureau of Land Management to proceed.	Powertech asserts that the requirement for authorization from three regulatory entities does not comport with NRC being the lead agency for all activities under 36 CFR Part 800 associated with an NRC license issued pursuant to the Atomic Energy Act (AEA). The listing of three regulatory entities with three different statutory mandates arising under different legal and administrative procedures can result in significant confusion for both the licensee and interested stakeholders. Powertech suggests revising the last sentence as follows. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance of the area shall occur until the licensee has received authorization from the NRC~~, South Dakota State Historic Preservation Officer, or Bureau of Land Management~~ to proceed.
9.9	The licensee shall dispose of solid byproduct material from the Dewey-Burdock Project operations at a site that is licensed by the NRC or an NRC Agreement State to receive byproduct material. The licensee's approved solid byproduct material disposal agreement must be maintained on site. In the event that the agreement expires or is terminated, the licensee shall notify the NRC within seven working days after the date of expiration or termination. A new agreement shall be submitted for NRC staff review and written verification within 90 days after expiration or termination, or the licensee will be prohibited from further lixiviant injection.	No comment
9.10	The results of the following activities, operations, or actions shall be documented: sampling; analyses; surveys or monitoring; survey/ monitoring equipment calibrations; reports on audits and inspections; all meetings and training courses; and any subsequent reviews, investigations, or corrective actions required by NRC regulation or this	No comment

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	license. Unless otherwise specified in a license condition (LC) or applicable NRC regulation, all documentation required by this license shall be maintained at the site until license termination, and is subject to NRC review and inspection.	
9.11	The licensee is hereby exempted from the requirements of 10 CFR 20.1902(e) for areas within the facility, provided that all entrances to the facility are conspicuously posted with the words, "CAUTION: ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE MATERIAL."	No comment
10.1	The licensee shall use a lixiviant composed of native groundwater and a combination of carbon dioxide and gaseous oxygen, as specified in the approved license application.	No comment
10.2	Facility Throughput. The Dewey-Burdock Project throughput shall not exceed an average daily flow rate of 4,000 gallons per minute, 2,400 gallons per minute in the Burdock Area processing plant and 1,600 gallons per minute in the Dewey Area satellite plant. The annual production of yellowcake shall not exceed 1 million pounds.	Powertech suggests modifying the facility throughput to be consistent with the response to TR RAI P&R-14(c) in ML112071064. This RAI response states, "During uranium recovery ... The typical well field production will be approximately 2,400 gpm ... from Burdock well fields and 1,600 gpm ...from Dewey well fields ... Note that these are typical flow rates provided to illustrate the water balance when the Dewey and Burdock well fields are operating simultaneously. An important value is the sum of [the typical Burdock and Dewey flow rates], which represents the typical project-wide production flow rate. This will be approximately 4,000 gpm, which represents the average annual flow rate proposed at full production for the Dewey-Burdock Project." Note that potential impacts from project-wide production flow rates of 4,000 gpm and 8,000 gpm were assessed in the numerical groundwater model report submitted in February 2012 (ML12062A096). Powertech also suggests clarifying that the 4,000 gpm flow limit will be exclusive of restoration flow, which will be up to 500 gpm as described in the response to TR RAI P&R-14(c) in ML112071064. Suggested revisions to the first sentence are shown below. Facility Throughput. The Dewey-Burdock Project throughput shall not exceed ~~an average daily flow rate of~~ 4,000 gallons per minute (on an average annual basis), excluding restoration flows ~~2,400 gallons per minute in the Burdock Area processing plant and 1,600 gallons per minute in the Dewey Area satellite plant~~.

Draft LC #	Draft License Condition	Powertech Comments
10.3	At least 12 months prior to initiation of any planned final site decommissioning, the licensee shall submit a detailed decommissioning plan for NRC review and approval. The plan shall represent as-built conditions at the Dewey-Burdock Project.	No comment
10.4	The licensee shall develop and implement written standard operating procedures (SOPs) prior to operations for: A) All operational activities involving radioactive and nonradioactive materials associated with licensed activities that are handled, processed, stored, or transported by employees; B) All nonoperational activities involving radioactive materials, including in-plant radiation protection, quality assurance for the respirator program, and environmental monitoring; and C) Emergency procedures for potential accidents/unusual occurrences, including significant equipment or facility damage, pipe breaks and spills, loss or theft of yellowcake or sealed sources, significant fires, and other natural disasters The SOPs shall include appropriate radiation safety practices to be followed in accordance with 10 CFR Part 20. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed. Current copies of the SOPs shall be kept in the area(s) of the production facility where they are utilized. These SOPs are subject to inspection, including the preoperational inspection specified in LC 12.3.	Powertech requests the addition of the qualifier "routine" to operational activities and nonoperational activities, since RWPs will be used for activities that are non-routine for which SOPs have not been developed. Suggested revisions to bullet items A and B follow. A) All routine operational activities involving radioactive and nonradioactive materials associated with licensed activities that are handled, processed, stored, or transported by employees; B) All routine nonoperational activities involving radioactive materials, including in-plant radiation protection, quality assurance for the respirator program, and environmental monitoring; and
10.5	Mechanical Integrity Tests (MITs). The licensee shall construct all wells in accordance with methods described in Sections 3.1.2.2 and 3.1.2.3 of the approved license application. The licensee shall perform well MITs on each injection and production well before the wells are utilized and on wells that have been serviced with equipment or procedures that could damage the well casing. Additionally, the licensee shall retest each well at least once every 5 years. The licensee shall perform MITs in accordance with Section 3.1.2.4 of the licensee's approved license application. Any failed well casing that cannot be repaired to pass the MIT shall be appropriately plugged and abandoned in accordance with Section 6.1.8 of the approved license application.	Powertech suggests modifying the second sentence to reflect more specific language in Section 3.1.2.4 of the license application. Suggested revisions follow. The licensee shall perform well MITs on each injection and production well before the wells are utilized and on wells following any repair where a downhole drill bit or under-reaming tool is used. ~~that have been serviced with equipment or procedures that could damage the well casing.~~

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10.6	Groundwater Restoration. The licensee shall conduct groundwater restoration activities in accordance with Section 6.1 of the approved license application. Permanent cessation of lixiviant injection in a production area would signify the licensee's intent to shift from the principal activity of uranium recovery to the initiation of groundwater restoration and decommissioning for any particular production area. If the licensee determines that these activities are expected to exceed 24 months for any particular production area, then the licensee shall submit an alternate schedule request that meets the requirements of 10 CFR 40.42. Hazardous constituents in the groundwater shall be restored to the numerical groundwater protection standards as required by 10 CFR Part 40, Appendix A, Criterion 5B(5). In submitting any license amendment application requesting review and approval of proposed alternate concentration limits (ACLs) pursuant to Criterion 5B(6), the licensee must also show that it has first made reasonable effort to restore the specified hazardous constituents to the background or maximum contaminant levels (whichever is greater). Notwithstanding the LC 9.4 change process, the licensee shall not implement any changes to groundwater restoration or post-restoration monitoring plans without written NRC verification that the criteria in LC 9.4 do not require a license amendment. The licensee shall submit all changes to groundwater restoration or post-restoration monitoring plans to the NRC staff, for review and written verification, at least 60 days prior to commencement of groundwater restoration in a production area.	No comment
10.7	The licensee shall maintain an inward hydraulic gradient in each individual production area, starting when lixiviant is first injected into the production zone and continuing until the restoration target values (RTVs) have been reached.	Powertech suggests removing the term "restoration target values (RTVs)," which is not used in the license application in the context of the Dewey-Burdock Project and does not reflect Powertech's right, as a matter of law, to submit an ACL application under 10 CFR Part 40, Appendix A, Criterion 5(B)(5). Powertech requests that the LC use the operation-based initiation of the stabilization monitoring period rather than the water quality-based criteria of target restoration goals. Further, Powertech requests that the specific point of compliance for this LC be defined as the perimeter monitor well ring, since this will be the point of compliance for excursion monitoring and since "production area" is not used in the updated monitoring system

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		description in the June 2011 TR RAI responses (ML112071064). Powertech also requests the addition of the word "overall" to the inward hydraulic gradient to reflect that Powertech is committed to maintaining an overall inward hydraulic gradient during uranium recovery and active aquifer restoration except for isolated, localized, short-duration operational imbalances (e.g., well clogging, pump failure, short-term power outage, etc.). Such imbalances will be detected and corrected through operational monitoring and daily balancing of injection and extraction flow rates. Suggested revisions are shown below. The licensee shall maintain an overall inward hydraulic gradient within the perimeter monitor well ring ~~in each individual production area~~, starting when lixiviant is first injected into the production zone and continuing until the initiation of the stabilization monitoring period. ~~restoration target values (RTVs) have been reached.~~
10.8	The licensee is permitted to construct and operate storage and treatment ponds, as described in Section 4.2 of the approved license application. Routine pond inspections will be conducted consistent with inspection procedures described in Regulatory Guide 3.11.	No comment
10.9	The licensee shall establish and conduct an effluent and environmental monitoring program in accordance with those programs described in Section 5.7.8 and Section 5.7.7 of the approved license application.	No comment
10.10	A. Prior to principal activities in a new wellfield, the licensee shall submit a hydrologic test data package to the NRC. The licensee shall submit a hydrologic test package at least 60 days prior to the planned start date of lixiviant injection. In each wellfield data package, the licensee will document that all perimeter monitoring wells are screened in the appropriate horizon in order to provide timely detection of an excursion. The licensee shall not proceed with any lixiviant injection in the new wellfield before it receives written NRC staff verification documenting the NRC staff's review of the hydrologic test data package. Contents of a wellfield package shall include: • A description of the proposed well field (location, extent, etc.) • Map(s) showing the proposed production and injection well patterns and locations of all monitor wells	Powertech requests clarification on why all well field packages require written verification, since operating history after the development of the first well field in each of the Dewey and Burdock areas should be sufficient to allow for subsequent well field packages to be reviewed by the SERP. Powertech has proposed to submit any well field package to NRC if anomalous conditions are present or the SERP evaluation indicates potential to impact human health or the environment (refer to TR RAI 5.7.8-14 response in ML112071064). Powertech requests an estimate of the typical amount of time required to review and verify each well field package. Powertech also requests that "Commission-approved" be changed to "NRC-approved" to clarify that NRC staff will review

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	• Geologic cross sections and cross section location maps • Isopach maps of the production zone sand and overlying and underlying confining units • Discussion of aquifer test procedures, including well completion reports • Discussion of the results and conclusions of aquifer tests, including raw data, drawdown match curves, potentiometric surface maps, water level graphs, drawdown maps and, when appropriate, directional transmissivity data and graphs • Sufficient information to show that wells in the monitor well ring are in adequate communication with the production patterns • All raw analytical data for Commission-approved background • Summary tables of analytical data showing computed Commission-approved background • Descriptions of statistical methods for computing Commission-approved background • Any other information pertinent to the proposed well field area tested will be included and discussed.	and provide written verification of well field packages submitted under this LC. Suggested revisions follow. A. Prior to principal activities in the first ~~a new~~ wellfield in each of the Dewey and Burdock areas, the licensee shall submit a hydrologic test data package to the NRC. The licensee shall submit a hydrologic test package at least 60 days prior to the planned start date of lixiviant injection. In each wellfield data package, the licensee will document that all perimeter monitoring wells are screened in the appropriate horizon in order to provide timely detection of an excursion. The licensee shall not proceed with any lixiviant injection in the new wellfield before it receives written NRC staff verification documenting the NRC staff's review of the hydrologic test data package. Contents of a wellfield package shall include: • A description of the proposed well field (location, extent, etc.) • Map(s) showing the proposed production and injection well patterns and locations of all monitor wells • Geologic cross sections and cross section location maps • Isopach maps of the production zone sand and overlying and underlying confining units • Discussion of aquifer test procedures, including well completion reports • Discussion of the results and conclusions of aquifer tests, including raw data, drawdown match curves, potentiometric surface maps, water level graphs, drawdown maps and, when appropriate, directional transmissivity data and graphs • Sufficient information to show that wells in the monitor well ring are in adequate communication with the production patterns • All raw analytical data for NRC~~Commission~~-approved background • Summary tables of analytical data showing computed NRC~~Commission~~-approved background • Descriptions of statistical methods for computing NRC~~Commission~~-approved background • Any other information pertinent to the proposed well field

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		area tested will be included and discussed.
10.10	B. The licensee will submit for review and approval, hydrologic packages for wellfields B-WF-6, -7, and -8. No extraction will be permitted in the aforementioned wellfields until the NRC staff approves the hydrologic package. Hydrologic packages shall include all the information in paragraph A of this license condition and aquifer test results that address the partially unsaturated conditions of the Chilson Aquifer in these wellfields. These hydrologic packages will also contain a justification for well spacings in the monitoring well ring and overlying and underlying aquifers.	No comment
10.14	The licensee is prohibited from using the "glue and screw" method of joining well casings to construct any monitoring, injection, or production well.	No comment
10.15	The licensee will implement a pre-operational and operational sampling plan as discussed in Section 6.0 of the licensee's South Dakota Department of Environment and Natural Resources, Groundwater Discharge Plan until principal activities at the land application areas cease.	Powertech suggests revising this LC to reflect that land application is only one of two disposal options for treated liquid waste. Powertech does not anticipate using land application if sufficient capacity is available in Class V deep disposal wells. Suggested revisions are shown below. If land application is used, the ~~The~~ licensee will implement a pre-operational and operational sampling plan as discussed in Section 6.0 of the licensee's South Dakota Department of Environment and Natural Resources, Groundwater Discharge Plan until principal activities at the land application areas cease.
10.16	The licensee shall conduct radiological characterization of airborne samples for natural U, Th-230, Ra-226, Po-210, and Pb-210 for each restricted area air particulate sampling location at a frequency of once every 6 months for the first 2 years following issuance of the initial license, and annually thereafter to ensure compliance with 10 CFR 20.1204(g). The licensee shall also evaluate changes to plant operations to determine if more frequent radionuclide analyses are required for compliance with 10 CFR 20.1204(g).	No comment
10.17	The licensee shall ensure radiation safety training is consistent with Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure," (as revised); Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure," (as revised); and Section 2.5 of Regulatory Guide 8.31 (as revised), or NRC-approved equivalent.	No comment

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11.1	In addition to reports required to be submitted to NRC or maintained on-site by Title 10 of the Code of Federal Regulations, the licensee shall prepare the following reports related to operations at the Facility: A) A quarterly report that includes a summary of excursion parameter concentrations, well placed on or removed from excursion status, corrective actions taken, and the results obtained for all wells that were on excursion status during that quarter. This report shall be submitted to NRC within 60 days following completion of the reporting period.	No comment
11.1	B) A semiannual report that discusses: status of well fields in operation (including last date of lixiviant injection), status of wellfields in restoration and restoration progress, status of any long term excursions and a summary of MITs during the reporting period. This report shall be submitted to NRC within 60 days following completion of the reporting period.	No comment
11.1	C) Quarterly report summarizing daily flow rates for each injection and production well and injection manifold pressures on the entire system. This report shall be made available for inspection upon request.	No comment
11.1	D) Consistent with Regulatory Position 2 of Regulatory Guide 4.14, a semiannual report that summarizes the results of the operational effluent and environmental monitoring program. The licensee shall submit this report consistent with the terms of Regulatory Guide 4.14.	No comment
11.2	The licensee shall submit the results of the annual review of the radiation protection program content and implementation performed in accordance with 10 CFR 20.1101(c). These results shall include an analysis of dose to individual members of the public consistent with 10 CFR 20.1301 and 10 CFR 20.1302.	No comment
11.3	Establishment of Commission-Approved Background Water Quality. Prior to injection of lixiviant in each production wellfield, as defined by the licensee, the licensee shall establish Commission-approved background groundwater quality data for the ore zone, overlying aquifers, underlying aquifers, alluvial aquifers (where present), and the perimeter monitoring areas. Commission-approved background sampling will be performed in accordance with Section 5.7.8 of the	Powertech requests that "Commission-approved" be changed to "NRC-approved" to clarify that NRC staff will review and provide written verification of background water quality. Suggested revisions follow. Establishment of NRC~~Commission~~-Approved Background Water Quality. Prior to injection of lixiviant in each production wellfield,

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	approved license application.	as defined by the licensee, the licensee shall establish NRC~~Commission~~-approved background groundwater quality data for the ore zone, overlying aquifers, underlying aquifers, alluvial aquifers (where present), and the perimeter monitoring areas. NRC~~Commission~~-approved background sampling will be performed in accordance with Section 5.7.8 of the approved license application.
11.4	Establishment of UCLs. Prior to injection of lixiviant into each production wellfield, as defined by the licensee, the licensee shall establish excursion parameters and their respective upper control limits (UCLs) in designated overlying aquifer, underlying aquifer, and perimeter monitoring areas in accordance with Section 5.7.8 of the approved license application. Unless otherwise determined, the site-specific excursion parameters are chloride, conductivity, and total alkalinity. The UCLs shall be established for each excursion control parameter and for each well based on the mean plus five standard deviations of the data collected for LC 11.3. The UCL for chloride can be set at the sum of the background mean concentration and either (a) five standard deviations or (b) 15 mg/L, whichever sum provides the higher limit.	No comment
11.5	Excursion Monitoring. Monitoring for excursions shall occur twice monthly and at least 10 days apart for all wells where UCLs have been established per Section 5.7.8 of the approved license application at all wellfields. If the concentrations of any two excursion indicator parameters exceed their respective UCL or any one excursion indicator parameter exceeds its UCL by 20 percent, then the excursion criterion is exceeded and a verification sample shall be taken from that well within 48 hours after results of the first analyses are received. If the verification sample confirms that the excursion criterion is exceeded, then the well is placed on excursion status. If the verification sample does not confirm that the excursion criterion is exceeded, a third sample shall be taken within 48 hours after the verification sampling. If the third sample shows that the excursion criterion is exceeded, the well is placed on excursion status. If the third sample does not show that the excursion criterion is exceeded, the first sample shall be considered to be an error and routine excursion monitoring is resumed (the well is not placed on excursion status). Upon confirmation of an excursion, the licensee shall notify NRC, as	Powertech suggests modifying the fourth sentence to be consistent with the second sentence. The suggested modifications are shown below. If the verification sample does not confirm that the excursion criterion is exceeded, a third sample shall be taken within 48 hours after the results of the verification sampling are received.

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	discussed below, implement corrective action, and increase the sampling frequency for the excursion indicator parameters at the well on excursion status to at least once every 7 days. Corrective actions for confirmed excursions may be, but are not limited to, those described in Section 5.7.8 of the approved license application. An excursion is considered corrected when concentrations of all indicator parameters are below the concentration levels defining the excursion for three consecutive weekly samples. If an excursion is not corrected within 60 days of confirmation, the licensee shall either (a) terminate injection of lixiviant within the wellfield until an excursion is corrected; or (b) increase the surety in an amount to cover the full third-party cost of correcting and cleaning up the excursion. The surety increase shall remain in force until the NRC has verified that the excursion has been corrected and remediated. The written 60-day excursion report shall identify which course of action the licensee is taking. Under no circumstances does this condition eliminate the requirement that the licensee must remediate the excursion to meet groundwater protection standards as required by LC 10.7 for all constituents established per LC 11.3. The licensee shall notify the NRC Project Manager (PM) by telephone or email within 24 hours of confirming a lixiviant excursion, and by letter within 7 days from the time the excursion is confirmed, pursuant to LC 11.6 and 9.3. A written report describing the excursion event, corrective actions taken, and the corrective action results shall be submitted to the NRC within 60 days of the excursion confirmation. For all wells that remain on excursion after 60 days, the licensee shall submit a report as discussed in LC 11.1(A).	
11.6	Until license termination, the licensee shall maintain documentation on unplanned releases of source or byproduct materials (including process solutions) and process chemicals. Documented information shall include, but not be limited to, the date, spill volume, total activity of each radionuclide released, radiological survey results, soil sample results (if taken), corrective actions, results of postremediation surveys (if taken), a map showing the spill location and the impacted area, and an evaluation of NRC reporting criteria. The licensee shall have written procedures for evaluating the consequences of the spill or incident/event against 10 CFR Part 20,	No comment

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	Subpart M, "Reports," and 10 CFR 40.60 reporting criteria. If the criteria are met, then the licensee shall report to the NRC Operations Center as required. If the licensee is required to report any production area excursions and spills of source material, byproduct material, or process chemicals that may have an impact on the environment, or any other incidents/events, to any State or other Federal agencies, a report shall be made to the NRC Headquarters Project Manager (PM) by telephone or electronic mail (e-mail) within 24 hours. In accordance with LC 9.3, this notification shall be followed, within 30 days of the notification, by submittal of a written report to NRC Headquarters detailing the conditions leading to the spill or incident/event, corrective actions taken, and results achieved.	
11.7	The licensee shall submit semi-annual reports that presents the flow rates and volumes of liquid effluent discharged to the Class V disposal wells and the land application areas, influent flow rates into the satellite and central processing plants, and bleed rates. The first report is due 12 months after the start of operations, and shall account for all effluent discharges and inflows during the previous 12 months.	No comment
11.8	After the initial land use update discussed in LC 12.17, every 12 months, thereafter, the licensee shall submit a land use update report for NRC staff review, until groundwater restoration and decommissioning are completed and approved by the NRC staff.	No comment
12.1	Prior to commencement of operations in any production area, the licensee shall obtain all necessary permits and licenses from the appropriate regulatory authorities. The licensee shall also submit a copy of all permits for its Class III and Class V underground injection wells to the NRC.	No comment
12.2	Prior to commencement of operations, the licensee shall coordinate emergency response requirements with local authorities, fire department, medical facilities, and other emergency services. The licensee shall document these coordination activities and maintain such documentation on-site.	No comment
12.3	The licensee shall not commence operations until the NRC performs a preoperational inspection to confirm, in part, that written operating procedures and approved radiation safety and environmental monitoring programs are in place, and that preoperational testing is complete. The licensee should notify the NRC, at least 90 days prior to the expected commencement of operations, to allow the NRC	No comment

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	sufficient time to plan and perform the preoperational inspection.	
12.4	The licensee shall identify the location, screen depth, and estimated pumping rate of any new groundwater wells or new use of an existing well within the license area and within 2 kilometers (1.25 miles) of any proposed production area since the application was submitted to the NRC. The licensee shall evaluate the impact of ISR operations to potential groundwater users and recommend any additional monitoring or other measures to protect groundwater users. The evaluation shall be submitted to the NRC for review within 6 months of discovery of such well use.	Powertech requests that "production area" be changed to "well field boundary" for consistency with LC 12.11 and the license application. The suggested revision is shown below. The licensee shall identify the location, screen depth, and estimated pumping rate of any new groundwater wells or new use of an existing well within the license area and within 2 kilometers (1.25 miles) of any proposed well field boundary ~~production area~~ since the application was submitted to the NRC.
12.5	Prior to commencement of operations, the licensee shall submit the qualifications of radiation safety staff members for NRC staff review and written verification.	No comment
12.6	Prior to commencement of operations, the licensee shall submit a copy of the solid byproduct material disposal agreement to the NRC.	No comment
12.7	Prior to the start of construction, the licensee will submit to the NRC staff for review and written verification, information regarding the procedures, structures, and/or equipment to address the following: • The containment of spills and contamination within the wellfields and land application areas to prevent migration of such contamination into surface water bodies or ephemeral stream channels. • The protection of wellfields, land application areas, and pipelines from damage, spills, and/or contaminant migration due to flooding. • The procedures for restoring stream channels to the original geomorphology during the decommissioning of facilities.	Powertech believes that the first bullet item is unnecessary and possibly confusing for the following reasons. Powertech has prepared a conceptual design of catchment areas around each land application area to prevent land application solutions and runoff up to and including the 100-year, 24-hour storm event from reaching surface water bodies or ephemeral stream channels. A copy of the conceptual design was provided to NRC under a July 3, 2012 cover letter (ML122090397). The Groundwater Discharge Plan that will be approved by DENR will address the potential migration of contamination from land application areas to surface water bodies or ephemeral stream channels. The June 2011 TR RAI responses (ML112071064) address monitoring and inspection procedures that will be used to detect a potential well field spill. Spill response, cleanup, and soil verification surveys also are addressed. Powertech asserts that NRC was provided sufficient information in the license application concerning action plans related to potential well field spills. Powertech believes that the second bullet item also is unnecessary and possibly confusing for the following reasons. The June 2011 TR RAI responses (ML112071064) present detailed analysis of potential flooding within the project area. The

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		responses to TR RAI MI-5 and 2.7-3 describe the modeled 100-year flood inundation boundaries and describe how facilities will be constructed outside of the flood inundation boundaries or protected from flooding (e.g., well heads will be sealed to withstand brief periods of submergence). Protection of land application areas from flooding will be addressed in the Groundwater Discharge Plan that will be approved by DENR. Powertech asserts that NRC was provided sufficient information in the license application concerning flood protection.
12.8	The licensee will propose, for review and written verification, a monitoring well network for the Fall River Aquifer in the Burdock area for those wellfields in which the Chilson Aquifer is the extraction zone.	Powertech suggests that this LC be omitted as duplicative of LC 10.10(A). Powertech has committed to monitoring all overlying aquifers in each well field (refer to the response to TR RAI 5.7.8-12 in ML112071064). As part of this commitment, the Fall River aquifer will be monitored, where present, in all well fields targeting the Chilson aquifer for uranium ISR. The monitoring network design for the first Burdock well field will be provided to NRC staff for written verification as required by LC 10.10(A).
12.9	The licensee will continue to collect additional meteorological data on a continuous basis at a data recovery rate of 90 percent until the data collected is determined by the NRC staff to be representative of long-term conditions. Justification of the similarity or validity of the data will include analysis of the statistical data presented to illustrate confidence in the representativeness of the data. The data collected shall include, at a minimum, wind speed, wind direction, and an annual wind rose. The submittal shall include a summary of the stability classification.	No comment
12.10	The licensee shall submit preoperational surface water analytical data for the new surface water sampling locations to the NRC within 3 months of the initiation of operations for review and written verification. Surface water analytical data shall be of the same completeness as the data provided in the licensee's June 2011 submittal.	Powertech suggests adding the Accession No. to the June 2011 submittal. The suggested revisions follow. The licensee shall submit preoperational surface water analytical data for the new surface water sampling locations to the NRC within 3 months of the initiation of operations for review and written verification. Surface water analytical data shall be of the same completeness as the data provided in the licensee's June 2011 submittal (Accession No. ML112071064).
12.11	Prior to major site construction, the licensee will collect four quarterly groundwater samples from each well within 2 km (1.25 mi) of the boundary of each wellfield. This data shall be submitted to the NRC staff for review and written verification.	Powertech requests changing "major site construction" to "commencement of operations." The latter is consistent with the license application and similar conditions in recently approved licenses, including LC 12.10 in SUA-1597 and LC 12.7 in SUA-

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		1598. Powertech also requests that the LC be modified to specify the type of wells to monitor. The response to TR RAI 5.7.8-17 in ML112071064 specifies that Powertech will monitor all domestic and stock wells within 2 km of the license boundary prior to operations. Powertech proposes to modify the final TR commitment to match the proposed revisions shown below to include all domestic, stock, and irrigation wells within 2 km of the proposed well field boundaries. This is in agreement with Regulatory Guide 4.14, which recommends sampling all wells that could be used for drinking water, livestock watering, or crop irrigation. Powertech also requests verification that samples collected prior to license approval may be used to satisfy this requirement. Powertech also requests the addition of language to clarify that well fields will be proposed at the time of preoperational monitoring and that sampling will be subject to landowner consent and suitable well conditions for proper sample collection. Suggested revisions are shown below. Prior to commencement of operations ~~major site construction~~, the licensee will collect four quarterly groundwater samples from each domestic, stock and irrigation well within 2 km (1.25 mi) of the boundary of each proposed wellfield, provided the owner consents to the sampling and the well condition is suitable for sampling.
12.12	The licensee per completed the following sampling and monitoring activities and submit the required information 30 days prior to construction:	Powertech requests that the first sentence be changed from "prior to construction" to "prior to commencement of operations" for consistency with similar facility-specific, preoperational LCs in recently approved licenses (e.g., LC 12.6 through 12.15 in SUA-1596, LC 12.7 through 12.14 in SUA-1597, and LC 12.7 through 12.14 in SUA-1598). Suggested revisions follow. The licensee shall ~~per~~ complete~~d~~ the following sampling and monitoring activities and submit the required information 30 days prior to the commencement of operations ~~construction~~:

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12.12	A. The licensee shall establish air particulate sampling stations consistent with Regulatory Guide 4.14 that specifically recommends are particulate stations to be located in a manner consistent with the principal wind directions and in the three sectors with the highest predicted radioactivity concentrations resultant from operations and co-locate radon air samplers and direct radiation and soil sampling with the air particulate sampling stations. Data shall be collected for one year and submitted to the NRC for review and written verification.	Powertech requests clarification of the need for bullet item A. Powertech asserts that NRC was provided sufficient information in the license application concerning the criteria used to establish air particulate sampling locations, including a demonstration that the preoperational air particulate sampling locations satisfy the recommendations of Regulatory Guide 4.14. This was provided in the response to TR RAI 2.9-1 in ML112071064. If NRC staff has determined that a preoperational air particulate station described in the license application is not located in a manner consistent with Regulatory Guide 4.14, Powertech requests clarification of the procedure to obtain NRC verification of an additional preoperational air particulate station.
12.12	B. The licensee shall submit to the NRC for review and written verification, a radiological environmental monitoring program report that will include soil samples collected at both 5-cm depth as described in Regulatory Guide 4.14 and 15-cm for background decommissioning data.	Powertech asserts that justification for the preoperational soil sampling depths was provided in the response to TR RAI 2.9-34 in ML112071064. Please clarify which additional soil sampling locations are requested for 5-cm sampling depth.
12.12	C. The licensee will collect samples from the relocated sediment sample locations at the frequencies specified Regulatory Guide 4.14. This data shall be submitted to the NRC staff for review and written verification.	No comment.
12.12	D. The licensee will provide additional statistical analysis of the soil sampling data and gamma measurements to establish sufficient statistical relationships. If such relationships are not sufficient for use at the site, then additional procedures or data shall be submitted to the NRC staff for review and written verification.	Powertech asserts that statistical analysis of the soil sampling data and gamma measurements was provided in the license application, specifically in the response to TR RAI 2.9-38(b) in ML112071064. Please clarify what additional information is required in this LC.
12.13	Within 30 days of license issuance, the licensee will provide the correct reference to the equations in NUREG-5512 for estimating plant uptake of radionuclides and provide the plant uptake estimates to the NRC for review and written verification.	Powertech proposes to update the equations for estimating plant uptakes of radionuclides to exactly match the NUREG-5512 equations in the revised TR. The revised TR also will include the calculated concentration factors for the various radionuclides and plant types evaluated in the response to TR RAI 2.9-12 in ML112071064. Please confirm whether "plant update estimates" refers to the calculated concentration factors.
12.14	No later than 30 days before the start of operations, the licensee shall provide the NRC staff, for review and verification, its procedures for documenting the wellfield inspections. These procedures shall include the personnel tasked with performing these inspections, items to be inspected, criteria for determining upset conditions, and the manner in which the inspections will be documented.	No comment

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12.15	Within 30 days of the pre-operational inspection, the licensee shall provide to the NRC staff, for review and written verification, its procedures for preparing logs of the dryer and emissions control system performance in accordance with 10 CFR Part 40, Appendix A, Criterion 8. The procedure shall include the manner in which logs for inspection will be produced and maintained at the Dewey-Burdock Project. These procedures shall also specify specific personnel responsible for responding to malfunctions of the dryer and emissions control system and the manner in which such responsible persons are notified of malfunctions.	Powertech suggests modifying "specific personnel" in the last sentence "job position or category" to avoid confusion between job category and specific individuals. The suggested revision follows. These procedures shall also specify job position or category ~~specific personnel~~ responsible for responding to malfunctions of the dryer and emissions control system and the manner in which such responsible persons are notified of malfunctions.
12.16	No later than 90 days before the start of operations, the licensee shall provide the qualifications and training required for RSO designee for reviewing and issuing radiation work permits to the NRC staff for review and written verification.	No comment
12.17	No later than 30 days before the start of operations, the licensee shall submit a report for NRC staff review updating the land use within the Dewey-Burdock Project and within 2 miles of the license boundary. This report shall identify actual land use changes, new structures and the purpose, and new water supply wells and the purpose.	No comment
12.18	The licensee shall ensure radiation safety training is consistent with Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure"(as revised); and Section 2.5 of Regulatory Guide 8.31 (as revised), or NRC approved equivalent.	Powertech requests elimination of this LC, which appears to be duplicative of LC 10.17.
12.19	At least 30 days prior to the preoperational inspection, the licensee shall provide the list of instrumentation including the manufacturer, model number and/or a description, and the range of sensitivity of the radiation survey meters proposed by the applicant to measure beta radiation. The licensee shall also provide a plan for conducting beta surveys in process areas.	No comment
12.20	No later than 30 days before the preoperational inspection, the licensee shall submit to the NRC staff for review and written verification an acceptable method to ensure the soluble intake of uranium will be ALARA.	No comment
12.21	The licensee shall submit to the NRC staff for review and approval the procedures by which it will ensure that unmonitored employees will not exceed 10 percent of the dose limits in 10 CFR Part 20, Subpart C.	Powertech suggests changing "review and approval" to "review and written verification" for consistency with approved LC 12.8 in SUA-1596. The proposed revision follows. The licensee shall submit to the NRC staff for review and written verification ~~approval~~ the procedures by which it will ensure that unmonitored employees will not exceed 10 percent of the dose

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		limits in 10 CFR Part 20, Subpart C.
12.22	The licensee shall prepare a bioassay QA/QC procedure that is consistent with Regulatory Guide 8.22. This procedure shall be made available for NRC staff review and written verification during the preoperational inspection.	No comment
12.23	No later than 30 days before the preoperational inspection, the licensee shall develop a survey program for beta-gamma contamination for personnel exiting from restricted areas, which will meet the requirements of 10 CFR Part 20, Subpart F.	No comment
12.24	The licensee shall provide, for NRC staff review and written verification, the surface contamination detection capability (scan MDC) for radiation survey meters used for contamination surveys to release equipment and materials for unrestricted use and for personnel contamination surveys. The detection capability in the scanning mode for the alpha and beta-gamma radiation expected shall be provided in terms of dpm per 100 cm^2.	No comment
12.25	No later than 30 days before the preoperational inspection, the licensee shall provide, to the NRC staff for review and written verification, the following information for the airborne effluent and environmental monitoring program in which it shall develop written procedures to: A. Discuss how, in accordance with 10 CFR 40.65, the quantity of the principal radionuclides from all point and diffuse sources will be accounted-for in, and verified by, surveys and/or monitoring.	No comment
12.25	B. Evaluate the member(s) of the public likely to receive the highest exposures from licensed operations consistent with 10 CFR 20.1302.	No comment
12.25	C. Discuss and identify how radon (radon-222) progeny will be factored into analyzing potential public dose from operations consistent with 10 CFR Part 20, Appendix B, Table 2.	No comment
12.25	D. Discuss how, in accordance with 10 CFR 20.1501, the occupational dose (gaseous and particulate) received throughout the entire license area from licensed operations will be accounted-for in, and verified by, surveys and/or monitoring.	No comment

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12.26	The applicant will submit to the NRC for review and approval a revised decommissioning, decontamination, and reclamation plan within 90 days of receipt of license. The revised plan will include soil cleanup criteria for radionuclides other than radium based on the radium benchmark dose method, as well as procedures to monitor for beta-gamma contamination on equipment, structures, and material released for unrestricted use. The soil cleanup criteria, based on the radium benchmark dose methodology for U and other radionuclides, will demonstrate that residual radioactivity in soil meets the criteria in 10 CFR Part 40, Appendix A, Criterion 6(6).	No comment
12.27	At least 60 days prior to the preoperational inspection, the licensee will submit a completed Quality Assurance Project Plan (QAPP) to the NRC for review to verify that the QAPP will be consistent with Regulatory Guide 4.15 (as revised).	No comment
12.28	Prior to the start of operations, the licensee shall submit a report to the NRC for review and verification that all water supply wells within one kilometer of the license area have been sampled for baseline quality and included in the routine environmental sampling program provided the owner consents to the sampling.	Powertech suggests revising this LC as shown below for consistency with the response to TR RAI 5.7.8-17 in ML112071064) and LC 12.11 (with suggested revisions). Justification for the preoperational sampling commitment is provided in the comment on LC 12.11. The operational monitoring commitment in the response to TR RAI 5.7.8-17 includes domestic wells within 2 km of the license boundary and stock wells within the license boundary. Powertech proposes to revise this commitment for consistency with LC 12.11 (with suggested revisions) to include domestic and irrigation wells within 2 km of the proposed well field boundaries and stock wells within the license area. Prior to the start of operations, the licensee shall submit a report to the NRC for review and verification that all domestic, stock, and irrigation water supply wells within 2 km (1.25 miles) ~~one kilometer~~ of the proposed wellfield boundaries ~~license area~~ have been sampled for baseline quality and that all domestic and irrigation wells within 2 km (1.25 miles) of the proposed wellfield boundaries and all stock wells within the license area are included in the routine environmental sampling program provided the owner consents to the sampling and the well condition is suitable for sampling.

Powertech's Dewey-Burdock Project and Section 106 Compliance
Richard Blubaugh
to:
'Reid Nelson', vhauser, jeddins, 'Richard Clement'
12/26/2012 10:51 AM
Cc:
"'Hsueh, Kevin'", "'Yilma, Haimanot'", gfesko, Valois Shea, Paige.HoskinsonOlson, "'Marian Atkins'", "'Martha Graham'", "'Lynne Sebastian'", "'Mark Hollenbeck'", "'John Mays'"
Hide Details
From: "Richard Blubaugh" <rblubaugh@powertechuranium.com> Sort List...
To: "'Reid Nelson'" <rnelson@achp.gov>, <vhauser@achp.gov>, <jeddins@achp.gov>, "'Richard Clement'" <rfclement@powertechuranium.com>,
Cc: "'Hsueh, Kevin'" <Kevin.Hsueh@nrc.gov>, "'Yilma, Haimanot'" <Haimanot.Yilma@nrc.gov>, <gfesko@blm.gov>, Valois Shea/R8/USEPA/US@EPA, <Paige.HoskinsonOlson@state.sd.us>, "'Marian Atkins'" <Marian_Atkins@blm.gov>, "'Martha Graham'" <mgraham@srifoundation.org>, "'Lynne Sebastian'" <lsebastian@srifoundation.org>, "'Mark Hollenbeck'" <markholl@gwtc.net>, "'John Mays'" <jmays@powertechuranium.com>

3 Attachments

Ltr_ReidNelson_121226.pdf Summary of SRIF-Tribal Communications to 08-27-12 (2).pdf crow butte.jpg

Mr. Nelson;

This email serves to transmit Powertech's letter addressing NRC's Section 106 compliance regarding Powertech's Dewey-Burdock Project in southwestern South Dakota. We request your assistance in successfully completing the Section 106 process. The original letter and attachments will follow.

Richard Blubaugh
Vice President-Health, Safety & Environmental Resources
Powertech (USA) Inc.
5575 DTC Parkway, Ste. 140
Greenwood Village, CO 80111
303-790-7528

RICHARD E. BLUBAUGH
Vice President-Health, Safety
& Environmental Resources

POWERTECH (USA) INC.

December 26, 2012

Mr. Reid Nelson, Director
Advisory Council for Historic Preservation
Old Post Office Building
1100 Pennsylvania Avenue, NW, Suite 803
Washington, DC 20004

RE: **The Nuclear Regulatory Commission's Section 106 compliance for the Dewey-Burdock Project**

Dear Mr. Nelson:

As an entitled Section 106 consulting party for the Dewey-Burdock Project, Powertech (USA) Inc. would like to take this opportunity to provide you with some background and information on our participation in consultations regarding this undertaking. We are aware that some of the federally recognized Indian tribes (Tribes) who have been participating in consultations for this undertaking have contacted the ACHP about their concerns. We are given to understand that the Nuclear Regulatory Commission (NRC) plans to provide the ACHP with a summary of the consultation efforts to date and to seek the Council's recommendations for successfully completing the 106 process. Presumably the NRC will request the Council's comments as to whether they have completed a reasonable and good faith effort to consult with the Tribes. We would like you to be aware of our perspective as the license applicant and a consulting party and to provide you with additional information on the Dewey-Burdock Project's Section 106 process.

On August 10, 2009, Powertech (USA) Inc. submitted an application to the NRC for a license to construct, operate and decommission the Dewey-Burdock Project, an in situ uranium recovery facility on primarily privately-owned land in Custer and Fall River Counties, South Dakota. Because 240 acres of the proposed 10,580 acre project area are managed by the Bureau of Land Management (BLM), Powertech (USA) Inc. was also required to submit a plan of operation to the BLM for its approval in accordance with 43 CFR Part 3809. A memorandum of understanding between NRC (lead agency) and BLM (cooperating agency) provides for joint review of the applications and preparation of a Supplemental Environmental Impact Statement (SEIS) under the requirements of the National Environmental Policy Act (NEPA). These federal approvals for the Dewey-Burdock Project require that NRC and BLM comply with Section 106 of the National Historic Preservation Act. As the applicant, Powertech (USA) Inc. has been participating in Section 106 consultations per 36 CFR 800.2(c)(4).

As specified by NRC licensing requirements Powertech (USA) Inc. submitted a report describing the results of an archaeological survey of the license area with our license application and has subsequently submitted reports detailing eligibility testing at 24 of the sites recorded during the survey. Although Powertech (USA) Inc. had already sited proposed ground-disturbing activities and facilities in previously disturbed areas to the extent possible, the results of the archaeological work enabled us to refine the siting of such activities for the Dewey-Burdock license area in such a way as to avoid all but six of the sites.

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In August of 2011, NRC staff requested that, in addition to the archaeological and historic structure information submitted previously, Powertech (USA) Inc. provide information on properties of traditional religious and cultural significance to Indian tribes that might be affected by the Dewey-Burdock Project. Powertech (USA) Inc. hired third-party consultants (SRI Foundation) to identify and facilitate consultations with Tribes that might ascribe religious and cultural significance to properties within the proposed project area. Once NRC Staff had informed the Tribes about its request to the applicants and explained the SRI Foundation's role, the SRI Foundation began the first of many contacts with the Tribes on November 4, 2011 (see Attachment 1 for a record of tribal communications). The SRI Foundation provided information about the proposed Dewey-Burdock Project and requested tribal input as to appropriate methods for gathering the information needed by NRC Staff. The Tribes indicated that they needed to conduct an on-the-ground field investigation within the project area, and that they wished to discuss how to proceed with this identification effort in a face-to-face meeting with NRC.

In partnership with Cameco Resources (which had received the same request for information from NRC), Powertech (USA) Inc. sponsored a two-day face-to-face Section 106 consultation meeting on February 14 and 15, 2012, among NRC Staff, BLM, Environmental Protection Agency (EPA), and representatives of the following Tribes:

Cheyenne River Sioux Tribe	Crow Creek Sioux Tribe
Crow Tribe of Montana	Eastern Shoshone Tribe
Fort Peck	Northern Arapaho Tribe
Northern Cheyenne Tribe	Oglala Sioux Tribe
Rosebud Sioux Tribe	Santee Sioux Tribe of NE
Sisseton-Wahpeton Oyate	Standing Rock Sioux Tribe
Yankton Sioux Tribe	

The purpose of this meeting, as established by NRC Staff, was to enable the federal agencies to hear from the Tribes what would be required in order for the Tribes to identify potential properties of religious and cultural significance to them within the Dewey-Burdock and Crow Butte/North Trend license areas. No information about specific identification procedures was forthcoming during this meeting, but the Tribes in attendance proposed to provide NRC Staff with a scope of work (SOW) for the Dewey-Burdock and Crow Butte/North Trend field identification efforts. The Tribes also indicated during the meeting that they would not work directly with either Powertech (USA) Inc. or its consultants.

In March of 2012, NRC staff requested that Powertech (USA) Inc. prepare a draft scope of work that could be used, along with the anticipated scope of work from the Tribes, to serve as a point of departure for negotiations. In this initial scope of work, we proposed a 20% sample survey in the primary areas of ground disturbance and a 10% sample in areas of potential future ground disturbance. As stated in our draft scope of work, the purpose of the sample surveys was to provide the agencies, the Tribes, and Powertech (USA) Inc. with an understanding of the distribution and density of traditional cultural features, which could then be used by NRC and BLM in determining what additional efforts would be needed to complete the TCP identification. NRC requested comments from 20 Tribes on the Powertech (USA) Inc. scope of work, but no formal comments were ever received, and no tribal scope of work was received by NRC.

In a conference call on April 24, 2012, the Tribes noted that they were not interested in participating in a sample survey, but that they would send two representatives to the project area to do a reconnaissance that would enable them to quickly design their field effort and prepare a scope of work. Powertech (USA) Inc. facilitated this field visit on May 26, 2012. A partial tribal scope of work was received by NRC on July 13, 2012, but it did not contain any information on level of effort – that is, number of field days, number of crew members, number of travel days, etc. – so Powertech (USA) Inc. was unable to estimate the cost of the proposed field work. NRC requested clarification from the Tribes about the level of effort

that would be involved in their proposed scope of work, but did not receive a response from any of the 20 Tribes participating in the Section 106 consultations.

At the end of July, again at the request of NRC, Powertech (USA) Inc. prepared a revised draft scope of work. Because of the unwillingness of the Tribes to work with us in any way, it has been difficult to prepare these scopes. Nevertheless we have attempted to use whatever information we have been able to glean from the tribal meeting and teleconferences to develop a scope of work responsive to tribal concerns. In the near absence of direct tribal input, we attempted to make clear all the assumptions on which our scopes were based, so that these could serve as points of departure for comments and subsequent discussions and negotiations. No comments were ever received and no subsequent discussions that involved Powertech (USA) Inc., as the Section 106 party that would be paying for the identification effort, were ever held.

We believe that the assumptions that formed the basis for our revised draft scope of work and the rationales behind those assumptions should be part of the discussion as to whether NRC has made a reasonable and good faith effort to identify places of religious and cultural significance. As a Section 106 consulting party for the undertaking, Powertech (USA) Inc. requests that the Advisory Council staff take the following information into account in preparing your comments to NRC.

Assumptions:

Nature of anticipated places of traditional religious and cultural importance – Based on ethnographic material, other Section 106 undertakings in the Northern Plains, and limited information gleaned from conversations with the interested tribes, it appears that the focus of field investigations would be on rock features, arranged in patterns that are meaningful to knowledgeable Native observers. Such features are known throughout a very wide area of the Northern Plains and could be considered contributing features of an extremely extensive cultural landscape, potentially multistate in scale.

Direct effects – As currently designed, the total area of measureable disturbance for the Dewey-Burdock Project is 243 acres. In an effort to ensure that ground disturbing activities would not inadvertently directly affect sensitive features, Powertech (USA) Inc. proposed field survey within a 2637-acre area that would provide a substantial protective buffer around the 243 acres of actual planned disturbance and potentially enable the company to adjust the areas of disturbance slightly to avoid affecting identified features.

> The setting within the project area has already been substantially impacted through previous activities including a road and railroad and multiple ground disturbing activities from historic period mining and ranching. Specifically the 243 acres of future direct disturbance has been thoroughly disturbed by historical drilling operations conducted by the Federal Tennessee Valley Authority and previous operators during past exploration to define the location of the ore bodies that will be produced. In fact, this entire 243 acres has had over 4000 drill holes located on a grid at a maximum density of 200 foot separation to as close as 50 feet between adjacent drill locations. In drilling each of these locations, surface disturbance included leveling for the large, 30-foot, wheeled drilling rig and 20-foot pipe trailer, plus subsurface backhoe-dug mud pits typically covering an area of 12 feet by 8 feet and 6 feet in depth.

Indirect effects – Powertech (USA) Inc. considered the possibility of indirect effects beyond the proposed 2637-acre survey area in preparing the scopes of work, but concluded that indirect effects beyond the buffered area of direct disturbance were unlikely for the following reasons:

> The visual and audible effects of construction and well-drilling for the Dewey-Burdock Project will be brief and temporary. Operation of the project will not result in substantial noise effects. Given the nature of in situ recovery operations (see Attachment 2, photograph), the visual effects from operations will be largely limited to two processing buildings. These structures will be painted to

blend with the landscape and will be removed entirely at the end of the approximately 25-year life of the operation, as will the wellhead covers, pipelines and other equipment.

The undertaking will alter the setting of historic properties within the project area, but given the transitory nature of the visual and auditory effects, we do not believe that these alterations will significantly diminish the setting of historic properties outside the area proposed for field survey.

For any properties outside the actual area of ground disturbance, there will be no alterations in location, design, materials, or workmanship. All but 240 acres of the 10,580 acre license area are private land and will remain private land during and after operations. No knowledgeable observers currently have or will have access to any properties of religious and cultural significance within the license area; therefore integrity of feeling and association are a moot point for any features within the project area.

Future effects – Powertech (USA) Inc. is awaiting a decision from the U.S. Environmental Protection Agency (EPA) on our request for an Underground Injection Control (UIC) permit for the disposal of produced water. If this permit is denied, a land-application approach to water disposal, permitted by the state of South Dakota, will be adopted. The land-application approach would add an additional 1155 acres of ground disturbance to the planned project. Should the land-application option become necessary, Powertech (USA) Inc. will commit, in the programmatic agreement for the undertaking, to carrying out a second phase of identification comprising a buffered area surrounding the additional acres of disturbance.

Additionally, utility lines will need to be brought into the project area. The location of these lines will not be determined for some time yet. Powertech (USA) Inc. has indicated to NRC and BLM that the company will also commit, in the programmatic agreement for the undertaking, to carrying out any needed additional historic property identification once the proposed utility line location is identified..

Any future additions to the total area of disturbance identified in the Powertech (USA) Inc. license application would require a license amendment and new approvals from NRC and possibly BLM. Such approvals would constitute a new undertaking under Section 106, and additional consultation, compliance activities, and an amendment of the programmatic agreement would be required.

Level of effort – Having no available examples of scopes of work for field surveys to identify traditional cultural properties and almost no information from the Tribes as to what level of effort would be required for such a survey, we began with figures from the Dewey-Burdock archaeological survey and modified them to take into account whatever we were able to learn from the Tribes.

In the February 2012 meeting, the Tribes indicated that the 30-meter interval survey transects generally used by archaeologists in the northern Plains region are too widely spaced to reliably encounter the kinds of cultural features that the Tribes propose to identify. At 30-meter intervals, the archaeological surveyors within the Dewey-Burdock Project area covered approximately 22 acres per person-day, depending on the terrain, ground cover, and number of archaeological sites that had to be recorded. Given the requested closer interval between tribal field personnel, we proposed a coverage rate of 15 acres per person-day (175 person-days for the 2637 acres). We also assumed a pay rate comparable to trained archaeological survey crew members. These two assumptions, along with the use of standard GSA rates for per diem, lodging, and mileage reimbursement and some assumptions about potential crew size and the need for elders to assist in evaluation of any features that might be found, enabled us to come up with a very general estimate of the likely cost of the TCP survey.

Although none of the 20 Tribes participating in Section 106 consultations provided a formal response to our draft and revised draft scopes of work, we made every effort to incorporate any information that we did receive. For example, during the April teleconference the statement was made that the crew rates in our first draft scope of work were much too low. In response to a direct question from our consultants, a figure was named, and we adopted that figure (which was nearly twice our estimate based on archaeological crew rates) in our revised draft scope of work. We repeatedly requested that the Tribes

give us feedback on our proposed scope of work so that we could negotiate any changes that they wished to make.

In addition to field time and costs, our proposed scopes of work provided for analysis, write-up, and reporting time for the tribal survey teams. Because most of the information derived from the field inventory would be confidential, we anticipated that only brief reports would be prepared. Therefore, we estimated write-up time approximately equal to the field time.

NRC provided our July 30, 2012 revised scope of work to the 20 Tribes and requested comments. None of the Tribes ever provided formal comments. During an August 21, 2012 teleconference call in which we participated, the Tribes informed NRC that our scope of work was inadequate and unacceptable. Plans were made to hold discussions in September between NRC and the Tribes about clarifying the level of effort issues in the tribal scope of work.

At this point, it became clear to us that nothing Powertech (USA) Inc. could do would bring us any closer to securing the information on properties of religious and cultural significance that NRC had requested in a year earlier. On August 29, 2012, Powertech (USA) Inc. informed NRC that the company would be unable to provide the requested information. We offered to financially support NRC Staff efforts to complete the Section 106 identification process by providing up to $100,000 in funding for tribal representatives to carry out fieldwork and reporting activities as agreed upon in government to government consultations among NRC, BLM, and the Tribes, provided that the fieldwork be completed in the fall of 2012. This sum represents approximately the total cost envisioned in our July 30, 2012 revised draft scope of work.

On September 5, 2012, NRC received a scope of work from a tribal enterprise to carry out field survey of the 2637 acre buffered area of direct effects at Dewey-Burdock. The level of effort was four times greater than our proposed level of effort, and the total cost was approximately nine times greater than our proposed cost. For comparison, on a per acre basis, this proposal was 12 times greater than the cost of the archaeological survey at Dewey-Burdock. We informed NRC that this proposed cost was far beyond our ability to support this effort and that we did not think it was reasonable.

Subsequently, on November 2, 2012, a second proposal from another tribal enterprise was received by NRC. This proposal was similar in scope and cost to our proposed scope of work, and it made provisions for Tribes not represented in the proposal to be involved in the fieldwork and evaluations. We informed NRC that we were willing to negotiate a contract immediately with the enterprise and further that we were willing to provide a modest amount of additional funding to enable other Tribes who wished to do so to participate in the fieldwork. This second proposal was withdrawn by the enterprise due to outside pressure on December 6, 2012.

We at Powertech (USA) Inc. feel that we have acted in good faith and done everything that we could to support and facilitate efforts to identify properties of religious and cultural significance within the Dewey-Burdock Project area so that they could be considered and if possible avoided during construction, operation, and reclamation of the project. When the Tribes refused to work directly with Powertech (USA) Inc. or its consultants, we continued to work with NRC and BLM to assist them in obtaining the desired information from the Tribes. Several of the Tribes involved in these consultations with NRC are on record, through tribal proclamations and other means, as opposing the project, and one of them is an intervener in the pending hearing before the Atomic Safety and Licensing Board (ASLB). Given the history recounted in this letter, we cannot help but feel that some of the Tribes are trying to use the Section 106 consultation process to endlessly delay and potentially kill the project. Nevertheless, we remain willing to work individually with any of the Tribes who wish to work with us to ensure that properties of significance to them are identified and protected. We are also very willing to work with the federal agencies, the ACHP, the Tribes and the South Dakota SHPO on a programmatic agreement to provide for resolution of adverse effects and completion of Section 106 compliance for any additional ground disturbance related to the project in the future.

NRC, as the lead agency under NEPA, and BLM, as the cooperating agency, established a schedule for reviewing the Dewey-Burdock application, issuing requests to Powertech (USA) Inc. for additional information, and reviewing the responses. The agencies also established a schedule for the development of two evaluation documents: 1) a safety evaluation (SER) of the proposed project that supports the license and 2) an SEIS that satisfies the requirements of NEPA and Section 106. The schedule was also intended to facilitate the hearing before the ASLB, which will not occur until after the final documents are issued. Based on this schedule for the licensing process, Powertech (USA) Inc. has made a number of important decisions, including financially significant decisions, and we have made every effort to aid NRC staff in maintaining this schedule. We would request that the ACHP staff do whatever you can to assist NRC to find a path forward that will permit them to meet their Section 106 obligations while bringing the Section 106 process to a timely conclusion.

In addition to the above information, we recommend that you review relevant sections of the draft SEIS, which was made available to the public November 23, 2012. The following sections provide information relative to the Section 106 process: Section 1.7 Consultation, Section 3.9 Historic and Cultural Resources, Section 4.9 Historic and Cultural Resources Impacts, and 5.9 Cumulative Impacts – Historic and Cultural Resources.

Respectfully yours,

Richard Blubaugh

Vice President-Health Safety and Environmental Resources

Attachment 1: Record of Tribal Communications

Attachment 2: Photograph of an In Situ Uranium Recovery Operation

cc: John Eddins, Advisory Council on Historic Preservation
Valerie Hauser, Advisory Council on Historic Preservation
Kevin Hsueh, U.S. Nuclear Regulatory Commission
Haimanot Yilma, U.S. Nuclear Regulatory Commission
Greg Fesko, Bureau of Land Management
Valois Shea, EPA Region 8
Paige Olson, South Dakota State Historic Society

SRI Foundation Communications with Indian Tribes
Regarding the Proposed Dewey-Burdock and Crow Butte Projects
November 4, 2011 to August 21, 2012

About this table: This table summarizes communications between the SRI Foundation (SRIF) and Indian tribes for the proposed Crow Butte Projects and Dewey-Burdock between November 4, 2011 and August 21, 2012. The applicants for these proposed projects are Cameco Resources (Cameco) and Powertech (USA) Inc. (Powertech), respectively. The U.S. Nuclear Regulatory Commission (NRC) requested that the applicants gather information about places of religious and cultural significance that may be affected by their proposed projects. NRC will use the information to complete its government to government consultations with the Indian tribes. The letters of November 4, 2011, and December 9, 2011, were sent to the Tribal Chairs or Presidents, and copied to the Tribal Historic Preservation Officer (THPO), or Cultural Resources Office, when present. SRI Foundation's follow up has been with the THPO or someone in a tribe's Cultural Resource Office. In cases where a tribe has not identified someone to contact or does not have such a person, SRI Foundation has communicated directly with the Tribal Chair or President. This table includes the tribal consultation meetings and teleconferences regarding the projects in which the applicants and SRI Foundation participated, and the on-site reconnaissance that the applicants hosted. It does not include direct communications between NRC and the tribes on the projects.

Name of Tribe	Re	Summary of Communication
Cheyenne River Sioux Tribe	Dewey-Burdock	On 11/4/11 Ms. Sebastian (SRIF) sent tribal chairs w/ cc to THPO/Cultural Resources Office a follow up to Mr. Hsueh's letter (10/28); Powertech to gather information for NRC; reviews the Section 106 undertaking & possible effects on historic properties; summarizes sites in Dewey-Burdock project area; asks about tribe's participation interest; and introduces Ms. Graham.
Crow Creek Sioux Tribe		
Crow Tribe		
Eastern Shoshone Tribe (Shoshone Tribe of the Wind River Reservation)		
Flandreau Santee Sioux Tribe		
Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation (Fort Peck)		
Lower Brule Sioux Tribe		
Lower Sioux Indian Community		
Arapahoe Tribe of the Wind River Reservation (Northern Arapaho Tribe)		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		

Name of Tribe	Re	Summary of Communication
Ponca Tribe of Nebraska		
Rosebud Sioux Tribe		
Santee Sioux Nation		
Sisseton-Wahpeton Oyate		
Spirit Lake Tribe		
Standing Rock Sioux Tribe		
Yankton Sioux Tribe		
Three Affiliated Tribes [Mandan, Hidatsa and Arikara Nation]	Dewey-Burdock	On 11/4/11 Sebastian sent Mr. Hall w/ cc to Mr. Crows Breast a follow up to Hsueh's letter (10/28); Powertech to gather information for NRC; reviews the Section 106 undertaking & possible effects on historic properties; summarizes sites in Dewey-Burdock project area; asks about tribe's participation interest; and introduces Graham. References tribe's 9/20/11 letter re "No Adverse Affect/No Historic Properties Affected" for the Dewey-Burdock project. SRIF has no plans to follow up with the tribe re the Dewey-Burdock project at this time.
Turtle Mountain Band of Chippewa Indians (Turtle Mountain Chippewa)	Dewey-Burdock	Per earlier correspondence between NRC and TMC, SRIF has no plans to contact the tribe at this time.
Cheyenne River Sioux Tribe	Dewey-Burdock	On 11/15/11, Graham called as follow up to 11/4/11 Dewey-Burdock mailing; Mr. Vance on travel, back in office on 11/17. Graham will call again.
		On 11/22/11, Graham called and spoke to Vance as follow up to 11/4/11 Dewey-Burdock mailing. Tribe definitely wants to be involved. Archaeological surveys do not necessarily identify or interpret historic properties that are significant to tribes. Need a survey by tribal members; the one place they stopped at Dewey-Burdock in June -- features on hill and going to it had been overlooked. Probably snow now -- May would be good (little ground cover, reliable weather). Bryan In The Woods, council member and on the committee the THPO answers to. Copy him on information sent to THPO; In The Woods can speak re the cultural issues and on behalf of the council, which Vance could not.
		On 11/23/11, Graham e-mailed Vance w/ cc to Mr. In The Woods. She thanked Vance for taking the time to speak with her on the previous day. She said that SRIF is working with NRC and Powertech to schedule a meeting about Dewey-Burdock, and possibly Crow Butte. She will let him know when there is more information. Graham also attached the 11/4 letter to CRST and Attachment B, so In The Woods had this information.
Crow Creek Sioux Tribe	Dewey-Burdock	On 11/15/11, Graham called as follow up to 11/4/11 Dewey-Burdock mailing and was told to call back tomorrow -- offices closed.

Name of Tribe	Re	Summary of Communication
		On 11/16/11, Graham called and spoke with Skyler, who said Ms. Wells was on travel. Skyler had SRIF's letter in front of her, and would give it to Wells when she returned.
		On 11/22/11, Graham called and spoke to Wells who said the tribe was very interested in the Dewey-Burdock project. She had not been able to make the June meeting, and had asked to be kept informed. She had the material in front of her but had not had the opportunity to look at it. Graham asked if more convenient to talk now or after she had reviewed it. Wells said later would be better, and that she would contact Graham.
Crow Tribe	Dewey-Burdock	On 11/15/11, Graham called as follow up to 11/4/11 Dewey-Burdock mailing; left a voice-mail (voice mail) for Mr. Old Horn and asked for a call-back.
		On 11/23/11, Graham explained she was following up to 11/4/11 Dewey-Burdock mailing, and had also called last week; left voice mail message asking for a call-back.
Eastern Shoshone Tribe	Dewey-Burdock	On 11/16/11, Graham called and left a voice mail message for Mr. Ferris - following up on 11/4 letter; requested a call back or e-mail
		On 12/2/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail
Flandreau Santee Sioux Tribe	Dewey-Burdock	On 11/16/11, Graham called and left voice mail message - following up on 11/4 letter; requested a call back or e-mail from Mr. Weston
		On 11/29/11, Graham called and left voice mail message - following up on 11/4 letter; requested a call back or e-mail
		On 11/29/11, Graham called and was forwarded to Weston's voice mail -- did not leave a message.
Fort Peck	Dewey-Burdock	On 11/16/11, Graham called as follow up to 11/4/11 Dewey-Burdock mailing and spoke to Mr. Youpee. Youpee said that the tribe would have an interest in the project. He said it needs a TCP study, and to do a site visit to get an idea of the area. Youpee is doing similar studies in other areas. Consultation/gathering should include consortium of tribes (not one-by-one). Recommended a site visit on 12/1.
		On 11/30/11, Graham called to follow up with Youpee that a 12/1 site visit would not take place. Youpee characterized the June 2011 meeting as preliminary, with no agreements made. He said that the tribes need to hammer out agreement w/ NRC. Youpee and Graham discussed what may constitute g-2-g consultation and relationship (fact finding builds up to that, when decision-makers are not in the room). Youpee thought NRC should be working on having agreements in place and understanding what involved in TCP study during these winter months -- in clear weather, the tribes need to be out in the field. Youpee asked Graham to e-mail a summary of this conversation, and he will use it in calling for a meeting w/ NRC.

Name of Tribe	Re	Summary of Communication
		On 12/1/11, Per Youpee's request, Graham sent Youpee an e-mail summarizing their conversation and providing Yilma's contact information. Graham attached a copy of SRIF's 11/4 letter as well.
Lower Brule Sioux Tribe	Dewey-Burdock	On 11/16/11, Graham called to follow up on 11/4 letter; Ms. Green out of the office
		On 11/29/11, Graham spoke to Green to follow up on 11/4 letter. Green said she is not in favor of that mine because there are a number of environmental and cultural resource issues associated with that area/Black Hills, which she did not have time to go into. The LBST is a small tribe w/o many resources. Green would like to stay advised of the project. If possible, she would participate in the NEPA process as well as Section 106. Green is not sure whether their office could participate in a meeting or send elders, but would, if possible; Pierre most convenient meeting venue. LBST would support other tribes closer to the area. She said that if a meeting was held in Pierre, then they would be able to participate. Graham said she would keep Green updated.
Lower Sioux Indian Community	Dewey-Burdock	On 11/16/11, Graham called and explained that she was following up on the 11/4 letter. Mr. Morse said that the tribe had no comments now; it is concentrating on projects in Minnesota and the local tribes could handle this project. He would like updates on what is going on, but would not expect to give comments.
Northern Arapaho Tribe	Dewey-Burdock	On 11/16/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail from Ms. Conrad
		On 11/16/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail
		On 12/7/11, Conrad left a message at SRIF for Graham to call her back
Northern Cheyenne Tribe	Dewey-Burdock	On 11/16/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail from Mr. Fisher
		On 11/17/11, Fisher returned Graham's telephone call of the previous day. Graham explained the purpose of her call and the results of conversations with other THPOs. Fisher requested e-mail copies of the 11/4 mailing, which Graham sent. He said he would be interested in attending a site visit, or in a round table discussion. He provided information about conducting TCP surveys, confidentiality, and working with tribes and federal agencies.
		On 11/18/11, Fisher e-mailed Graham to say that he had reviewed her e-mail and attached letter, and the NCT is interested in participating in any tribal consultation that may occur. NCT is concerned with cultural resources in the permit area that may be adversely affected by the undertaking.

Name of Tribe	Re	Summary of Communication
Oglala Sioux Tribe	Dewey-Burdock	On 11/16/11, Graham called and explained to Mr. Laysbad that she was following up on the 11/4 letter. Laysbad said that he seemed to recall it, and that he had sent a compliance letter, concurring with what the project is doing. Graham's impression was that Laysbad had a different project in mind. In response to Graham saying that she assumed he would want to be kept informed, Mr. Laysbad said ok.
Ponca Tribe of Nebraska	Dewey-Burdock	On 11/16/11, Graham called and explained that she was following up on the 11/4 letter. She spoke to both Mr. Robinette and his assistant, Ms. Hamilton, who handles most of these issues. They agreed that the Dewey-Burdock project, near the Black Hills, would be of most concern to the Sioux tribes. The Ponca Tribe of Nebraska would like to be kept in the loop (e.g., informed of what other tribes are responding, updates, inform re any face-to-face meetings), but will let the other tribes take the lead. Ponca Tribe would not act without the Sioux nation, and probably would defer to them. Would not expect any Ponca sites of traditional religious & cultural significance here, anyway.
Rosebud Sioux Tribe	Dewey-Burdock	On 11/16/11, Graham called and spoke to Ms. Arcoren, explaining that she was following up on the 11/4 letter. Mr. Eagle Bear was down at the Council. Graham requested that Mr. Eagle Bear return her call. On 11/23/11, Graham called for Eagle Bear. He is a council representative, and therefore only part time in this office. Graham then spoke with his administrative assistant, Arcoren. Arcoren had given Eagle Bear Graham's message of the previous week but he has not gotten back to her. Graham provided a brief update -- that a number of tribes had suggested a face-to-face meeting. Arcoren said that was a good idea. Graham said she would keep them updated. She confirmed telephone was the best form of contact, and also e-mail.
Santee Sioux Nation	Dewey-Burdock	On 11/16/11, Graham explained that she was following up on the 11/4 letter. Mr. Thomas did not remember seeing it and asked Graham to e-mail it to him. Graham e-mailed the materials to Thomas, and said that the tribal office would also have it. On 12/1/11, Graham called to follow up w/ Thomas. He has not had a chance to read the letter, and was not familiar with the project (initially thought it was another one in Wyoming). Graham asked Thomas to call back with comments or questions after he has had a chance to review it. In a letter addressed to Yilma [copied to Sebastian], Thomas responded to Sebastian's 11/4/11 letter. Thomas wrote that the Santee Sioux Nation is 1 of 8 signatory bands to the Ft. Laramie Treaty (1868); a major concern is to ensure g2g relationship. Thomas requested consultation and would like to participate in field visits and interviews as part of the information gathering for the proposed project. Thomas enclosed Attachment C of Sebastian's 11/4/11 letter, indicating that the tribe "would like to be informed ..." and "would like to participate ..."

Name of Tribe	Re	Summary of Communication
Sisseton-Wahpeton Oyate	Dewey-Burdock	On 11/16/11, Graham called Ms. Desrosiers to follow up on 11/4 letter; Desrosiers was out. Graham explained the purpose of her call to Mr. Whitted, who said he usually responded to these sorts of inquiries. Whitted spoke of the need for NRC to respond to the tribes' request for a TCP survey and consultation. He said that it was important for NRC to first sit down with the tribes to discuss how to proceed, and then the tribes would need to conduct a TCP survey. He said that the tribe did not intend to halt progress, but it needed to protect cultural resources and the law required consultation. A round table discussion would need to be with a group of tribes, not one-by-one. He thought that the Sioux tribes, in particular, would be interested in this project.
Spirit Lake Tribe	Dewey-Burdock	On 11/16/11, Graham called the main office asking for Ms. Shaw to follow up on 11/4 letter. Graham was referred to a couple of other numbers to try to reach a Mr. Smith, who works in Cultural Resources.
		On 11/29/11, Graham called the main office asking for Shaw to follow up on 11/4 letter, and was given the phone number for the "Central Repository Project," where Graham left a voice mail identifying herself and explaining the purpose of her call. Graham left contact information and requested a call back.
Standing Rock Sioux Tribe	Dewey-Burdock	On 11/16/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail from Ms. Young
		On 11/22/11, Graham called Young, who said Mr. Clothier was handling this matter, and transferred the call. Clothier initially expressed his frustration at NRC's response to June meeting and SRI Foundation's involvement. Graham explained that she had little information, although she had reviewed the June transcript; our letter and this phone call was to get more information. Clothier explained why the tribes need to conduct a survey, why they cannot just "tell you where the sites are" and why it will not work to just go previously identified archaeological sites. First step is a face-to-face meeting, at which NRC MUST be present. No problem with SRIF being there -- in fact, should. Clothier suggested SRIF give tribes several dates and see what happens. Cameco project might be addressed at the same time.
Yankton Sioux Tribe	Dewey-Burdock	On 11/23/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail from Ms. Gravatt
		On 11/29/11, Graham called and was told that Gravatt is out of the office until 11/30.
		On 12/1/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail

Name of Tribe	Re	Summary of Communication
Apache Tribe of Oklahoma	Crow Butte	On 12/9/11, LS sent tribal chairs w/ cc to THPO/Cultural Resources Office a follow up to Hsueh's letter (10/28); Cameco to gather information for NRC; asks about tribe's interest and possible participation; provides maps and other information about the areas and the ISR process.
Cheyenne and Arapaho Tribes		
Cheyenne River Sioux Tribe		
Comanche Nation		
Crow Creek Sioux Tribe		
Crow Tribe		
Eastern Shoshone Tribe		
Fort Peck		
Kiowa Indian Tribe		
Lower Brule Sioux Tribe		
Three Affiliated Tribes [Mandan, Hidatsa and Arikara Nation]		
Northern Arapaho Tribe		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		
Pawnee Nation		
Ponca Tribe of Nebraska		
Rosebud Sioux Tribe		
Santee Sioux Nation		
Standing Rock Sioux Tribe		
Turtle Mountain Chippewa Tribe		
Yankton Sioux Tribe		
Apache Tribe of Oklahoma	Crow Butte	On 12/16/11, Graham called to follow up on the 12/9 SRIF mailing re Crow Butte, but only got a recorded message and could not leave a message. (NB: Letter sent to Alonzo Chalepah, but tribal chair is Louis Maynahonah)
Cheyenne and Arapaho Tribes	Crow Butte	On 12/16/11, Graham spoke first with Ms. Gray, who no longer handles these matters. Gray forward Graham to Ms. Anquoe. Graham explained that she is following up on the Crow Butte mailing. Anquoe has not seen the mailing. Graham identified herself as a 3rd party consultant working for Cameco to help gather information that NRC can use in its g2g consultations with the tribe. Anquoe asked Graham to e-mail her contact information. Graham said she would also send a copy of the letter. If the packet with the CD does not come, then Graham can send another, if Anquoe lets her know. Graham e-mailed Anquoe a copy of the letter.

Name of Tribe	Re	Summary of Communication
Cheyenne River Sioux Tribe	Dewey-Burdock	On 12/12/11, Graham called to update Vance on the Dewey-Burdock, and said that there was the possibility of meeting 1/10-13 or 17-20, but dates were preliminary. She also said that the tribe would soon be receiving a similar letter to our November Powertech letter about Cameco. Vance and Graham talked about g2g consult -- agreed that people "in the middle" had a role to play to prepare information for decision-makers, and such interactions were important, worthwhile, and could involve 3rd party consultants' participation and information gathering. If a gov agency is not responsive, then the tribe might insist on hi levels meeting with its tribal council. Vance had looked at the 11/4 letter -- the "response" letter did not have an appropriate box: "participate in on-the-ground identification and evaluation of TCPs." Re Crow Butte -- tribes had agreed to support Oglala; Mesteth was supposed to write up a response. Vance referred Graham to the 8/30 letter from Clothier (STST) to Hsueh re tribes' concerns
Comanche Nation – Oklahoma	Crow Butte	On 12/16/11, Graham left a voice mail message identifying herself and explaining that she is following up on Sebastian's letter to Mr. Coffey (copied to Mr. Arterberry). Graham said she wanted to know if the tribe had questions or concerns, and whether the tribe wanted to participate in information gathering. Graham gave her contact number and asked Arterberry to get back to her.
Comanche Nation – Oklahoma	Crow Butte	On 12/19/11, Arterberry left a voice mail message asking Graham to call him back. Graham called back and they discussed the SRIF mailing re Crow Butte. Arterberry says that the Crow Butte project is on the edge of the Comanche territory, so the tribe might be interested, but needs to know more about the bigger picture -- needs copies of the archaeological reports, and is also interested in knowing what the SHPO has had to say, and whether the SHPO has any concerns. He noted that, from the materials SRIF sent, that there is a lot of cultivation in the area, but again said he needs more information. Arterberry said he thought this area probably used more by migratory peoples, and expected them to have more interest and concerns. Graham mentioned the possibility of a meeting re Crow Butte (back-to-back with a Dewey-Burdock meeting). Arterberry says tribe consults only within own area, unless they go to consult in Washington DC.
Crow Creek Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/16/11, Graham provided Wells with an update on Dewey-Burdock: tribes see next step as a meeting w/ NRC. Wells agreed. Graham gave proposed dates in Jan; Wells is fine with either, or early February. Graham confirmed that Wells had received the Crow Butte mailing. Wells would be ok w/ back-to-back meetings for Dewey-Burdock and Crow Butte. Graham will keep her posted.

Name of Tribe	Re	Summary of Communication
Crow Tribe	Crow Butte & Dewey-Burdock	On 12/16/11, Graham left a voice mail message explaining that she was calling about both the Dewey-Burdock project, for which she had called before, and the Crow Butte project, about which SRIF had recently sent a letter. Graham said that, based on information from the tribes, she is inquiring about interest in participating in a meeting that NRC would have w/ the tribes about Dewey-Burdock proposed dates are in Jan. Graham asked Old Horn to let her know about these dates, or if Feb dates might be more feasible. Graham said it was possible that there would be a separate meeting about Crow Butte following the Dewey-Burdock meeting. Graham left her contact information & requested a call back.
Eastern Shoshone Tribe	Crow Butte & Dewey-Burdock	On 12/16/11, Graham left a voice mail that she was following up on the 12/9 SRIF mailing re Crow Butte. Graham also gave an update on Dewey-Burdock project -- tribes want a meeting w/ NRC to decide next steps. Proposed meeting dates in Jan, or possibly in Feb. Graham requested a call back.
		On 12/20/11, Ferris returned Graham's telephone call. He has a conflict for the second Jan dates -- Jan 10-13 would work. Asked what other tribes were interested -- Graham reviewed them.
Flandreau Santee Sioux Tribe	Dewey-Burdock	On 12/19/11, Graham called and left a voice mail message - following up on 11/4 letter; requested a call back or e-mail
Fort Peck	Crow Butte & Dewey-Burdock	On 12/20/11, Youpee called Graham and said that he could not meet on Jan 18-19, and thought meeting on Jan 10-13 would be best. Youpee did not want to delay the meeting to February. He recommended meeting in Hot Springs or Rapid City. Youpee agreed that, as long as Dewey-Burdock and Crow Butte projects were kept separate, and the relevant information was brought to both, back-to-back meetings made sense. He provided suggestions about length and content of meetings. He said to make sure that there were competent people from NRC there -- the tribes have spent time training them, and have a lot more experience with Section 106 than any agency. NRC needs at least one decision-maker in the group. Graham asked about SRIF being in the room for all or part of the meeting -- Youpee said tribes know how to work with 3rd party consultants & archaeologists -- just do not want the 3rd party consultants talking on behalf of NRC. This is not g2g yet -- THPOs need to take info back to Tribal Chairs & Council who will sign. Graham asked why Youpee said they would need an NRC decision maker at the meeting. Youpee explained that it is because it is *their* program -- not the program of their delegated authority. If the tables were turned, then tribal Chairs would be asking to meet with NRC. For these meetings, tribes are in the information-gathering mode. When they feel they have enough information -- hammer out a PA.

Name of Tribe	Re	Summary of Communication
Kiowa Indian Tribe	Crow Butte	On 12/16/11, Graham called to speak with Mr. Tofpi, but he is no longer Chairman. The current chair, Ronald Two Hatchet and his secretary were both out. Graham said she would call back.
Lower Brule Sioux Tribe	Crow Butte	On 12/16/11, Graham reached Green who asked her to call back in 20 minutes so Green could finish something. Graham did not manage to call Green back that day.
Lower Brule Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/19/11, Graham left a voice mail message for Green, explaining it had 2 purposes - follow up on the 12/9 Crow Butte mailing, and let Green know about the meeting that SRIF is helping to set up for tribes and NRC. Listed dates. Graham requested a call back.
Three Affiliated Tribes [Mandan, Hidatsa and Arikara Nation]	Crow Butte	On 12/16/11, Graham left a voice mail explaining that she had called to follow up on the 12/9 SRIF mailing re Crow Butte. Graham said she understood that, per other communications between the tribe and NRC, that there were no adverse effects re Dewey-Burdock project, but that tribe may want an update. Referenced possible meeting in Jan/Feb for Dewey-Burdock project, and possibility of back-to-back meeting re Crow Butte project.
Northern Arapaho Tribe	Dewey-Burdock	On 12/12/11, Conrad called and left a message for Graham to return her call. Conrad said that they had found the 11/4 letter re Dewey-Burdock, and she had not had a chance to go through it yet. The tribal chair is now Jim Shakespeare. The tribe would be interested in the project, though its priority is Wyoming. Conrad supported having a meeting with the tribes and agency(ies) present. Graham said SRIF would likely be there, too. Conrad said that was ok; she indicated that it was good for cultural resource consultants to be there w/ information; Graham clarified that we would also be liaison for TCP information gathering. Graham told her about the 12/9 letter re the Crow Butte project, and proposed meeting in January. Conrad said February would be better; it is difficult to travel in winter, and grant reports due at the end of January. Graham will keep Conrad informed re the meeting, etc. Conrad said e-mail is a good way to get in touch, as well as cell phone, and gave Graham both.
Oglala Sioux Tribe	Dewey-Burdock	On 12/12/11, Graham called and asked to speak w/ Laysbad, & was told he no longer worked there. Graham then asked for the THPO, & was told that it was Mr. Mesteth, and that Mesteth was not there. Graham left a message for him, requesting a call-back re Dewey-Burdock and Crow Butte. She then explained that she had thought the THPO was Mesteth, then had recent info it was Laysbad, but wanted to confirm. The receptionist said checked, and said she was not sure -- maybe Richard Iron Cloud. She said she would pass on Graham's message.

Name of Tribe	Re	Summary of Communication
Oglala Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/16/11, Graham tried to reach Ms. Whiting, but neither Whiting nor the reception was available. Graham left a voice mail message requesting a call back re the Crow Butte and Dewey-Burdock projects. Her msg included the update re a meeting that NRC wants to hold; Graham wanted to find out whether the tribe was interested and available at the dates we have.
Pawnee Nation	Crow Butte	On 12/16/11, Graham called to follow up re the 12/9/ mailing about the Crow Butte project, but Mr. Adams was on another line On 12/19/11, Graham called Adams and explained that she was following up on the SRIF's letter about the Crow Butte project. Adams said that he had seen it, but had not looked at it yet. He said he would look at the material and call Graham back. Subsequently, Adams called and left a message for Graham saying that the tribe is interested, and he will get back to Graham.
Ponca Tribe of Nebraska	Crow Butte & Dewey-Burdock	On 12/16/11, Graham spoke with Robinette and explained that she was following up on the 12/9 mailing about the Crow Butte project. Robinette asked Graham to send his assistant, Gloria, an e-mail about this matter. Per Robinette's request to e-mail Hamilton, Graham sent a copy of the 12/9 letter about the Crow Butte project to Hamilton. She invited comments or questions. Graham also summarized the telephone conversation that Graham, Robinette, and Hamilton had had regarding the Dewey-Burdock project on 11/16. Graham added the update that tribes have requested a meeting w/ NRC, and SRIF is working with NRC on that. On 12/19/11, Hamilton wrote that the Ponca Tribe of Nebraska would like to be kept in the loop for all information about the project. The tribe is not interested in an on-site visit or monitoring at this time, but wants to receive all pertinent information. Graham emailed her thanks for Hamilton's reply. She said that we would continue to keep the tribe updated on the project.
Rosebud Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/16/11, Graham spoke with Arcoren, who had shown Eagle Bear the information. Eagle Bear apparently said something about wanting to participate, but did not elaborate. Arcoren said that a meeting for the tribes and NRC would be good. February would be better for the tribe, since they had a number of meetings in January, and February was open now. Graham said that we were also considering having a (distinct) meeting about Crow Butte at the same time, to save the tribes' time. Arcoren seemed supportive of this idea. She suggested holding the meeting in Pierre (preferred) or Rapid City so that the eastern tribes would not have to travel so far. She and Graham agreed that, in Jan/Feb, there would be little to see during a site visit to Dewey-Burdock.

Name of Tribe	Re	Summary of Communication
Santee Sioux Nation	Crow Butte & Dewey-Burdock	On 12/16/11, Graham called to discuss the Crow Butte and Dewey-Burdock projects, but there was no answer or answering machine, so Graham could not leave a message.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/16/11, Graham asked for Clothier, but he is on leave until January. She was forwarded to Young's voice mail. Graham left a message that she wanted to make sure the 12/9 Crow Butte mailing had been received, and would be happy to discuss/answer questions. Graham also gave an update on the Dewey-Burdock project -- tribes had requested a meeting with NRC, so NRC has proposed meeting dates in Jan or Feb. Graham asked if Young could call or e-mail to let Graham know if the tribe was interested in participating, and what dates would work for them.
		On 12/19/11, Young e-mailed that the best dates for the tribe would be Feb 13-16, so Clothier could participate. However, they would be available for Jan 17-20 if that is other tribes' preference. Graham replied to Young's e-mail, and said that she would let Young know about the final meeting dates.
Yankton Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/16/11, Graham called Gravatt to follow up on Crow Butte and Dewey-Burdock mailings, & give an update on conversations with other tribal representatives. Gravatt said that she had both mailings. Gravatt said tribes need on-the-ground survey - most places have been inaccessible since the treaties were signed. The tribes object to 3rd party consultants -- do not want to divulge information to them. Recently had a situation where a consultant tried to use the information to get work. Gravatt agreed with the idea of a meeting between NRC and the tribes, and suggested Graham e-mail the dates to everyone. Gravatt said the meeting should include the scope of work, confidentiality, the need for an on-the-ground survey. Gravatt suggested Pierre or Rapid City -- no reason to go the Edgemont or Hot Springs (they do not want another site visit; they need to do survey instead). Graham clarified SRIF's role as 3rd party consultant, and said we may facilitate gathering information but we do not confuse that with g2g consultation. Gravatt thanked Graham and said the difficulty is that tribes cannot give information to SRIF instead of the government, so not sure what we would do - something to discuss in the meeting.
Cheyenne and Arapaho Tribes Cheyenne River Sioux Tribe Crow Creek Sioux Tribe Crow Tribe Eastern Shoshone Tribe Flandreau Santee Sioux Tribe Fort Peck	Crow Butte & Dewey-Burdock	On 12/20/11, Graham sent an e-mail to the tribes providing an update on SRIF's information gathering re the Dewey-Burdock project and proposing dates in Jan or Feb for a meeting at which NRC and the tribes could discuss the approaches for obtaining needed information; confidentiality and the g2g relationship between tribes and NRC, and how it relates to Powertech and SRIF's roles in information gathering. Graham also said that we were considering a similar meeting re the Crow Butte project and Cameco. Graham requested that tribes let her know whether the tribe might be interested in

Name of Tribe	Re	Summary of Communication
Lower Sioux Indian Community		attending, and which dates it preferred.
Northern Arapaho Tribe		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		
Ponca Tribe of Nebraska		
Rosebud Sioux Tribe		
Santee Sioux Nation		
Sisseton-Wahpeton Oyate		
Spirit Lake Tribe		
Standing Rock Sioux Tribe		
Turtle Mountain Chippewa Tribe		
Yankton Sioux Tribe		
Flandreau Santee Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/21/11, Graham called and left voice mail message - following up on 11/4 letter. Graham also said that other tribes requested a meeting w/ NRC, and gave possible Jan and Feb dates. Graham requested call back or e-mail.
Northern Cheyenne Tribe	Crow Butte	On 12/21/11, Fisher faxed the tribe's "Native American Consultation Response Form" for the Three Crow Expansion area, which said that "tribal participation is requested in addition to a field visit."
Oglala Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/23/11, Graham called Whiting's extension, but neither Whiting nor the reception were available. Graham left a voice mail message requesting a call back re the Crow Butte and Dewey-Burdock projects, including the proposed meeting in Jan or Feb.
Oglala Sioux Tribe	Crow Butte & Dewey-	On 12/27/11, Graham called the Natural/Cultural Resources and was informed that neither Whiting nor Laysbad currently work there. When Graham asked to speak to the

Name of Tribe	Re	Summary of Communication
	Burdock	THPO, she was transferred to Mr. Iron Cloud. Iron Cloud said he started 2 weeks ago. He had seen Sebastian's 12/9 letter about Crow Butte, but has not gone through everything yet. Graham explained the purpose of her call was to follow up and to let him know about proposed meeting dates. He would be available 1/17-20 or 2/10-13. Iron Cloud and Graham discussed whether it might be appropriate for THPOs to meet w/ NRC as the next step for the Crow Butte and Dewey-Burdock projects, and report to tribal leaders. Alternatively, should the next step be a meeting btwn NRC and the leaders? Iron Cloud said this was a good question, and that he would need to make some calls. Graham and Iron Cloud exchanged e-mail contact information, and Iron Cloud will get back to Graham. Graham e-mailed Iron Cloud a copy of the 12/20 e-mail to THPOs regarding the proposed meeting. Graham e-mailed a copy of the 12/20 e-mail to THPOs regarding the proposed meeting. In a series of e-mails between Iron Cloud, Mr. Catches Enemy, and Graham, they considered the question of whether the meeting should be between NRC and THPOs or should tribal leaders be brought in; and how the June 2011 meeting fit re information gathering and g2g consultation. Iron Cloud suggested a conference call the following week when Catches Enemy was back in the office.
Cheyenne River Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/29/2011, Graham left a voice mail message for Vance re proposed meeting and possible dates; requested a call-back.
		Petersen forwarded Graham's 12/20/11 e-mail to "Wayne," but addressed the e-mail to Graham.
Crow Creek Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/29/2011, Graham spoke to someone in Wells's office re proposed meeting and possible dates. Graham was told that CCST had not received Graham's e-mail and to re-send it.
Crow Tribe	Crow Butte & Dewey-Burdock	On 12/29/2011, Graham left a voice mail message for Old Horn re proposed meeting and possible dates; requested a call-back.
Flandreau Santee Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/29/2011, Graham left a voice mail message for Weston re proposed meeting and possible dates; requested a call-back.
Lower Brule Sioux Tribe	Crow Butte & Dewey-Burdock	On 12/29/2011, Graham left a voice mail message for Green re proposed meeting and possible dates, and said it would be in Rapid City; requested a call-back.
Northern Arapaho	Crow Butte & Dewey-Burdock	On 12/29/2011, Graham left a voice mail message for Conrad re proposed meeting and possible dates; requested a call-back. Graham also re-sent the 12/20 e-mail.

Name of Tribe	Re	Summary of Communication
Northern Cheyenne	Crow Butte & Dewey-Burdock	On 12/29/2011, Graham left a voice mail message for Fisher re proposed meeting and possible dates; requested a call-back.
Pawnee Nation	Crow Butte	On 12/30/11, Adams called Graham back to say that, after some investigation, he thought it unlikely that the Pawnee would have sites in this area. He was therefore declining the invitation to participate in the information gathering. He will send a letter stating this, also.
Crow Creek Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/3/12, Wells e-mailed to say that holding the meeting Jan 10-13 in Rapid City would work best for her. Graham e-mail back to say that she would get back to everyone as soon as the final dates were set.
Fort Peck	Crow Butte & Dewey-Burdock	On 1/3/12, Youpee called to find out whether a date had been set for the Dewey-Burdock and Crow Butte meeting. He expressed dissatisfaction at the time the process has taken, and said that tribes needed to schedule this and other meetings. Graham agreed and noted that working around peoples' holiday schedules had complicated things. She expected the dates would be set by the end of the day. On 1/4/12, Graham called and told Youpee that the meeting dates were set at 2/14-15, with travel on 2/13 and 16. Youpee understood from his conversation with NRC (Yilma) the previous day that the meeting would be to share information and set up guidelines on gathering information. He recommended an agenda: Morning – Prayer, Intro, Project Presentation, Tribal Caucus (minimum 2 hours); Afternoon – Discuss plans/strategies to move forward re TCP Study, Confidentiality clause, PA. Youpee saw this as the first of a series of meetings; the purpose of other meetings was “fine tuning” and details would need to be determined later. Youpee stressed that the tribes needed time to come to consensus, as well as possibility bring new tribal reps up to speed. He emphasized the need for transparency by NRC, and that it was important for a decision-maker to be present. Graham and Youpee spent some time on the internet trying to find the NRC organizational chart; and Youpee said NRC should bring one to the meeting. Youpee and Graham talked about reimbursement (Youpee pointed out tribes only get reimbursement and not compensation) – they agreed that Graham needed to get additional direction about this matter from the applicants.
Northern Arapaho		On 1/3/12, Conrad e-mailed Graham that she received the information about the ISR projects, and would like to attend the proposed Feb mtg.
Pawnee – Oklahoma	Crow Butte	On 1/5/12, Adams wrote Graham regarding their telephone conversation of 12/30/11. No know Pawnee archaeological, historic, or sacred sites within the APE, although sites of "Pawnee progenitor" near the project area. The Project has no potential for adverse effects to any known Pawnee sites. Request immediate contact if human remains encountered.

Name of Tribe	Re	Summary of Communication
Crow Creek Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/6/12, Wells e-mailed Graham regarding the proposed meeting in early 2012, and said that 1/17-20 would not work for her, and dates in February would be better.
Oglala Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/9/12, Graham called Iron Cloud to tell him the dates of the meeting would be Feb 14-15. Iron Cloud suggested that Graham send this information to all of the tribes in an e-mail. Graham thanked him and said that she would send an e-mail the information soon.
Cheyenne and Arapaho Tribes	Crow Butte & Dewey-Burdock	On 1/10/12, Graham e-mailed the tribes to follow up on previous conversations and her 12/20/11 e-mail. She said that the meeting to discuss approaches for obtaining the information needed for NRC and the tribes' Section 106 consultation for the proposed Dewey-Burdock and Crow Butte projects would be on February 14-15 in Rapid City, SD. She said that we were working with NRC on the details of the formal invitation, the meeting place, and agenda, and that NRC would also contact them. The e-mail provided information about agenda topics, meeting structure, and applicants' reimbursements to the tribes. Graham requested that tribes let her know whether they could attend, and also regarding agenda items and meeting structure.
Cheyenne River Sioux Tribe		
Crow Creek Sioux Tribe		
Crow Tribe of Montana		
Eastern Shoshone Tribe		
Flandreau-Santee Sioux Tribe		
Fort Peck		
Lower Sioux Indian Community		
Northern Arapaho Tribe		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		
Ponca Tribe of NE		
Rosebud Sioux Tribe		
Santee Sioux Tribe of NE		
Sisseton-Wahpeton Oyate		
Standing Rock Sioux Tribe		
Turtle Mountain Band of Chippewa Tribe		
Yankton Sioux Tribe		
Apache Tribe of Oklahoma	Crow Butte	On 1/10/12, Graham called the Tribal offices and was told that the Business Committee was in a meeting; she was forwarded to the tribal administrator's (Lyman Guy) voice-mail. Graham left the message that she was following up on the 12/9 letter re Crow Butte, and requested a call back. On 1/l8/12, Graham left a voice-mail for Guy, explaining that she was calling re the C-B project, and that she also had left a message for Guy on 1/10. Graham said she wanted the tribe to be aware of NRC's meeting on Feb 14-15 to talk about Crow Butte and TCPs, and was not sure whether Guy was the person to talk with. Graham left her contact information, and asked that Guy get back to her.

Name of Tribe	Re	Summary of Communication
Cheyenne and Arapaho Tribes	Crow Butte	On 1/17/12, Graham called the number she had for cultural resources for the tribe, which was Gray's, and left a voice-mail asking that the message be forwarded to Anquoe. Graham explained that she was following up on her 1/10/12 e-mail to Anquoe about the February 14-15 meeting; she wondered whether Anquoe had received the e-mail, if she had questions, and if she planned to come. Graham asked for a call back or e-mail.
		On 1/18/12, Anquoe e-mailed Graham saying that she would not be able to attend the 2/14-15/12 meeting, but NAGPRA Reps for the tribe—Mr. Dale Hamilton (Arapaho delegate) and Ms. Karen Little Coyote (Cheyenne delegate)—were interested and would be able to act as spokespersons. Anquoe also gave Graham their e-mail addresses. Graham responded via e-mail, acknowledged Anquoe's e-mail and saying that NRC would be sending out a formal invitation within a day or two.
Cheyenne River Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/17/12, Graham called and explained to Vance that she was following up on her 1/10 e-mail. Vance found the e-mail and said that he would be attending, and that In the Woods also would probably attend. Graham and Vance talked briefly about the June meeting – In the Woods had not participated in the Dewey-Burdock site visit; in the transcripts, Vance had been identified as being from OST, and as saying things others had said. Also, Vance had raised the issue of faults and not received a clear answer. Vance said that he had driven his own vehicle behind the bus and been covered with dust. He noted that [employees?] at the project sites had badges to monitor radiation, but the consultation delegation did not receive these. He noted Rapid City would be "more comfortable" and some tribes would not have to travel as far (as to see C-B or D-B). Graham said that NRC would be sending out the formal invitation and agenda.
Crow Creek Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/13/12, Skyla Wells (?) called on behalf of Wanda Wells and asked Graham to fax more information to the THPO regarding the February 2012 meeting. Graham explained that she had no additional information at this time, other than that reimbursement funds would be available at Rapid City at the time of the meeting. Graham explained that NRC was developing a formal invitation and agenda, and as soon as we knew more, then Graham would send it to the THPO.
Eastern Shoshone Tribe	Dewey-Burdock	On 1/17/12, Graham called Ferris, but the phone rolled over to the main switchboard and no operator; Graham could not leave a msg.
Flandreau-Santee Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/17/12, Graham left a voice-mail message for Weston, stating that she was following up on her e-mail of 1/10 re the February 14-15 mtg. She wanted to make sure Weston had received the e-mail, find out whether he had any questions, and if he was planning on attending.

Name of Tribe	Re	Summary of Communication
Fort Peck	Crow Butte & Dewey-Burdock	On 1/10/12, Youpee responded to Graham's e-mail of the same date requesting that NRC sent a follow up invitation letter and formal agenda so that travel could be approved. Graham replied and copied Yilma and Goodman so that they were aware of Youpee's request.
Kiowa Indian Tribe	Crow Butte	On 1/10/12, Graham called the Kiowa Tribe of Oklahoma's main line, was switched to "compliance" (?), and forwarded to x370, where she left a voice-mail message identifying herself, explaining that she was following up on Sebastian's letter or 12/9/2011 re the Crow Butte project. Graham asked that someone get back to her re whether the tribe had interests or concerns in the project. She also said that there will be a meeting on 2/14-15 in Rapid City re the project, and she wanted to know if the tribe would be interested in attending. Graham requested a call back or e-mail.
		On 1/18/12, Graham called the tribal offices called several times and ended up in switchboard loops. She was never able to reach a person or leave a voice-mail message.
Northern Arapaho Tribe	Crow Butte & Dewey-Burdock	On 1/18/12, Graham left a voice-mail message for Conrad, explaining that she was following up on her e-mail of 1/10 regarding the 2/14-15/12 meeting in Rapid City for the C-B and D-B propose uranium mining facility projects. Graham said that NRC would send out a formal invitation & agenda. Graham was calling to see whether Conrad had received her e-mail; if she had questions or comments; and whether the tribe would be attending. Graham left her contact information.
Northern Cheyenne Tribe	Crow Butte & Dewey-Burdock	On 1/18/12, Graham left a voice-mail message for Fisher, explaining that she was following up on her e-mail of 1/10 regarding the 2/14-15/12 meeting in Rapid City for the C-B and D-B propose uranium mining facility projects. Graham said that NRC would send out a formal invitation & agenda. Graham was calling to see whether Fisher had received her e-mail; if she had questions or comments; and whether the tribe would be attending. Graham left her contact information.
Rosebud Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/18/12, Graham spoke with Arcoren regarding the 2/14-15/12 meeting for the C-B and D-B proposed projects. Graham clarified that Feb 13 and 16 would be travel days, and the actual meetings will be on Feb 14 and 15. Arcoren said that she thought both Eagle Bear and Rhodd, their consultant, would attend. Graham said that NRC would be sending the formal invitation and agenda.
Santee Sioux Tribe of NE	Crow Butte & Dewey-Burdock	On 1/18/12, Graham tried to reach Thomas, but the line was busy and she could not leave a message.

Name of Tribe	Re	Summary of Communication
Sisseton-Wahpeton Oyate	Dewey-Burdock	On 1/18/12, Graham explained that she was following up on her 1/10 e-mail, which she had sent to Desrosiers. Whitted had not seen it, but assumed that Desrosiers had forwarded it to him, and it was in his e-mail somewhere. Whitted asked generally about the meeting, and Graham gave an overview of the agenda. She said NRC would be sending out a formal invitation and agenda. Whitted said that they planned to be there, if it is an open discussion. Graham said it would be a listening session for NRC (and 3rd party consultants). Whitted didn't have any other questions, and said he would see Graham at the mtg.
		On 1/24/12, Graham followed up on an e-mail that Desrosiers sent to Cameco re the upcoming 2/14-15/12 meeting. They discussed the meeting and clarified the dates and location. Graham recommended that Desrosiers send an e-mail to NG confirming attendance, which DD subsequently did, identifying Whitted and Desrosiers as the tribal representatives.
Spirit Lake Tribe	Dewey-Burdock	On 1/18/12, Graham left a voice mail message at the "Central Repository Project" for Shaw, explaining that she was calling about the upcoming meeting 2/14-15/12 for the C-B and D-B proposed projects. Graham explained that NRC is putting out the formal invitation and agenda, and that she also wanted to let the tribe know about the meeting, address any questions, and find out whether any tribal representatives would be attending. Graham left her contact information and requested Shaw return her call.
		On 1/24/12, Shaw e-mailed Graham to say that she was not the THPO for the Spirit Lake Tribe. Shaw provided contact information for Darrell Smith, and explained that he is serving the tribe in this capacity. She copied Joanne Smith and B. Jackson on the e-mail.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/17/12, Graham spoke to Clouthier. She asked whether Clouthier received her e-mail of 1/10 -- he had not; and Graham realized that she had sent the e-mail to Young, but did not have Clouthier's e-mail address. Graham explained briefly about the 2/14-15 meeting in Rapid City, and that NRC would provide a formal invitation and agenda. Clouthier said that he would likely be coming, and he could not speak for Young. Graham said she would send Clouthier the e-mail, and he could let her know if he had questions or comments.
		On 1/18/12, Clouthier e-mailed and thanked Graham for the information. He said that he would be attending, and would likely be the only representative for the tribe. Graham confirmed that Clouthier would need to make his own reservations for the meeting and supplied some information re the hotel and reimbursements. Graham said that NRC will provide additional information in the formal invitation it is providing within the next few days.

Name of Tribe	Re	Summary of Communication
		On 1/30/12, Clouthier e-mailed Graham to ask, as part of information needed for travel arrangements, whether checks would be made out to individuals or organizations. Graham clarified that this information could be supplied by the tribes, and copied Schmuck (Cameco) on the e-mail, explaining that he would be handling the reimbursements. Schmuck added to the e-mail string between Clouthier and Graham, and confirmed that reimbursements could be made out to named individuals.
Yankton Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/18/12, Graham replied to Gravatt's e-mail. Graham said that NRC would send a formal invitation and agenda. Graham gave LG information about the Ramkota Best Western, and they discussed reimbursement: reimbursements would be available on 2/13, and either checks or cash. Gravatt said that she would bring the tribe's g2g policy: consultation should be face to face and in a good way; the THPO is delegated (among other things) to conduct Section 106; there is a Preservation Officer "who is also council" who signs any MOA, PA, etc. Gravatt asked whether agencies or applicants would be bringing their lawyers. If so, this should be made known to the tribes, so that tribes can decide whether they should bring their lawyers to make a level playing field. Graham said that the meeting was to be a listening session for NRC (and applicants), so even if lawyers, hopefully they would not be talking. Gravatt said it sounded like a good meeting
Cheyenne River Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/9/12, Graham sent out an e-mail to THPOs and others that were expected to participate in the 2/14-15/12 meeting to clarify that tribal representatives would need to make their own hotel arrangements, and providing details about the Best Western Ramkota.
Crow Creek Sioux Tribe		
Crow Tribe of Montana		
Eastern Shoshone Tribe		
Fort Peck		
Northern Arapaho Tribe		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		
Rosebud Sioux Tribe		
Santee Sioux Tribe of NE		
Sisseton-Wahpeton Oyate		
Standing Rock Sioux Tribe		
Yankton Sioux Tribe		
Cheyenne River Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/7/12, Graham e-mailed Vance and copied In the Wood requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg. Vance replied with the information.

Name of Tribe	Re	Summary of Communication
Crow Creek Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/7/12, Graham e-mailed Wells requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg. She also phoned, since the fax she tried to send did not go through. Well confirmed that she would be coming, and that she would send additional details at a later time.
		On 2/9/12, Wells e-mailed Graham regarding her reimbursement preference. Graham e-mailed her reply on 2/10.
Crow Tribe of Montana	Crow Butte & Dewey-Burdock	On 2/1/12, the Crow THPO responded to Schmuck regarding the 1/19/2012 NRC letter inviting a g2g consultation on 2/14-15/2012, and provided information re reimbursements for the tribal representatives: Hubert Two Leggings (THPO) and Richard White Clay (assistant).
		On 2/7/12, Graham called Old Horn, explaining that this was the number she had for the Crow THPO, and requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.
Eastern Shoshone Tribe	Dewey-Burdock	On 2/7/12, Graham e-mailed Ferris requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.
		On 2/712, Graham contacted Ferris regarding information about the names of tribal representatives and details for reimbursement for the 2/14-15/12. Ferris will not attend, but Jim and or John Pingree would represent the Eastern Shoshone Tribe. Graham followed up with an e-mail to Ferris saying that she was sorry Ferris could not attend the 2/14-15/12 meeting, but looked forward to John and/or Jim Pingree representing the EST. She reviewed reimbursement and travel details. Ferris responded by e-mail on 2/9/2012 that perhaps he could attend the next meeting, and would provide the Pingrees with the necessary travel/reimbursement information.
Fort Peck	Crow Butte & Dewey-Burdock	On 2/10/12, Youpee called Graham to discuss details and logistics for the 2/14-15/12 meeting including lodging and meal considerations. Subsequently, Youpee e-mailed THPOs about alternative lodging, and Graham e-mailed her thanks to Youpee.
Northern Arapaho Tribe	Crow Butte & Dewey-Burdock	On 2/7/12, Graham e-mailed Conrad requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.
Northern Cheyenne Tribe	Crow Butte & Dewey-Burdock	On 2/1/12, the Northern Cheyenne THPO responded to Schmuck regarding the 1/19/2012 NRC letter inviting a g2g consultation on 2/14-15/2012, and provided information re reimbursements for the tribal representatives: Conrad Fischer (THPO), Gilbert White dirt (Cultural Commission), Hubert Black wolf (Tribal Cultural Monitor), and possibly Steve Brady (Chairman of Cultural Commission).
		On 2/7/12, Graham e-mailed Fisher requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.

Name of Tribe	Re	Summary of Communication
Oglala Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/1/12, the Oglala THPO responded to Schmuck regarding the 1/19/2012 NRC letter inviting a g2g consultation on 2/14-15/2012, and provided information re reimbursements for the tribal representatives: Richard Iron Cloud and possibly several others.
		On 2/7/12, Graham e-mailed Catches Enemy and Iron Cloud requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.
		On 2/8/12 and in reply to Graham's 2/7/12 e-mail, Catches Enemy provided information about representatives of the OST that would and would not need reimbursements, and reimbursement preference. MCE copied John Yellowbird Steele and Michael Her Many Horses, and others on the letter, since the invitation letter had referenced other Tribal representatives. He said that he had sent [NRC's 1/19/12] invitation letter to all Tribal Council and Executive Board members and some other Tribal Program personnel impacted by the proposed projects. He was not certain of the exact number of OST representatives that would be present. Graham e-mailed to Catches Enemy and thanked him for the information, and provided reimbursement information based on the e-mail from earlier in the day. Graham "replied all" thereby sending her response to the 13 individuals copied on Catches Enemy's e-mail.
		On 2/10/12, Iron Cloud informed Graham that Wilmer Mesteth would not be able to attend the 2/14-15/2012 mtg. Graham acknowledged the e-mail.
		On 2/10/12, Catches Enemy copied Graham on his e-mail to Iron Cloud, asking that Iron Cloud make hotel reservations for any of the OST delegation that would need them.
Rosebud Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/7/12, Graham e-mailed Eagle Bear requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg. In her e-mailed reply, Arcoren confirmed that Eagle Bear and Rhodd would attend the meeting and provided information about travel and reimbursements.
		On 2/13 and 14/12, Arcoren and Graham exchanged e-mails about aspects of 2/14-15/12 meeting, travel, and reimbursement.
Santee Sioux Tribe of NE	Crow Butte & Dewey-Burdock	On 2/7/12, Graham e-mailed Thomas requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.
		On 2/10/12, Thomas replied to Graham's e-mail of 2/7/12 with information about delegation and travel. Thomas sent two versions of this information. Graham acknowledged the e-mail.
Sisseton-Wahpeton Oyate	Crow Butte & Dewey-Burdock	On 2/7/12, Graham e-mailed Desrosiers requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.

Name of Tribe	Re	Summary of Communication
		On 2/8/12 and in a series of e-mails, Graham and Desrosiers discussed details re travel and reimbursements for the 2/14-15 meeting in Rapid City.
Spirit Lake Tribe	Dewey-Burdock	On 2/7/12, Graham left a voice-mail message for Smith about the 2/14-15/12 meeting.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/2/12, Clouthier e-mails Schmuck about his reimbursement preference, and copied Graham.
		On 2/7/12, Graham e-mailed Clouthier requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg. Clouthier replied in his e-mail to Graham, and clarified Tim Mentz Sr. and Jr.'s roles and names. He copied the Mentzes and Gravatt (YST) on the e-mail.
Yankton Sioux Tribe	Crow Butte & Dewey-Burdock	On 1/10/12, Gravatt replied to Graham's e-mail of the same day, stating that the Yankton Sioux representatives attending the 2/14-15/12 meeting would be the Tribal Historic Preservation Officer Lana M. Gravatt and Council member Gail A. Hubbeling, Gravatt requested that their reimbursements be sent before the meeting if possible. Gravatt asked that Graham let her know where the meeting will be so that she can send round trip mileage costs.
		On 2/7/12, Mentz Sr. confirmed attendance and spelling of his name, and provided information and travel arrangements and reimbursements for Mentz Sr. and Mentz Jr. Graham acknowledged this information in an e-mail reply on 2/8/2012. Mentz Sr. e-mailed additional clarification on 2/9/12.
		On 2/1/12, the Yankton Sioux THPO responded to Schmuck regarding the 1/19/2012 NRC letter inviting a g2g consultation on 2/14-15/2012, and provided information re reimbursements for the tribal representatives: Lana Gravatt (THPO), Gail Hubbeling (Council member), Tim Mentz Sr. (elder), and Tim Mentz Jr. (support to Sr.)
		On 2/4/12, Mentz Sr. followed up on Clouthier's e-mail to provide Graham with information about Mentz Sr. and Mentz Jr. re travel and reimbursements.
		On 2/7/12, Graham e-mailed Gravatt requesting information about the names of tribal representatives and details for reimbursement for the 2/14-15/12 mtg.
		On 2/8/12, Gravatt confirmed the attendance of Mentz Sr. & Jr, and clarified they were coming at the request of the YST for their expertise in TCPs/surveys. Gravatt also provided information re the YST delegations travel and reimbursement arrangements. Gravatt and Graham continued this e-mail exchange on 2/9 with additional details about the 2/14-15/12 meeting and expenses.

Name of Tribe	Re	Summary of Communication
Cheyenne River Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/14-15/12, Representatives of these tribes, BLM, NRC, EPA, Cameco, Powertech, and SRI Foundation met as part of NRC's ongoing tribal consultation on Section 106 for the Crow Butte Projects (Crow Butte License Renewal and North Trend License) and Dewey-Burdock Project. The purpose of this meeting was for the federal agencies to hear from the Tribes what would be required in order for the Tribes to identify potential properties of religious and cultural significance to them within the project areas. The tribes questioned the level of g2g consultation at the meeting. The tribes spent a significant amount of meeting time in caucus, and caucusing with the federal agencies. Tribes stressed the importance of knowledgeable tribal representatives conducting on-the-ground field investigations for TCPs and indicated the standard archaeological survey interval of 30 m was insufficient for TCPs. No additional information about specific identification procedures was forthcoming, but the tribes proposed to provide NRC Staff with scopes of work (SOWs) for the Dewey-Burdock and Crow Butte/North Trend identification efforts. The tribes also indicated during the meeting that they would not work directly with either the applicants or their consultants.
Crow Creek Sioux Tribe		
Crow Tribe of Montana		
Eastern Shoshone Tribe		
Fort Peck		
Northern Arapaho Tribe		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		
Rosebud Sioux Tribe		
Santee Sioux Tribe of NE		
Sisseton-Wahpeton Oyate		
Standing Rock Sioux Tribe		
Yankton Sioux Tribe		
Cheyenne and Arapaho Tribes	Crow Butte	On 2/21/12, SRI Foundation received a form letter, dated 2/15/12, from Anquoe ([signature block, not signed] apparently responding to Sebastian's 12/4/11 letter. The form letter states that, after reviewing the Consultation Request, the box selected was "No objections, however [if HR or cultural items per NAGPRA] uncovered, that the tribe should immediately stop and notify the tribe.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 2/21/12, Graham e-mailed Clouthier and asked whether he would send her a copy of the confidentiality agreement that he had referenced at the 2/14-15/12 mtg.
Northern Arapaho Tribe	Crow Butte & Dewey-Burdock	On 3/26/2012, Conrad e-mailed Graham to request Schmuck's e-mail information. Conrad wanted to contact Schmuck about invoicing and reimbursement for the 2/14-15/2012 tribal consultation mtg. Graham replied and provided the requested information, and copied Schmuck. Schmuck
		On 3/26/2012, Schmuck followed up on the e-mail message that Graham had copied him on. He told Conrad that he would send her a check now that he had her mailing address. He apologized for the delay.
Cheyenne River Sioux Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham left a voice-mail message for Vance, asking for a call back. Graham referenced the C-B and D-B projects, the SOWs that NRC had asked the applicants to produce, and the recent letter from NRC. Graham explained that she wanted to touch base, find out what's going on, and see whether there might be a chance to get tribes on the ground this spring for TCP Studies.
Crow Creek Sioux Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham called and left a message for Wells requesting a call back re the D-B and C-B projects.

Name of Tribe	Re	Summary of Communication
Crow Tribe of Montana	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham left a voice-mail message Two Leggings, asking for a call back. She referenced the C-B and D-B projects, the SOWs that NRC had asked the applicants to produce, and the recent letter from NRC. Graham explained that she wanted to touch base, find out what's going on, and see whether there might be a chance to get tribes on the ground this spring for TCP Studies. Graham clarified that SRIF is a third party consultant to applicants, and not working directly for NRC.
Eastern Shoshone Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham left a voice-mail message explaining that she was trying to reach Ferris/THPO. She requested that her message be forwarded to Ferris, and for him to give her a call back.
Fort Peck	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham telephoned Youpee and explained that she was calling about the C-B and D-B projects, applicants' SOWs, and NRC's recent letter. She said she wondered whether it was possible to get tribes out in the field for TCP studies this spring. Youpee said he thought it was possible, but NRC needs to be back at the table. NRC needs to be in the process, and teleconferences are not going to work. Youpee said that the tribes asked for the TCP study, and they need to discuss how they are going to do this. Graham agreed and pointed out that the tribes had made this request nearly a year ago. She thought good progress had been made in February, but then things seemed to stall. Youpee made some reference to trying to scare tribes off, and brush them off with a teleconference. He said that NRC has to go through the process and learn from its mistakes. He said he didn't have anything more to say about it. Graham said that she understood the tribes would be preparing a SOW, and NRC had asked the applicants to do the same. Youpee said this was the responsibility of NRC, and third parties could not take on the g2g role; Graham said she absolutely agreed, and suggested that contractual elements could be between the applicants and the tribes. Youpee said that some of this information deals with the g2g relationship and that NRC could not delegate it. He reiterated that this was all he had to say. Graham thanked him.
Flandreau-Santee Sioux Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham left a voice-mail message for Weston, asking for a call back. She referenced the C-B and D-B projects, the SOWs that NRC had asked the applicants to produce, and the recent letter from NRC. Graham explained that she wanted to touch base, find out what's going on, and see whether there might be a chance to get tribes on the ground this spring for TCP Studies.
Northern Cheyenne Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham left a voice-mail message for Fisher, asking for a call back. She referenced the C-B and D-B projects, the SOWs that NRC had asked the applicants to produce, and the recent letter from NRC. Graham explained that she wanted to touch base, find out what's going on, and see whether there might be a chance to get tribes on the ground this spring for TCP Studies.

Name of Tribe	Re	Summary of Communication
Northern Arapaho Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham telephoned Conrad and explained that she was calling about the C-B and D-B projects, applicants' SOWs, and NRC's recent letter. Conrad first asked whether Graham had talked with the Sioux yet. Graham said that she planned to call those tribes later in the day. Conrad said she had not received the letter, and Graham waited while Conrad found the letter in her e-mail box and reviewed it. Conrad said that she would e-mail the tribes to see what is going on. Conrad suggested that Graham contact Dianne Desrosiers. Conrad said that the Northern Arapaho Tribe is saturated with field work right now. Graham replied that this was one reason for her call – Graham wanted to know whether there was something that could be done to move the process forward. Conrad said she would e-mail tribes and call Graham back.
Oglala Sioux Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham telephoned Iron Cloud and explained the purpose of her call: to follow up on NRC's recent letter about the C-B and D-B projects, applicants' SOW, and to see whether there might be a way to get the tribes out into the field this spring. Iron Cloud said he had seen the correspondence and downloaded it, but other things came up before his office and their advisory committee had a chance to look at it. He seemed surprised that NRC had received no tribal responses to their request. Graham read that part of the letter to Iron Cloud, to confirm that she was providing correct information to him. Iron Cloud said that he would get together with others and see what their advisory committee had to say. He confirmed the date and the time of the upcoming teleconference.
Rosebud Sioux Tribe	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham telephoned the THPO office, and was told that Eagle Bear was out of the office. Graham left a message that she was calling re the C-B and D-B projects and the recent letters from NRC. The person said that she was sure Eagle Bear had received the letter, but she would have to check. Graham explained about the SOWs and upcoming conference call. She indicated Rhod had been involved. Graham was told that Eagle Bear would provide Rhod with the necessary information, and that Eagle Bear would call Graham back.
Santee Sioux Tribe of NE	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham attempted to telephone Thomas, but no one picked up and she could not leave a voice-mail message.

Name of Tribe	Re	Summary of Communication
Sisseton-Wahpeton Oyate	Crow Butte & Dewey-Burdock	On 4/10/2012, Graham telephoned Desrosiers and explained that she was following up on NRC's 4/5/12 letter regarding the D-B and C-B projects. Desrosiers asked what other tribes were saying and whether MG had spoken with Mentz or Rhod. Graham summarized her conversations w/ Conrad and Youpee. They reviewed SRIF's role as 3rd party to applicants in response to NRC's request for additional information. Desrosiers said she can only speak for her tribe. Desrosiers helps to coordinate information and facilitates teleconferences, etc., but that's it. Also, she does not develop SOWs; that is left to the guys with the expertise. Graham said she knew the tribes wanted to act as a consortium, but did not know whether anyone was coordinating, or lead for the group. Desrosiers encouraged Graham to contact other tribes directly. Desrosiers will also send out an e-mail reminding the tribes about the applicants' SOW and the teleconference on April 24. Desrosiers made some reference to the possibility of losing opportunity if the tribes don't act. MG referenced the June 2011 mtg where tribes said they needed to conduct the TCP work, noted the progress made up to the Feb 2012 mtg, and observed that things haven't moved seemed to move forward much since then. Graham said that the applicants had asked Graham to ask the question of how to get tribes out on the ground this spring. Graham and Desrosiers talked about the number of consultation requests the tribes get (1200-1500/year in correspondence alone). Graham said she understood tribes were not happy w/ a teleconference – Desrosiers agreed this isn't considered good faith effort. MG said perhaps there was a way to use both, given the amount of work THPOs have and the areas they need to cover. Graham asked Desrosiers to let her know if she has any other ideas. Desrosiers also said all the THPOs are in ND this week on a project - she thought maybe they could caucus about our projects while there.
Cheyenne/Arapaho Tribes	Crow Butte & Dewey-Burdock	On 4/24/12, Representatives of these tribes, the BLM, NRC, EPA, Cameco, Powertech, and SRI Foundation and the South Dakota State Historic Preservation Officer (SD SHPO) participated in a teleconference as part of NRC's ongoing tribal consultation on Section 106 for the Crow Butte Projects (Crow Butte License Renewal and North Trend License) and Dewey-Burdock Project. The Rosebud Sioux representative was Ben Rhod, the tribe's contract archaeologist. NRC sought feedback from the tribes on the applicants proposed Statements of Work (SOWs) for conducting TCP studies. Aspects of the SOWs discussed included the phased approach, amount of acreage covered, confidentiality, pay rates, and the tribes' desire to write their own SOWs. Tribal representatives agreed that Rhod and Clothier (SRST) would conduct reconnaissance surveys of the project areas, from which the tribes would develop draft SOWs for TCP field investigations.
Northern Arapaho Tribe		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		
Rosebud Sioux Tribe		
Sisseton-Wahpeton Oyate		
Standing Rock Sioux Tribe		
Yankton Sioux Tribe		

Name of Tribe	Re	Summary of Communication
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 5/8/2012, Graham left a voice-mail message for Clouthier, explaining that in NRC's 5/24/12 conference call, it was decided that Rhod and Clouthier would conduct a reconnaissance of the D-B and C-B project areas in order to help the tribes draft their TCP Study SOWs for the projects. Graham was calling to help facilitate access to the project areas. Graham left contact information and requested a callback.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 5/11/12, Graham called Clothier to follow up on the discussions during the 4/24 teleconference. Clothier was already aware of the discussions from a THPO conference call and his conversations with Rhod. Graham and Clothier discussed covering 4 areas for Cameco (Crow Butte, North Trend, Three Crow, and Marsland). They also addressed issues of per diem and lodging, and agreed Clothier and Rhod could finalize any details directly with the applicants. Clothier noted the possibility of visual impacts beyond the APE. Graham and Clothier reviewed that any new disturbance beyond the current license would mean a new 106 action would require additional work. Graham asked about the confidentiality agreement TC had spoken of at the 2/14-15/12 meeting, and Clothier said it was under review by the tribe. Clothier said that he would speak to the SD SHPO regarding minimal recording standards. He provided his direct contact information so the applicants could reach him.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	Between 5/24 and 5/26/12, Clothier and Rhod conducted reconnaissance field visits of the project areas in order to obtain information about scope and extent of fieldwork necessary in the areas. NRC staff and applicant representatives participated in the field visits. Clothier and Rhod visited the Crow Butte, North Trend, Three Crow and Marsland (Cameco) on 5/24 and the Dewey-Burdock project area (Powertech) on 5/26.
Rosebud Sioux Tribe		
Cheyenne River Sioux	Dewey-Burdock	On 89/2012, NRC conducted a tribal consultation teleconference meeting involving NRC, THPOs, and other tribal representatives to finalize the SOW and establish a timeframe for conducting field work for the D-B project. In addition to NRC personnel, BLM, EPA, and SD SHPO representatives also participated. Applicants and SRI Foundation staff also participated in the teleconference. The discussion and SOW could be as a model for Cameco projects. The agenda included discussion of the tribes' draft SOW and applicant's revised draft SOW. NRC proposed to discuss the purpose, amount of land surveyed and coverage rate, period of performance, reports, and level of effort. Tribes expressed concern over not having sufficient time to review the revised SOW. They indicated surprise at seeing modifications to the tribes' SOW without discussion, and declined to review either SOW during the call. The tribes discussed the need for a PA to address some concerns, and NRC and the BLM agreed a PA could be developed. All parties agreed to reconvene on 8/21 in order to
Crow Creek Sioux Tribe		
Northern Arapaho Tribe		
Northern Cheyenne Tribe		
Oglala Sioux Tribe		
Rosebud Sioux Tribe		
Santee Sioux Nation		
Sisseton Wahpeton Oyate		
Standing Rock Sioux Tribe		

Name of Tribe	Re	Summary of Communication
Yankton Sioux Tribe		give the tribes the opportunity to review the applicants' revised SOW(s). At that next teleconference, development of the final SOW would proceed.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 8/9/12, Sebastian e-mailed Clothier to respond to comments Clothier had made during the teleconference about assumptions that she had made in developing the applicants' SOWs. Sebastian explained the need to develop our own assumptions in the absence of information from the tribes. She expressed her wish that a group could share information and work together to meet everyone's needs, and regretted that such a cooperative endeavor seemed impossible.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 8/10/12, Clothier replied to Sebastian's e-mail. He suggested that working together might be possible if schedules would allow it. Clothier expressed frustration about lack of time or notice to review the applicants' revised SOWs. He indicated that he thought tribal input on costs and acreage issues had been ignored. Clothier explained some of the important differences in how archaeological and tribal person address identification and recording: For archaeologists, evaluating sites takes the most time, whereas the tribal personnel need to spend more time on recording sites. Clothier said that determining the amount of acres covered in a day is determined by the density of sites, and their complexity. For the D-B project area, he expected this density to be high, based on a ridge Clothier and Rhod saw during their reconnaissance field visit. Clothier said that he wanted to pass his ideas along to a potential contractor [who would conduct the TCP field investigation] on how they might proceed before going into detail.
Standing Rock Sioux Tribe	Crow Butte & Dewey-Burdock	On 8/10/12, Sebastian replied to Clothier's e-mail, reviewing the history of developing the applicants initial and revised draft SOWs (at the request of NRC), and stating that she viewed the draft SOWs as part of on-going negotiations. Sebastian wrote that the applicants are open the changing assumptions and moving figures around, but that we have been unsuccessful in getting the tribes to provide information that we could apply to the matter. Sebastian said the more prepared the tribes are to provide specifics during the upcoming 8/21 conference call, the more opportunities to work toward a middle ground.
Cheyenne River Sioux	Dewey-Burdock	On 8/21/12, NRC conducted a tribal consultation teleconference meeting between NRC, THPOs, and other tribal representatives to continue the discussion of the 8/9/12 teleconference with the goal of completing the SOW for the D-B TCP study to the point where the tribes and applicant could work out contractual details. In addition to NRC personnel, BLM, EPA, and SD SHPO representatives also participated. Applicants and SRI Foundation staff also participated in the teleconference. The agenda included
Crow Creek Sioux Tribe		
Northern Arapaho Tribe		

Name of Tribe	Re	Summary of Communication
Northern Cheyenne Tribe		discussion of the estimated coverage rate for field identification (acres/person day); start date and estimated duration of field identification; report content and confidentiality requirements; personnel level of effort (number and titles of field crews); and report deliverable schedule. After introductory remarks, the tribes went into a private caucus and other participants logged off the call. When the teleconference reconvened, the tribes asked about g2g consultation, and NRC explained their working policy. The tribes also articulated the importance and sacredness of the Black Hills, and their opposition to mining or other development; they acknowledged the difficulty in participating in the current consultation because they viewed it as enabling such development. They distinguished between approaches to identify archaeological sites and TCPs. Tribal representatives indicated that there were many aspects of the revised SOW that were not feasible, and did not speak directly to the discussion topics. In response to the tribes' indicating the need to revise the SOW (or that the SOW "needs to come from the tribes"), Withrow will meet with representatives attending another tribal meeting in Bismarck, ND on September 5 to discuss the SOW.
Oglala Sioux Tribe		
Rosebud Sioux Tribe		
Santee Sioux Nation		
Sisseton Wahpeton Oyate		
Standing Rock Sioux Tribe		
Yankton Sioux Tribe		

POWERTECH (USA) INC.

February 3, 2014

Ms. Sadie Hoskie
Director, Water Program
United States Environmental Protection Agency - Region 8
Mail Code: 8P-W
1595 Wynkoop Street
Denver, CO 80202-1129

Re: Status of UIC Permitting for Powertech (USA) Inc.'s Dewey-Burdock Project

Dear Ms. Hoskie:

We are writing to respectfully request that the U.S. Environmental Protection Agency Region 8 (EPA) proceed with completion of the permitting action on the Company's two Underground Injection Control (UIC) applications for the Dewey-Burdock Project, a proposed uranium *in situ* recovery (ISR) project near Edgemont, South Dakota. The two applications currently pending decision from EPA are:

- Class III UIC permit application for the proposed ISR injection wells
- Class V UIC permit application for the disposal of treated wastewater in Class V, non-hazardous injection wells

These permit applications have been in review for several years without any resulting action from EPA. Without any understanding of when action may occur, we are deeply concerned that this uncertainty could negatively affect our business. By this letter, Powertech also formally requests that a schedule for completion be provided so that we may reasonably plan the future development of our project.

During the past several years, Powertech's management has met with senior EPA personnel who have indicated that the timing of EPA's permitting action would coincide with permitting being completed by other state and federal agencies. The lack of permitting action by EPA is currently in contrast to the actions completed by other federal regulatory agencies and the State of South Dakota. The U.S. Nuclear Regulatory Commission (NRC) finalized its technical review of the source and byproduct material license application and recommended approval in its Safety Evaluation Report (SER) published in March 2013. NRC, with the cooperation of the Bureau of Land Management, has also completed the Final Supplemental Environmental Impact Statement (FSEIS) for the Dewey-Burdock Project. This document

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was noticed to the Federal Register on January 31, 2014. The two documents represent the final staff recommendations for issuance of the NRC license, which is expected in the first quarter of this year. The South Dakota Department of Environment and Natural Resources (SD DENR) recommended approval of Powertech's large scale mine permit application in April 2013, approximately seven months after its September 2012 submittal. SD DENR also has recommended approval of three other permit applications for water rights and land application of treated wastewater. All of the SD DENR permit applications await final decision from two State citizen boards, which have decided to continue public hearings until after the NRC and EPA have issued their respective license/permits and determined financial assurance.

Meanwhile, Region 8 has yet to commence substantial portions of its permitting process, including such steps as issuing draft permits for solicitation of public comments and holding a public hearing, both of which must be completed prior to Region 8 issuing final permit decisions.

The following summary describes the history of the UIC applications for your reference:

Class III UIC permit application

- December 2008: Powertech submitted the application
- February 2009: Region 8 determined the application to be administratively complete
- July 2012: Powertech updated the application to be consistent with the updated NRC license application
- January 2013: Powertech provided additional updates to the application in response to questions from Region 8 reviewers

Class V UIC permit application

- March 2010: Powertech submitted the application
- April 2010: Region 8 determined the application to be administratively complete
- January 2012: Powertech submitted responses to Region 8 review comments

As far as we are aware, Powertech has provided all necessary information for the agency to complete its review of the Class III application as of a year ago and to complete its review of the Class V application as of two years ago.

The EPA permitting schedule has now become the critical path in the overall project schedule. Because the NRC licensing process was effectively complete with issuance of the SER and FSEIS reports,

completion of permitting now hinges on EPA permits. Resumption of State permit hearings and the beginning of project construction cannot occur until these permits are issued.

We urge you to move forward expeditiously with your review of the UIC permit applications for the Dewey-Burdock Project, which has the potential to provide substantial economic benefit to local communities and the State of South Dakota while also significantly increasing the domestic uranium supply for greenhouse gas-free nuclear power.

Respectfully yours,

Richard F. Clement
President & CEO

cc: J. Mays
R. Blubaugh
M. Hollenbeck
L. Scheinost
Shaun McGrath, EPA Region 8 Administrator
Douglas Minter, EPA Region 8 UIC Program
Valois Shea, EPA Region 8 UIC Program
Craig Boomgaard, EPA Region 8 UIC Program

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

FEB 19 2014

Ref: 8P-W-UIC

Mr. Richard F. Clement
President and CEO
Powertech (USA) Inc.
5575 DTC Parkway, Suite 140
Greenwood Village, Colorado 80111

Re: Status of UIC Permitting for Dewey-Burdock Uranium In-situ Recovery Project

Dear Mr. Clement:

Thank you for your February 3, 2014, letter requesting that the U.S. Environmental Protection Agency Region 8 complete its permitting actions in response to Powertech (USA), Inc.'s (Powertech) Underground Injection Control applications to operate Class III and Class V injection wells proposed for the company's uranium in-situ recovery project near Edgemont, South Dakota.

In this letter you specifically requested that we provide you with a schedule for completion so that you may reasonably plan the future development of this project. At this time, we intend to announce draft permit decisions for Powertech's proposed Class III and V injection well operations in April, 2014, through a public notice soliciting comments. This notice will also announce the date(s) and location(s) of one or more public hearings. However, we cannot reasonably project when the EPA will issue its final permit decisions due to the considerable public interest associated with this proposed project.

We appreciate your diligence in providing the EPA the necessary technical information over the past several months to inform the Agency's pending proposed decisions on your UIC permit applications.

Please contact me at (303) 312-6390 or Douglas Minter of my staff at (303) 312-6079 with questions or concerns regarding this matter.

Sincerely,

/Sadie Hoskie/

Sadie Hoskie
Director
Water Program

cc: Bill Von Till, NRC
Kevin Hsueh, NRC
Bill Markley, SDDENR
Bob Townsend, SDENR

Shea, Valois

From: John Mays <jmays@powertechuranium.com>
Sent: Monday, February 24, 2014 8:18 AM
To: Shea, Valois
Subject: RE: EPA Letter responding to Powertech's Feb 3 2014 letter

Valois,

Thanks you for the response.

Sincerely,

John

John M. Mays
Chief Operating Officer
5575 DTC Parkway, Suite 140
Greenwood Village, Colorado, USA 80111-3012
(303) 790-7528 x106
(303) 790-3885 FAX
jmays@powertechuranium.com
www.powertechuranium.com

Please do not print this e-mail unless necessary

From: Shea, Valois [mailto:Shea.Valois@epa.gov]
Sent: Thursday, February 20, 2014 2:55 PM
To: jmays@powertechuranium.com; rblubaugh@powertechuranium.com
Subject: EPA Letter responding to Powertech's Feb 3 2014 letter

_____

Valois Shea
US EPA Region 8
Mail Code: 8P-W-UIC
1595 Wynkoop Street
Denver, CO 80202-1129

phone: 303-312-6276
fax: 303-312-6741
http://www.epa.gov/region08/water/uic

********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
  image001.jpg
which may be a computer program. This attached computer program could
contain a computer virus which could cause harm to EPA's computers,
network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced
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If the message sender is known and the attachment was legitimate, you
should contact the sender and request that they rename the file name
extension and resend the Email with the renamed attachment. After
receiving the revised Email, containing the renamed attachment, you can
rename the file extension to its correct name.

For further information, please contact the EPA Call Center at
(866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

POWERTECH (USA) INC.

JOHN M. MAYS
Chief Operating Officer

November 17, 2014

Ms. Valois Shea
U.S. EPA Region 8
Mail Code: 8P-W-UIC
1595 Wynkoop Street
Denver, CO 80202-1129

Re: Dewey-Burdock Project Class III and Class V Underground Injection Control (UIC) Permit Applications - Follow-Up to October 22, 2014 Meeting

Dear Ms. Shea:

This letter is in response to EPA's questions discussed in our meeting on October 22, 2014. The two issues addressed within this letter include impoundment construction and a non-drinking water, domestic well within the proposed aquifer exemption boundary.

Impoundment Construction

It should be noted that Powertech plans to submit an application to EPA for approval to construct wastewater storage and treatment impoundments in the Dewey-Burdock Project that are regulated under 40 CFR Part 61, Subpart W, as directed by 40 CFR § 61.07. The application will be submitted at least 60 days prior to construction of the impoundments. Due to unique treatment of fluid stored in specific impoundments as well as other factors, this application may include a request for a variance. Regardless, Powertech is committed to abiding by 40 CFR Part 61, Subpart W, for which a recent draft rule revision was issued in 2014, but which has yet to be finalized. Powertech understands that EPA is currently reviewing comments from the interested public, including comments submitted by Powertech. Powertech provided oral comments to EPA on the proposed rule in Denver on September 4, 2014. Written comments also were submitted prior to the October 29, 2014 deadline.

By this letter, Powertech commits to one of the following in regard to its wastewater storage and treatment impoundment construction at the Dewey-Burdock Project:

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Email: info@powertechuranium.com

POWERTECH (USA) INC.

1.) Relocate any single-lined impoundments (i.e., those that contain a single synthetic liner overlying a clay liner) that overlie alluvium away from the alluvium such that no single-lined impoundment overlies alluvium.

2.) Remove the alluvial material so that no single-lined impoundment overlies the alluvium.

3.) Construct a hydrologic barrier such as a soil-bentonite slurry wall between any single-lined impoundments that overlie alluvium and the downgradient alluvium to prevent any potential leakage from reaching the alluvial aquifer.

4.) Install dual synthetic liners with leak detection systems for any of the impoundments that overlie alluvium.

These four commitments apply only to wastewater storage and treatment impoundments in the Burdock portion of the project. They do not apply to impoundments in the Dewey portion of the project, which are planned in areas that do not overlie alluvium. Furthermore, these commitments apply only to impoundments that are currently designed with a single synthetic liner overlying a clay liner.

The construction specifications of these impoundments are not described in either UIC application to EPA, but they are described in Powertech's NRC license application for the Dewey-Burdock Project (e.g., in the June 2011 Technical Report [TR] Responses to Request for Additional Information [RAI], NRC Adams Accession No. ML112071064). The impoundments currently designed with single synthetic liners are:

<u>Deep Disposal Well (DDW) Option</u>

- surge pond
- outlet pond

<u>Land Application Option</u>

- treated water storage ponds
- spare storage pond
- outlet pond

While Powertech agrees to make these additional commitments in order to address EPA staff's questions, we respectfully submit that the existing impoundment designs have been thoroughly

reviewed and evaluated by the NRC staff and have been determined by NRC staff to be adequately protective of public health and the environment. More specifically, Section 4.2.3.1.2 of the Safety Evaluation Report (SER), issued by NRC in April 2014, documents NRC staff's review of (a) pond siting, including soil conditions, (b) design and construction details, and (c) operational inspection plans (NRC Adams Accession No. ML14043A347). Regarding the impoundments with dual synthetic liners and leak detection systems, they determined on p. 117 that:

> "A review of the proposed liner system components indicates that the specifications for the radium settling ponds and CPP brine pond comply with the regulations in 10 CFR Part 40, Appendix A, requiring a synthetic liner have a leak detection system. The applicant has adequately described the materials that will be used to construct the liner and leak detection systems."

Regarding the single lined impoundments (including the surge and outlet ponds in the deep disposal well option and the treated water storage, spare storage and outlet ponds in the land application option), NRC staff determined on p. 117 of the SER that:

> "The staff notes that the other ponds have been designed to prevent migration of wastes to groundwater or surface water, which is consistent with standard review plan Section 4.2.3 (NRC, 2003b) and 10 CFR Part 40, Appendix A, Criterion 5A(3)."

Due to the presence of alluvium near the ponds, the NRC license contains a pre-operational condition requiring a shallow groundwater monitoring network for the Dewey and Burdock area impoundments. This is found in license condition 12.25 in NRC license SUA-1600, issued on April 8, 2014 (NRC ADAMS Accession No. ML14043A392):

> "No later than 60 days prior to construction, [Powertech] shall submit to the NRC for review and written verification, a pond detection monitoring plan that contains the number, locations, and screen depths of groundwater monitoring wells to be installed around the Burdock area and Dewey ponds. The plan shall also include sampling frequency and sampling parameters."

NRC staff's authorization for the construction and operation of the impoundments is found in license condition 10.8 in License No. SUA-1600:

POWERTECH (USA) INC.

> "The licensee is permitted to construct and operate storage and treatment ponds, as described in Section 4.2 of the approved license application. Routine pond inspections will be conducted consistent with inspection procedures described in Regulatory Guide 3.11."

The pond inspection procedures are found in Section 3.1.6.1.2 of Powertech's approved NRC license application and include the following (p. 90 of the June 2011 TR RAI response):

- Daily inspections of the liner, liner slopes, and other earthwork features
- Daily inspections of pond freeboard
- Monthly inspection of the functionality of leak detection systems
- Daily checks for water accumulation in leak detection systems
- Quarterly inspections of embankment settlement and slope stability. Unscheduled inspections will be performed after occurrence of significant earthquakes, tornadoes, intense local rainfall, or other unusual events

It is also important to note that Powertech will be required, as a condition of its NRC license, to develop a standard operating procedure (SOP) for potential accidents and spills, including pond releases (see license condition 10.4 in SUA-1600). NRC staff will verify the adequacy of all SOPs during the mandatory pre-operational inspection (see license condition 12.3 in SUA-1600). Further, Powertech will be required to document any unplanned releases and report them to NRC staff in accordance with federal regulations in 10 CFR Part 20, Subpart M and 10 CFR § 40.60 (see license condition 11.6 in SUA-1600). In addition, Powertech will be required under its State of South Dakota large scale mine permit and groundwater discharge plan to report any unplanned releases from the ponds (see Pond Leakage Response conditions 1 and 2 in Powertech's recommended large scale mine permit conditions[1]; see also conditions 5 and 14 in Powertech's recommended groundwater discharge plan permit conditions[2]).

Powertech contends that the issues associated with all wastewater storage and treatment impoundments at the project should be regulated only under the proper regulatory authority. The commitments made above are being provided at the oral request of EPA staff and are, in the opinion of Powertech, outside the scope of the UIC applications submitted on the Dewey-Burdock Project.

[1] http://denr.sd.gov/des/mm/powertechminepermitapp.aspx
[2] http://denr.sd.gov/des/gw/Powertech/Powertech_GW_Discharge_Permit.aspx

POWERTECH (USA) INC.

Non-Drinking Water Domestic Well (Hydro ID #16)

In reference to well 16, Powertech has an agreement from the current landowner, executed February 9, 2012, that specifies that the well cannot be used for drinking water purposes. Indeed, water quality in this well exceeds drinking water MCLs for gross alpha and radium-226, and exceeds the secondary drinking water standard for sulfate. Please see Table 17.8 (p. 17-26) in the Class III UIC permit application, July 2012 revisions. Powertech has been providing bottled drinking water to the residence since February 2012.

In response to EPA's recent question, Powertech further commits to remove the piping connection from well 16 to the seasonal residence, which is currently only inhabited sporadically as a hunting lodge. Powertech will provide a cistern at the house in order to supply all domestic uses and supply water by hauling drinking water to this cistern as needed. This will ensure that well 16 will only be used for stock water purposes. Prior to operating each well field, all stock wells within ¼ mile of the well field will be removed from private use (see p. 4-15 of the revised Class III UIC permit application). Please also refer to Section 4.11 of the revised Class III UIC permit application, which states that all domestic wells, including well 16, will be removed from private use prior to operation. Powertech will notify EPA when each of the modifications is complete.

Following disconnection, Powertech will further submit paperwork to have the well reclassified as per South Dakota regulations to "stock" use only. Powertech will inform EPA of the submittal and its completion.

A response from EPA indicating whether the commitments herein meet staff's requirements for issuing draft Class III and V UIC permits would be appreciated.

Sincerely,

John Mays

John M. Mays, P.E.
Chief Operating Officer

cc: Ronald Burrows, NRC
Greg Fesko, BLM
Mike Cepak, SD DENR

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Shea, Valois

From: Richard Blubaugh <rblubaugh@powertechuranium.com>
Sent: Tuesday, February 25, 2014 2:28 PM
To: 'Yilma, Haimanot'; 'John Eddins'; ''Lynne Sebastian''; 'Sant, Mark'; 'Smith, Gary'; 'Fesko, Gregory'; Marian_atkins@blm.gov; Brenda_Shierts@blm.gov; Shea, Valois
Cc: rfclement@powertechuranium.com; 'John Mays'
Subject: RE: Final Draft Programmatic Agreement Appendix

Haimanot,

Lynne Sebastian, our consultant, and I have reviewed the final draft programmatic agreement appendices. We have the following comments:

- Generally, the draft appears to capture the key elements of what has been discussed as necessary and appropriate in this programmatic agreement.

- Draft Appendix D (1)a)) refers to a 150 foot buffer from unanticipated discoveries, including human remains. Table 4.9-5 of the FSEIS contains an entry for Tribal Survey Numbers TS007-011 that states, "Avoid with no less than a 300 m protective buffer." It would seem that human remains are about as sacred as sacred gets. How is it that one sacred site gets assigned a 150 foot buffer and another gets a 984 foot buffer? It is inconceivable that there are levels of buffer distances for sacredness. Powertech strongly recommends that the 150 foot buffer be applied to all TCP sites.

- Draft Appendix C seems to need some further clarification.
  - Under paragraph c) it is suggested that the word "participating" be inserted after "all" and before "agencies."
  - It is recommended that Paragraph d) be reworded as follows: "Powertech will compile and distribute all reviews and comments received within 30 days of receipt of the report to the agencies and consulting parties."
  - In paragraph e) the phrase "participating agencies and" should be inserted before "consulting parties."
  - Also in paragraph e), it is strongly recommended that "60 days" be changed to "30 days." The parties would have had the report 30 days for comment. If comments can be prepared and submitted within 30 days, arranging a conference call can be done within the following 30 days. 60 days is excessive for arranging a conference call.

Thank you for all your efforts to complete the 106 Process. Your diligence is appreciated.

Richard Blubaugh
VP-HS&E Resources
Powertech (USA) Inc.
303-790-7528
rblubaugh@powertechuranium.com

From: Yilma, Haimanot [mailto:Haimanot.Yilma@nrc.gov]
Sent: Monday, February 24, 2014 11:59 AM
To: John Eddins (jeddins@achp.gov); rblubaugh@powertechuranium.com; 'Lynne Sebastian' (lsebastian@srifoundation.org); Sant, Mark (msant@blm.gov); Smith, Gary (gsmith@blm.gov); Fesko, Gregory (gfesko@blm.gov); Marian_atkins@blm.gov; 'Brenda_Shierts@blm.gov' (Brenda_Shierts@blm.gov); Shea.Valois@epa.gov
Subject: FW: Final Draft Programmatic Agreement Appendix

FYI

From: Terence Clouthier [mailto:tclouthier@standingrock.org]
Sent: Monday, February 24, 2014 1:53 PM
To: Yilma, Haimanot
Cc: Hsueh, Kevin; Luhman, Hope (hluhman@louisberger.com); Jamerson, Kellee; John Eddins; Paige.Olson@state.sd.us; Conrad Fisher; Steve Vance; Oglala THPO (oglalathpo@goldenwest.net); Dennis Yellow Thunder (ostnrrafd@gwtc.net); Waste'Win Young
Subject: RE: Final Draft Programmatic Agreement Appendix

Good afternoon,

I have attached the comments to the PA appendixes to this email which I was working on during the phone conference last Friday.

Thank you
Standing Rock Sioux Tribe

Terry Clouthier
Tribal Archaeologist

From: Yilma, Haimanot [mailto:Haimanot.Yilma@nrc.gov]
Sent: Thursday, February 20, 2014 10:59 AM
To: Yilma, Haimanot
Cc: Hsueh, Kevin; Luhman, Hope (hluhman@louisberger.com); Jamerson, Kellee
Subject: Final Draft Programmatic Agreement Appendix

All,

Please find attached the draft Programmatic Agreement (PA) Appendix which incorporates editorial changes and minor additions based on comments received from consulting parties. In Appendix A, the NRC staff added tables to depict the amount of land that would be disturbed during the construction and operation of the Dewey-Burdock project. In the same appendix, the NRC staff also added a section to explain why a PA is required for this project as well as replaced figure 1 to show the visual APE. In Appendix B, the NRC staff updated or clarified the timeline as requested by some consulting parties.

Haimanot Yilma
Project Manager
FSME/DWMEP/EPPAD/ERB
U.S Nuclear Regulatory Commission
Phone: 301-415-8029
email: haimanot.yilma@nrc.gov
Mail Stop : T8F05

Shea, Valois

From: John Mays <jmays@powertechuranium.com>
Sent: Thursday, February 27, 2014 7:20 AM
To: Shea, Valois
Subject: News on Powertech

Valois,

Please see the attached link below. Spoke with Doug and told him would send the announcement below but I did not have his email.

http://finance.yahoo.com/news/powertech-uranium-corp-merge-azarga-140300478.html;_ylt=A0LEVwmnRw9T7UMAU5hXNyoA;_ylu=X3oDMTB0bGZtanIyBHNlYwNzYwRjb2xvA2JmMQR2dGlkA1NNRTQxOV8x

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********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
image001.jpg
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For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Tuesday, May 20, 2014 2:17 PM
To: Minter, Douglas
Subject: ASLB denies Motion for Stay of License
Attachments: removed.txt; Powertech 052014or.pdf

Doug,

Please see the attached order.

Thanks.

John

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Dr. Richard F. Cole
Dr. Mark O. Barnett

In the Matter of	Docket No. 40-9075-MLA
POWERTECH USA, INC.	ASLBP No. 10-898-02-MLA-BD01
(Dewey-Burdock In Situ Uranium Recovery Facility)	May 20, 2014

ORDER
(Removing Temporary Stay and
Denying Motions for Stay of Materials License Number SUA-1600)

I. INTRODUCTION

On April 8, 2014 the NRC Staff issued NRC Source Materials License No. SUA-1600[1] to Powertech (USA), Inc. (Powertech) pursuant to 10 C.F.R. § 2.1202(a).[2] The license allows Powertech to possess and use source and byproduct material in connection with the Dewey-Burdock Project.[3] On April 14, 2014 the Oglala Sioux Tribe and the Consolidated Intervenors

[1] Materials License, NRC Form 374 (Apr. 8, 2014) (ADAMS Accession No. ML14043A392). See also, ADAMS Accession Package Number ML14043A052, which includes the license transmittal letter, the license, and the Final Safety Evaluation Report. The NRC Staff also issued its Record of Decision for the Dewey-Burdock Uranium In-Situ Recovery (ISR) Project at ADAMS Accession No. ML14066A466. The Final Programmatic Agreement was executed April 7, 2014 and is available in ADAMS Accession Package No. ML14066A344.

[2] Under 10 C.F.R. § 2.1202(a) the NRC Staff may issue a license "during the pendency of any hearing under this subpart."

[3] Materials License, NRC Form 374 (Apr. 8, 2014) (ADAMS Accession No. ML14043A392) at 1.

filed timely applications for a stay of the effectiveness of the NRC staff's licensing action on a matter involved in this hearing.[4] On April 24, 2014 the NRC Staff and Powertech filed oppositions to Intervenors' motions.[5] The Oglala Sioux Tribe filed an answer in support of the Consolidated Intervenors' motion on April 24, 2014.[6]

On April 30, 2014 the Board granted a temporary stay of Powertech's NRC license, pending an oral argument among the parties.[7] The temporary stay was issued to prevent any immediate and irreparable harm to any cultural or historic resources caused by earthwork or ground disturbance within the Dewey-Burdock sites and to preserve the status quo until the Board was able to hold an oral argument on the motions for a stay. The oral argument was held by telephone on Tuesday, May 13, 2014.[8]

II. LEGAL STANDARDS

The purpose in granting a stay is to preserve the status quo until a decision can be made on the merits of the underlying controversy. The grant of a stay is an extraordinary

[4] Oglala Sioux Tribe's Motion for Stay of Effectiveness of License (Apr. 14, 2014) [hereinafter OST Stay Motion]; Consolidated Intervenors' Application for a Stay of the Issuance of License No. SUA-1600 Under 10 CFR Section 2.1213 (Apr. 14, 2014) [hereinafter CI Stay Motion].

[5] NRC Staff's Opposition to Applications for a Stay (Apr. 24, 2014) [hereinafter Staff Opposition]; Powertech (USA) Inc's Response to Consolidated Intervenors and the Oglala Sioux Tribe Motions for Stay of the Effectiveness of NRC License No. SUA-1600 (Apr. 24, 2014) [hereinafter Powertech Response].

[6] Oglala Sioux Tribe's Answer in Support of Consolidated Intervenors' Motion for Stay of Effectiveness of License (Apr. 24, 2014).

[7] Order (Temporarily Granting Stay of Materials License Number SUA-1600) (Apr. 30, 2014) (unpublished).

[8] Tr. at 578–637.

remedy, and a rare occurrence in NRC practice.[9] In determining whether to grant or deny an application for a stay, a Board must balance:

> (1) Whether the requestor will be irreparably injured unless a stay is granted; (2) Whether the requestor has made a strong showing that it is likely to prevail on the merits; (3) Whether the granting of a stay would harm other participants; and (4) Where the public interest lies.[10]

Discussing these four factors in the context of 10 C.F.R. § 2.342(e), the Commission has stated that "of these factors, irreparable injury is the most important."[11] And for a potential injury to be irreparable, it must be shown to be "imminent . . . certain and great."[12] If a strong showing of irreparable injury can be shown, "a movant need not always establish a high probability of success on the merits."[13] But if a party moving for a stay fails to show irreparable injury, a Board may still grant a stay if the movant has made "an overwhelming showing" or a demonstration of "virtual certainty" that it will prevail on the merits.[14] If the movant cannot show either irreparable injury or that it is likely to prevail on the merits, a Board "need not consider the

---

[9] U.S. Dep't of Energy (High-Level Waste Repository), CLI-05-27, 62 NRC 715, 718 (2005) (treating a stay as "an extraordinary equitable remedy" (quoting Pub. Serv. Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-77-27, 6 NRC 715, 716 (1977))).

[10] 10 C.F.R. § 2.1213(d).

[11] S. Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-11, 75 NRC 523, 529 (2012) (citing Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 151 (2010) and David Geisen, CLI-09-23, 70 NRC 935, 936 & n.4 (2009)).

[12] Vogtle, CLI-12-11, 75 NRC at 529 (quoting Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 237 (2006)).

[13] Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2), ALAB-820, 22 NRC 743, 746 n.8 (1985) (quoting Cuomo v. NRC, 772 F.2d 972, 974 (D.C. Cir. 1985).

[14] Vogtle, CLI-12-11, 75 NRC at 529 (quoting AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-13, 67 NRC 396, 400 (2008) and Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 154 (2010)).

remaining factors."[15] In addressing the stay criteria in a Subpart L proceeding, "a litigant must come forth with more than general or conclusory assertions in order to demonstrate its entitlement" to relief.[16] On a motion for a stay, the burden of persuasion on the four factors of listed in 10 C.F.R. § 2.1213, supra, is on the movant.[17]

III. DISCUSSION

A. Irreparable Injury

To qualify as an irreparable injury, the potential harm cited by the moving party first "must be related" to the underlying claim that is the focus of the adjudication.[18] Here, the Oglala Sioux Tribe and Consolidated Intervenors both base their motions for a stay on potential destruction of the Tribe's cultural resources and alleged continuing violations of NEPA and NHPA compliance.[19] These issues are the contentions at issue in the upcoming evidentiary hearing. Contention 1A concerns the protection of historical and cultural resources, and Contentions 1B, 2, 3, 4, 6, 9, and 14B concern alleged failures in the FSEIS and NHPA processes.[20]

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[15] Vogtle, CLI-12-11, 75 NRC at 529. This Order will discuss irreparable injury and the likelihood to prevail on the merits, but will not consider the remaining factors.

[16] Babcock and Wilcox (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-92-31, 36 NRC 255, 263 (1992) (citing United States Dep't of Energy (Clinch River Breeder Reactor Plant), ALAB-721, 17 NRC 539, 544 (1983)).

[17] Public Serv. Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 & 2), ALAB-493, 8 NRC 253, 270 (1978); Alabama Power Co. (Joseph M. Farley Nuclear Plant Units 1 and 2), CLI-81-27, 14 NRC 795, 797 (1981).

[18] Vogtle, CLI-12-11, 75 NRC at 530–31 (quoting United States v. Green Acres Enters., Inc., 86 F.3d 130, 133 (8th Cir. 1996).

[19] OST Stay Motion at 2–4; CI Stay Motion at 6–7.

[20] LBP-14-5, 79 NRC at __ (slip op. at Appendix A) (Apr. 28, 2014).

A party seeking a stay must also specifically and "reasonably demonstrate [an injury], not merely allege" generalized harm.[21] The Oglala Sioux Tribe and Consolidated Intervenors both attach declarations purporting to demonstrate the specific irreparable injury that may be suffered.[22] These declarations allege that a comprehensive cultural resource study has not been adequately conducted, and that the FSEIS is "not sufficient to identify cultural and historic resources significant to the Oglala Sioux Tribe."[23] The Tribe alleges that "construction activities slated for the site" before the evidentiary hearing will cause irreparable harm by not ensuring adequate mitigation techniques are used.[24] Consolidated Intervenors claim cultural resources are at risk if construction, including "earthwork, massive ground disturbance, roadmaking, and other preparations" begins at the site.[25]

The NRC Staff counters that the Programmatic Agreement, with which the Intervenors find fault, is sufficient to protect cultural resources, and that the Intervenors' motions lack specificity.[26] Powertech argues that Consolidated Intervenors' and the Oglala Sioux Tribe's claims are nothing more than conclusory statements, and unsupported conjecture that historic and cultural resources will be damaged or destroyed within the scope of the NRC licensed activities.[27]

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[21] Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-814, 22 NRC 191, 196 (1985).

[22] See OST Stay Motion, Decl. of Michael CatchesEnemy and Decl. of Wilmer Mesteth; CI Stay Motion, Exs. 1–11 and A1–A2.

[23] OST Stay Motion, Decl. of Michael CatchesEnemy ¶ 9.

[24] OST Stay Motion at 3–4.

[25] CI Stay Motion at 6.

[26] Staff Opposition at 3.

[27] Powertech Response at 8–10; 12–14.

Harm to tribal cultural resources does constitute irreparable injury.[28] In a District Court case granting a preliminary injunction enjoining a solar energy project, the Quechan Tribe claimed that the project would not avoid most of the 459 cultural sites identified, and that the NEPA and NHPA process had been insufficient.[29] In determining that the irreparable harm element of the test for issuance of injunctive relief was met, the court found that the Tribe's evidence showed that phase one of the project would involve damage to at least one known site, and "virtually ensure[d] some loss or damage."[30]

Here, however, the intervenors' allegations and their supporting declarations lack the specificity needed to demonstrate a serious, immediate, and irreparable harm to cultural and historic resources. As the Eighth Circuit has said, "[A] party must show that the harm is certain and great and of such imminence that there is a clear and present need for equitable relief."[31] In this case, the intervenors have not shown that the activities proposed at the Dewey Burdock site are imminent nor that the harm is certain. Indeed, the intervenors have not shown that a clear and present need exists for a stay nor have they addressed the argument that the Programmatic Agreement protects the cultural and historic resources in the area.

Even if it was certain that irreparable harm would result from Powertech's pre-construction activities, staying the effectiveness of the NRC materials license will not forestall these injuries. The NRC license, for which a stay is sought, was issued pursuant to 10 C.F.R. Part 40. It authorizes Powertech to receive, acquire, possess, transfer, use, and deliver

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[28] United States v. Jenkins, 714 F. Supp. 2d 1213, 1222 (S.D. Ga. Dec. 5, 2008) ("Harming Native American artifacts would constitute an irreparable injury because artifacts are, by their nature, unique, and their historical and cultural significance make them difficult to value monetarily.").

[29] Quechan Tribe v. U.S. Dep't of the Interior, 755 F. Supp. 2d 1104, 1106–07 (S.D. Cal. Dec. 15, 2010).

[30] Id. at 1120.

[31] Iowa Util. Bd. v. FCC, 109 F.3d 418, 425 (8th Cir. 1996).

byproduct, source, and special nuclear material.[32] Further, the license permits Powertech to commence construction, as construction is defined in 10 C.F.R. § 40.4. Construction is defined as:

> the installation of wells associated with radiological operations (e.g., production, injection, or monitoring well networks associated with in-situ recovery or other facilities), the installation of foundations, or in-place assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that are related to radiological safety or security.[33]

The term "construction" in Part 40 specifically excludes site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values.[34] It also excludes excavation and preparation of the site for construction of the facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas.[35]

At oral argument, counsel for Powertech stated, without contradiction, that the ground disturbing work contemplated for the next few months could be accomplished without the NRC license.[36] Therefore, staying the license would not address the intervenors' concerns nor would it protect any cultural or historic sites. Indeed, counsel for the NRC Staff observed that in its view having the license remain in effect was more protective because the staff could then take

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[32] Materials License, NRC Form 374 (Apr. 8, 2014) at 1 (ADAMS Accession No. ML14043A392).

[33] 10 C.F.R. § 40.4.

[34] Id.

[35] Id.

[36] Tr. at 592–93.

enforcement actions should it find violations of the NRC license or the Programmatic Agreement.[37]

Based on the C.F.R. definitions, staying the effectiveness of Powertech's NRC issued license would have a very limited and incomplete effect on preventing the irreparable injuries the Intervenors claim Powertech may cause. Even if its NRC license is stayed by the Board, Powertech will still be permitted to engage in the earth moving activities on which the irreparable injury claim is premised. As a result, the injuries alleged in the Intervenors' motions are not redressable by the Board granting a stay of Powertech's license. The Board declines to issue an Order which would have no practical effect.[38]

B. Likelihood to Prevail on the Merits

At its heart, the dispute over a stay boils down to a disagreement over the NHPA consultation process. Intervenors argue that the process by which the Programmatic Agreement was created was inadequate, and therefore fails to fully protect the Tribe's sensitive and significant historic and cultural resources. Powertech and the NRC Staff disagree and believe the Programmatic Agreement memorialized a fair and adequate process that fully protects all potential cultural and historic resources at the Dewey-Burdock sites.

This issue will be adjudicated by this Board at the upcoming evidentiary hearing.[39] At this hearing, and in the prefiled statements of position and testimony, all parties will have the

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[37] Tr. at 620.

[38] In Pacific Gas and Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-10, 58 NRC 127, 129 (2003) the Commission held a stay request in abeyance during settlement negotiations, basing the delay, in part, on the rationale that "in practical terms, [the stay request would have] no current effect." See also Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Unit 3), LBP-74-42, 7 AEC 1022, 1037 (1974) (declining to take a "meaningless" action and allow a hearing request when that hearing had already been held). In the context of Article III standing, a court may only hear a case when the relief requested is likely to redress the injury. Lujan v. Defenders of Wildlife, 504 U.S. 555, 590 (1992).

[39] Memorandum (Summarizing the February 12, 2014 Teleconference) (Feb. 20, 2014) at Appendix A (unpublished) (setting the evidentiary hearing to begin on August 19, 2014).

opportunity to present specific and detailed evidence supporting their respective positions to the Board. The Board will then make its decision based on this specific and detailed evidence. Since the potential harm is not redressable by the Board, we decline to make any estimation as to the Intervenors' likelihood of success on the merits at this point in time.

IV. BOARD ORDER

The Board rules that:

A. The temporary stay of Materials License Number SUA-1600, issued April 30, 2014[40] is lifted.

B. The motions for a stay of the effectiveness of Materials License Number SUA-1600 filed by Consolidated Intervenors and the Oglala Sioux Tribe on April 14, 2014[41] are denied.

C. As the Board ruled during the May 13, 2014 teleconference,[42] the unopposed Joint Motion to Clarify Filing Deadlines filed on April 30, 2014[43] is granted.

D. Consolidated Intervenors' Motion to Strike Pages 11-21 of Powertech Response to Stay filed May 13, 2014[44] was untimely[45] and is therefore denied.[46]

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[40] Order (Temporarily Granting Stay of Materials License Number SUA-1600) (Apr. 30, 2014) (unpublished).

[41] OST Stay Motion; CI Stay Motion.

[42] Tr. at 635.

[43] Joint Motion to Clarify Filing Deadlines (Apr. 30, 2014).

[44] Consolidated Intervenors' Motion to Strike Pages 11-21 of Powertech Response to Stay (May 13, 2014).

[45] 10 C.F.R. § 2.323(a)(2) requires all motions to be filed within ten days from the occurrence which triggers the motion. This motion to strike was filed eight days after this ten day period ended on May 5, 2014. Tr. at 636.

[46] The Board, however, notes that it finds Powertech's answer in violation of the Commission's regulations because it exceeded the ten-page reply length intended by 10 C.F.R. § 2.342(d). The regulation permits an answer to be filed "opposing the granting of a stay. This answer may

E. No specific section of the Commission's regulations, including 10 C.F.R. § 2.1210 and 10 C.F.R. § 2.1212, permits appeals from an order ruling on a request for a stay of the effectiveness of the NRC staff's action on a matter involved in a hearing under Subpart L. Nonetheless, interlocutory review of decisions and actions of a presiding officer may be available pursuant to § 2.341(f)(2) of the Commission's regulations.

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

_____
William J. Froehlich, Chair
ADMINISTRATIVE JUDGE

/RA/

_____
Richard F. Cole
ADMINISTRATIVE JUDGE

/RA/

_____
Mark O. Barnett
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 20, 2014

---

not be longer than ten (10) pages." The regulation contemplates a single ten-page opposition to a stay, not ten pages of opposition to each motion filed.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
POWERTECH (USA) INC.	)	Docket No. 40-9075-MLA
(Dewey-Burdock In Situ Recovery Facility)	)	
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **ORDER (Removing Temporary Stay and Denying Motions for Stay of Materials License Number SUA-1600)** have been served upon the following persons by Electronic Information Exchange, and by electronic mail as indicated by an asterisk*.

U.S. Nuclear Regulatory Commission
Atomic Safety and Licensing Board (ASLB)
Mail Stop T-3F23
Washington, DC 20555-0001

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POWERTECH (USA) INC., DEWEY-BURDOCK IN SITU RECOVERY FACILITY
DOCKET NO. 40-9075-MLA
ORDER (Removing Temporary Stay and Denying Motions for Stay of Materials License Number SUA-1600)

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Counsel for Consolidated Intervenor
(Dayton Hyde)
Thomas J. Ballanco, Esq.*
945 Traval Street, #186
San Francisco, CA 94116
harmonicengineering1@mac.com

[Original signed by Clara Sola]
Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 20th day of May 2014.

Shea, Valois

From: John Mays <jmays@powertechuranium.com>
Sent: Tuesday, July 29, 2014 2:15 PM
To: Shea, Valois
Subject: FW: FOIA Request EPA-R8-2014-008961 Submitted
Attachments: removed.txt

Valois,

The request was made today. See below.

Thanks.

John

John M. Mays
Chief Operating Officer
5575 DTC Parkway, Suite 140
Greenwood Village, Colorado, USA 80111-3012
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www.powertechuranium.com

Please do not print this e-mail unless necessary

From: dew.wendy@epa.gov [mailto:dew.wendy@epa.gov]
Sent: Tuesday, July 29, 2014 2:06 PM
To: jmays@powertechuranium.com
Subject: FOIA Request EPA-R8-2014-008961 Submitted

This message is to confirm your request submission to the FOIAonline application: View Request. Request information is as follows:

- Tracking Number: EPA-R8-2014-008961
- Requester Name: John M. mays
- Date Submitted: 07/29/2014

- Request Status: Submitted
- Description: I would like to request all information released as a part of FOIA request # EPA-R8-2014-004924. An electronic copy of the information would be sufficient. If the costs are greater that $250 please advise on the total estimated cost.

Minter, Douglas

From: Shea, Valois
Sent: Thursday, August 07, 2014 2:39 PM
To: John Mays
Cc: Minter, Douglas
Subject: RE: FOIA Request EPA-R8-2014-008961 mailed

Hi John,
I just took the FOIA package down to the mailroom. They said it would go out tomorrow morning.

Valois Shea
US EPA Region 8
Mail Code: 8P-W-UIC
1595 Wynkoop Street
Denver, CO 80202-1129
phone: 303-312-6276
fax: 303-312-6741
http://www2.epa.gov/region8/underground-injection-control

From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Tuesday, July 29, 2014 2:15 PM
To: Shea, Valois
Subject: FW: FOIA Request EPA-R8-2014-008961 Submitted

Valois,

The request was made today. See below.

Thanks.

John

John M. Mays
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From: dew.wendy@epa.gov [mailto:dew.wendy@epa.gov]
Sent: Tuesday, July 29, 2014 2:06 PM
To: jmays@powertechuranium.com
Subject: FOIA Request EPA-R8-2014-008961 Submitted

This message is to confirm your request submission to the FOIAonline application: View Request. Request information is as follows:

- Tracking Number: EPA-R8-2014-008961
- Requester Name: John M. mays
- Date Submitted: 07/29/2014
- Request Status: Submitted
- Description: I would like to request all information released as a part of FOIA request # EPA-R8-2014-004924. An electronic copy of the information would be sufficient. If the costs are greater that $250 please advise on the total estimated cost.

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Thursday, November 13, 2014 6:17 PM
To: McGrath, Shaun
Cc: rfclement; Minter, Douglas
Subject: Dewey-Burdock Project

Mr. McGrath,

I would like to introduce myself. My name is John Mays and I am Chief Operating Officer with Powertech USA, Inc. Myself and Mr. Richard Clement, who is President and CEO of Powertech USA, Inc. would like to schedule a meeting with you at your earliest convenience to discuss the status of our permit applications for the Dewey-Burdock Project.

The Dewey-Burdock project received its license from the Nuclear Regulatory Commission in April of 2014. We are currently awaiting a determination on Class III and Class V UIC permits from your agency. These UIC permits are necessary for our project to move forward into both construction and operation.

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Can we please schedule a meeting to discuss with you as soon as possible. Feel free to contact me at the number below or reply to this email.

Sincerely,

John Mays
Chief Operating Officer
Powertech USA, Inc.
303-790-7528

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Friday, November 14, 2014 10:26 AM
To: Shea, Valois; Minter, Douglas
Subject: Re: Dewey Burdock

Thanks Valois. Much appreciate you setting something up so quickly but we won't be coming next week.

Sincerely,

John

From: "Shea, Valois" <Shea.Valois@epa.gov>
Date: Friday, November 14, 2014 at 9:32 AM
To: "Minter, Douglas" <Minter.Douglas@epa.gov>, John Mays <jmays@powertechuranium.com>
Subject: Dewey Burdock

I have the room till 11:30 in case we need more time.
John, If you are bringing 5 people or more, please let me know. They like to have a heads-up at the security desk.
If this time doesn't work, please let me know & I will find another time.
Thanks!

Minter, Douglas

From: McGrath, Shaun
Sent: Friday, November 14, 2014 12:33 PM
To: John Mays
Cc: rfclement; Minter, Douglas; Varcoe, Betsy; Videtich, Callie
Subject: Re: Dewey-Burdock Project

Dear Mr. Mays,
Thank you for your email and request to meet. I would welcome the opportunity to discuss the project and related issues with you. I have copied Betsy Varcoe can help us find a time that will work for us.

Best regards,

Shaun McGrath

Sent from my iPhone

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Minter, Douglas

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Sent: Friday, November 14, 2014 2:12 PM
To: McGrath, Shaun
Cc: rfclement; Minter, Douglas; Varcoe, Betsy; Videtich, Callie
Subject: Re: Dewey-Burdock Project

Mr. McGrath,

Next week we are available anytime Thursday or Friday. If there are other dates which would be better please let us know.

Looking forward to meeting with you.

Sincerely,

John

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Shea, Valois

From: John Mays <jmays@powertechuranium.com>
Sent: Monday, November 17, 2014 10:05 PM
To: Shea, Valois
Cc: Ronald Burrows; gfesko; Mike.Cepak@state.sd.us
Subject: Response to Oct 22 meeting
Attachments: EPA Letter 141117_final.pdf

Valois,

Please see the Powertech's attached letter in response to our October 22nd meeting.

Please advise if any additional information is required.

Sincerely,

John

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Friday, December 12, 2014 9:12 AM
To: McGrath, Shaun
Cc: rfclement; Minter, Douglas; Varcoe, Betsy; Videtich, Callie; Hal; Bob Van Voorhees
Subject: Re: Dewey-Burdock Project
Attachments: Proposed Meeting Agenda EPA121714[1].docx

Mr. McGrath,

Attached is a proposed agenda for our upcoming meeting next week. We would like to bring one other person along with us; Hal Demuth, who is a hydrogeologist with Petrotek Engineering and is extensively familiar with our UIC permit applications.

We would like to have a phone line available, so also Bob Van Voorhees a legal consultant working for Powertech can participate and as he cannot be there in person.

Please feel free to let us know of anything else you would like to discuss.

Looking forward to meeting you next week and discussion or project and permitting.

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John M. Mays
Chief Operating Officer
Powertech (USA) Inc.
5575 DTC Parkway, Suite 140
Greenwood Village, Colorado, USA 80111-3012
(303) 790-7528 x106
(303) 242-4054 Cell
(303) 790-3885 FAX
jmays@powertechuranium.com
www.azargauranium.com

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Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Friday, December 12, 2014 9:42 AM
To: Ken.Buhler@state.sd.us
Cc: Shea, Valois; Jack Fritz; Lisa Scheinost; Minter, Douglas
Subject: Well rehabilitation record
Attachments: E1623LDV1-WaterWellRehab16.pdf

Ken,
Attached is a well rehabilitation form for a domestic well (#16) that Powertech and a landowner within the Dewey-Burdock Project boundary have disconnected from a seasonal residence. The well is now available for stock-use only. It is located in Fall River County, NW1/4 SE1/4 Section 1 T7S R1E. I would appreciate DENR's records being updated accordingly.

Please note that no work to the well casing was done. This was just modification to piping between the well and the residence and as such no grouting was required.
Please do not hesitate to contact me if you have any questions.
Thank you for your assistance.
Sincerely,
John

POWERTECH (USA) INC.
John M. Mays
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SD EForm - 1623LD V1

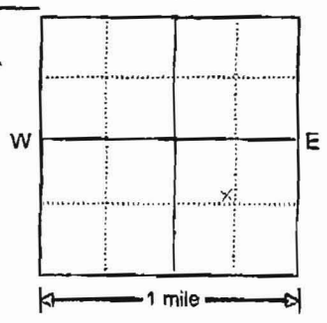
SOUTH DAKOTA WELL REHABILITATION REPORT

11-02

Location NW ¼ SE ¼ Sec 1 Twp 7S Rg 1E

County Fall River

Please mark well location with an "X"



Rehabilitation Completion Date November 15, 2014

PROPOSED USE:

☐ Domestic ☐ Municipal ☑ Stock
☐ Irrigation ☐ Industrial

Well owner:

Name KLRBJ, LLC

Address 211 Zinnia Street

City, State, Zip Belle Fourche SD 57717

Describe original construction if possible.
(Attach original log if available)

A survey of Edgemont area wells by Silver King Mines (SKM) in the 1970s indicates the well (No. 16) was 1 year old at that time and was completed to a depth of 330 feet in the Lakota Formation. Its use was stock only. The static water level was 157'7" feet below ground surface. SKM records are attached.

Sometime before August 2008, the well was connected to the residence and has since been used as a domestic water supply well. Bottled drinking water, however, has been provided to the residence by Powertech since early 2012.

Description of condition of well before rehabilitation:

4 1/2-inch casing with a pump

Description of rehabilitation work completed:

Same casing and pump but the waterline to the house has been disconnected and sealed; the well use is now once again livestock only.

Recasing information: Material _____ Diameter _____ inches Depth _____ Feet

Describe screen or perforations _____ Screen Location From _____ To _____

From _____ To _____

Grout: ☐ YES ☒ NO Describe grouting procedure and grout:

Well Test Data: Specific capacity _____ Static water level _____

If a flowing well _____ GPM Shut in _____ PSI

This well rehabilitation was completed under license # 724 and this report is true and accurate.

Drilling firm: J+M Drilling

Signature of Licensed Representative: [signature] 10:21 A.M. 12-10-14

Signature of Well Owner: K.A. Bowker For KLRBJ, LLC

Date: 12/11/14

WATER WELLS IN EDGEMONT PROJECT AREA

Well No.	Location
1	SE/4 SE/4 Sec. 9 T7S,R1E
2	SE/4 SE/4 Sec. 16 T7S,R1E
3	SW/4 NW/4 Sec. 22 T7S,R1E
4	SE/4 SE/4 Sec. 15 T7S,R1E
5	NE/4 NW/4 Sec. 14 T7S,R1E
6	NE/4 SE/4 Sec. 14 T7S,R1E
7	NW/4 NW/4 Sec. 23 T7S,R1E
8	NW/4 SE/4 Sec. 23 T7S,R1E
9	NE/4 NE/4 Sec. 23 T7S,R1E
10	NE/4 NE/4 Sec. 13 T7S,R1E
11	NW/4 SW/4 Sec. 24 T7S,R1E
12	SE/4 SE/4 Sec. 4 T7S,R1E
13	NW/4 NW/4 Sec. 3 T7S,R1E
14	NW/4 SW/4 Sec. 2 T7S,R1E
15	NW/4 NW/4 Sec. 2 T7S,R1E
16	NW/4 SE/4 Sec. 1 T7S,R1E
17	SE/4 NW/4 Sec. 12 T7S,R1E
18	NW/4 SW/4 Sec. 9 T7S,R1E
19	NW/4 NW/4 Sec. 18 T7S,R1E
20	NW/4 SW/4 Sec. 17 T7S,R1E
21	SW/4 NW/4 Sec. 19 T7S,R1E
22	NE/4 SW/4 Sec. 27 T40N, R60W
23	NW/4 NW/4 Sec. 29 T7S, R1E
24	NE/4 NW/4 Sec. 28 T7S,R1E
25	SE/4 NW/4 Sec. 27 T7S,R1E
26	SW/4 NE/4 Sec. 35 T7S,R1E
27	SE/4 SE/4 Sec. 33 T7S,R1E
28	NE/4 SW/4 Sec. 22 T8S,R2E
29	NE/4 NW/4 Sec. 16 T8S,R2E
30	SE/4 SE/4 Sec. 31 T7S,R2E
31	SW/4 NW/4 Sec. 31 T7S,R2E

Water Wells in Edgemont Project Area

Map #	Owner	Use	Depth	Probable Aquifer	Remarks
1	Peterson & Son Inc.	Stock	600	K l	Flowing 1.1 gpm, stopped during test. Casing was cut off closer to ground & flow recovered to 1.3 gpm, 6 wks after test.
2	Peterson & Son Inc.	Domestic	640	K l	Flowing est. 15 gpm.
3	Peterson & Son Inc.	Stock	Oil test		Flowing 3 gpm.
4.	Peterson & Son Inc.	Stock	Oil Test		Couldn't measure- broken out around casing. Also used by Glen Peterson for garden.
5.	Peterson & Son Inc.	Stock	Oil Test		Plugged at 850", possible Sundance flow. Flowing 6.6 gpm, slowed to 5 gpm during test
6.	Glen Peterson	Stock	280'	K f	SWL 11'2", Siphon Arrangement into tank.
7.	Glen Peterson " "	Domestic	500' 200"	K l K f	Flowing 4.25 gpm. Slowed to 3.6 during test SWL 12' 8"
8.	Leslie Coates " "	Domestic	500 240	K l K f	Flowing 4.2 gpm. Flow est. 1 gpm. Pumped to house.
9.	Leslie Coates	Stock	90 ?	K f	Flowing 2.5 gpm.
10	Leslie Coates	Stock	200	K l	SWL 78' New well.
11	Leslie Coates	Stock	Oil test		Flowing 5 gpm.
12	Leslie Coates	Stock	730'	K l	Flowing 0.6 gpm, slowed to < 0.1 gpm during test. Recovered to 0.3 gpm after 6 weeks.
13	Miles Spencer	Domestic	500	K l	Flowing 2.5 gpm., slowed to 1.2 gpm during test, Recovered to 2.0 gpm after 6 weeks.
14.	Earl Darrow	Stock	470	K l	Barely flowing. Stopped during test. SWL recovered to 1.0 ft.
15	Earl Darrow	Stock	280	K l	Pump jack, couldn't measure accurately SWL approximately 24'
16	Earl Darrow	Stock	330	K l	New well, SWL 157' 7"
17	H. P. Heck	Stock	156	K f	Windmill, couldn't measure
18	Dick Andersen	Domestic	527	K f	Flowing 7.5 gpm.

Well #	D. S.	Distance to Electricity	Well Dia.	Age and Condition	Pump Information-Type Setting, Capacity, Age, etc.	Season of Use	Water Requirement	Remarks
16	S	on site	4½	1 yr. - good	no pump installed yet			
17	S	2 miles	UNK.		windmill			
18	D.S.I.	on site	4"	48 yrs.	pressure pump			
19	S	1 mile	6"	16 yrs. - fair	pump jack			
20	D.S.I.	on site	6"	51 yrs. - poor	shallow well jet pump			casing rusted out - was repaired
21	S	1½ mile	7"	65 yrs.	none			oil test
22	S	on site	3"	10 yrs. - good	cylinder type			
23	S	1 mile	6"		none			
24	D.S.	on site	3"		none			
25	S	2 miles	4½"		windmill			
26	S	1 mile	5"		windmill			
27	S	on site	12"		submersible pump			serues pipeline
28	S	1/2 mile	6"	poor	none			
29	S	1/2 mile	5"	poor	none			casing rusted out
30	D.I.	on site	6"	24 yrs.	deep well jet pump set @ 80 ft			

Minter, Douglas

From: Minter, Douglas
Sent: Friday, December 12, 2014 11:51 AM
To: Hoskie, Sadie; Chin, Lucita; Shea, Valois
Subject: FW: Dewey-Burdock Project
Attachments: Proposed Meeting Agenda EPA121714[1].docx

fyi

-----Original Message-----
From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Friday, December 12, 2014 9:12 AM
To: McGrath, Shaun
Cc: rfclement; Minter, Douglas; Varcoe, Betsy; Videtich, Callie; Hal; Bob Van Voorhees
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POWERTECH (USA) INC.

PROPOSED AGENDA

December 17, 2014 from 2:00 to 3:30 P.M.

Purpose

To complete permitting and construction of the Dewey-Burdock Project, Powertech needs timely issuance of permits in response to two Underground Injection Control (UIC) permit applications currently under review at EPA. These Class III and Class V applications were deemed by EPA to be complete for review respectively on February 17, 2009 and April 28, 2010. Over the past six years, Powertech has already received its other major regulatory approvals including a license from the Nuclear Regulatory Commission (NRC) in April of 2014. State approvals for other major permits have been recommended by the South Dakota Department of the Environment and Natural Resources staff and have gone to hearings in front of state boards for final decision. These state proceedings have been suspended, however, pending EPA issuance of the UIC permits. Early this year EPA provided a schedule for completion of draft permits in April of 2014 but action is still being delayed 8 months later. EPA approval has lagged behind the NRC actions and is now critically necessary in order that state citizen board may resume and conclude its process. Powertech is requesting action on the pending UIC permit applications and a schedule for completion of the regulatory process at EPA and anticipated timing for draft and final permits.

Powertech Attendees

Richard F. Clement	C.E.O and President, Powertech USA
John Mays	C.O.O., Powertech USA
Hal Demuth	Petrotek Engineering
Bob Van Voorhees	Legal Consultant (by phone)

Powertech understands that Shaun McGrath, Region 8 Administrator will attend and requests the names of any other anticipated attendees from EPA.

Powertech would like to request that a conference telephone line be made available for the meeting.

Proposed Agenda

I. Introductions

II. Overview of Project History (Powertech)

lll. Summary of technical aspects of Dewey Burdock (Petrotek)

IV. Update of current project status and context (Powertech)

V. Review plans for action on the UIC permits (EPA)

Estimated Duration: 1 hour 30 minutes

5575 DTC Parkway, Suite 140
Greenwood Village, CO 80111 USA

Telephone: 303-790-7528
Facsimile: 303-790-3885

Website: www.powertechuranium.com
Email: info@powertechuranium.com

Minter, Douglas

Subject: Meet with Powertech USA
Location: Shaun McGrath's office, EPA or conf. no. 866-299-9141 code [redacted]

Start: Wed 12/17/2014 2:00 PM
End: Wed 12/17/2014 3:30 PM
Show Time As: Tentative

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: McGrath, Shaun
Required Attendees: jmays@powertechuranium.com; Card, Joan; Ward, W. Robert; Thomas, Deb; Videtich, Callie; Logan, Paul
Optional Attendees: Sadie Hoskie; Minter, Douglas; Lucita Chin

Extending time to 90 minutes - adding call-in number - detailing attendees below

From Powertech USA, Inc.
Richard Clement, President and CEO
John Mays, Chief Operating Officer
Hal Demuth, Hydrogeologist with Petrotek Engineering
Bob VanVoorhees, Legal Consultant (by phone)

From EPA R8
Shaun McGrath, Regional Administrator
Joan Card, Senior Policy Advisor
Bob Ward, Regional Counsel
(or alt., Paul Logan, Deputy Regional Counsel)
Callie Videtich, Asst Regional Administrator for Partnerships & Regulatory Assistance
Sadie Hoskie, Water Program Director
Douglas Minter, Underground Injection Control Unit Chief

To discuss the status of permit applications for the Dewey-Burdock Project.

Scheduled by
Betsy Varcoe
Staff Assistant to the Regional Administrator
EPA Region 8, 1595 Wynkoop St, Denver CO 80202
303.312.6532 | Fax 303.312.6882 | varcoe.betsy@epa.gov

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Monday, December 15, 2014 12:05 PM
To: McGrath, Shaun; Card, Joan; Ward, W. Robert; Thomas, Deb; Videtich, Callie; Logan, Paul
Cc: Hoskie, Sadie; Minter, Douglas; Chin, Lucita
Subject: Re: Meet with Powertech USA

Mr. McGrath and Ms. Varcoe,

Thank you for the list of attendees and setting up the phone line. Looking forward to seeing and meeting everyone on Wednesday.

Sincerely,

John

POWERTECH (USA) INC.
John M. Mays
Chief Operating Officer
Powertech (USA) Inc.
5575 DTC Parkway, Suite 140
Greenwood Village, Colorado, USA 80111-3012
(303) 790-7528 x106
(303) 242-4054 Cell
(303) 790-3885 FAX
jmays@powertechuranium.com
www.azargauranium.com

From: "McGrath, Shaun" <McGrath.Shaun@epa.gov>
Date: Monday, December 15, 2014 at 9:56 AM
To: John Mays <jmays@powertechuranium.com>, "Card, Joan" <Card.Joan@epa.gov>, "Ward, W. Robert" <Ward.Robert@epa.gov>, "Thomas, Deb" <thomas.debrah@epa.gov>, "Videtich, Callie" <Videtich.Callie@epa.gov>, "Logan, Paul" <Logan.Paul@epa.gov>
Cc: "Hoskie, Sadie" <Hoskie.Sadie@epa.gov>, "Minter, Douglas" <Minter.Douglas@epa.gov>, "Chin, Lucita" <Chin.Lucita@epa.gov>
Subject: Meet with Powertech USA

Extending time to 90 minutes - adding call-in number - detailing attendees below
From Powertech USA, Inc.
Richard Clement, President and CEO
John Mays, Chief Operating Officer
Hal Demuth, Hydrogeologist with Petrotek Engineering
Bob VanVoorhees, Legal Consultant (by phone)
From EPA R8
Shaun McGrath, Regional Administrator
Joan Card, Senior Policy Advisor
Bob Ward, Regional Counsel
(or alt., Paul Logan, Deputy Regional Counsel)
Callie Videtich, Asst Regional Administrator for Partnerships & Regulatory Assistance

Sadie Hoskie, Water Program Director
Douglas Minter, Underground Injection Control Unit Chief
To discuss the status of permit applications for the Dewey-Burdock Project.
Scheduled by
Betsy Varcoe
Staff Assistant to the Regional Administrator
EPA Region 8, 1595 Wynkoop St, Denver CO 80202
303.312.6532 | Fax 303.312.6882 | varcoe.betsy@epa.gov

Minter, Douglas

From: Minter, Douglas
Sent: Wednesday, January 28, 2015 10:33 AM
To: Shea, Valois
Cc: Moore, Keara
Subject: FW: Action requested: FW: UIC Permits in Region 8

Hi Valois: can you reply directly back to Lisa and copy myself and John Mays please? I think we would need to release the list through FOIA. If they proceed with a FOIA request, we can have Lynne or one of the other SEEs pull from U2.

Douglas

From: Moore, Keara
Sent: Wednesday, January 28, 2015 7:42 AM
To: Minter, Douglas
Cc: Dorsey, Towana
Subject: FW: Action requested: FW: UIC Permits in Region 8

Douglas – see below for a request we got for Region 8 permit information. Do you have someone who could get back to her?

Thanks!

_____

Keara Moore
Underground Injection Control Program
Office of Ground Water and Drinking Water
U.S. Environmental Protection Agency
Ph: 202-564-3173

From: Dorsey, Towana
Sent: Wednesday, January 28, 2015 9:25 AM
To: Moore, Keara
Subject: Action requested: FW: UIC Permits in Region 8

Hi Keara:

Can you assist Lisa or should this go to Region 8?

Thanks in advance,

Towana

From: Lisa Scheinost [mailto:escheinost@powertechuranium.com]
Sent: Tuesday, January 27, 2015 4:27 PM
To: Dorsey, Towana
Subject: UIC Permits in Region 8

Towana,

I am searching for a list of UIC permit applications submitted in Region 8 (Forms 7520-6) between January 1, 2009 and January 1, 2015. Do you know where I might find such a list?

Thank you for your help.

Sincerely,
Lisa

POWERTECH (USA) INC.

Lisa Scheinost
Licensing & Environmental Compliance Engineer
Powertech (USA) Inc.
5575 DTC Parkway, Suite 140
Greenwood Village, Colorado, USA 80111-3012
(303) 790-7528 x107
(303) 328-7371 Cell
(303) 790-3885 FAX
escheinost@powertechuranium.com
www.azargauranium.com

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Tuesday, October 13, 2015 4:21 PM
To: Minter, Douglas
Subject: Discussion on Dewey-Burdock

Doug,

We would plan to have the following in attendance by phone.

Myself – John Mays, COO, Powertech USA and Azarga Uranium Corp.
Chris Pugsley – Legal counsel for NRC licensing, by phone to describe his work during the year
Blake Steele – president, Azarga Uranium Corp.
Jack Fritz – Project Engineer, WWC Engineering

Sincerely,

John

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Minter, Douglas

From: Minter, Douglas
Sent: Wednesday, October 14, 2015 11:11 AM
To: 'John Mays'
Subject: RE: Discussion on Dewey-Burdock

Thanks John: we are looking at either 9 to 10 am or 12 noon to 1 pm on Tuesday, November 3rd for this call.

If you have a preference, let me know.

Douglas

From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Tuesday, October 13, 2015 4:21 PM
To: Minter, Douglas
Subject: Discussion on Dewey-Burdock

Doug,

We would plan to have the following in attendance by phone.

Myself – John Mays, COO, Powertech USA and Azarga Uranium Corp.
Chris Pugsley – Legal counsel for NRC licensing, by phone to describe his work during the year
Blake Steele – president, Azarga Uranium Corp.
Jack Fritz – Project Engineer, WWC Engineering

Sincerely,

John

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Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Thursday, October 15, 2015 10:06 AM
To: Minter, Douglas
Subject: Re: Discussion on Dewey-Burdock

Doug,

Thanks for the quick response.

We are good for the November 3rd meeting. Would prefer the earlier time you proposed.

Please advise on a call in-number as most people will be very far away from Denver – our president will be calling from Hong Kong.

Sincerely,

John

Azarga URANIUM

John M. Mays

Chief Operating Officer

Azarga Uranium Corporation

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jmays@powertechuranium.com
www.azargauranium.com

From: "Minter, Douglas" <Minter.Douglas@epa.gov>
Date: Wednesday, October 14, 2015 at 11:10 AM
To: John Mays <jmays@powertechuranium.com>
Subject: RE: Discussion on Dewey-Burdock

Thanks John: we are looking at either 9 to 10 am or 12 noon to 1 pm on Tuesday, November 3rd for this call.

If you have a preference, let me know.
Douglas

From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Tuesday, October 13, 2015 4:21 PM
To: Minter, Douglas
Subject: Discussion on Dewey-Burdock

Doug,
We would plan to have the following in attendance by phone.
Myself – John Mays, COO, Powertech USA and Azarga Uranium Corp.
Chris Pugsley – Legal counsel for NRC licensing, by phone to describe his work during the year
Blake Steele – president, Azarga Uranium Corp.
Jack Fritz – Project Engineer, WWC Engineering
Sincerely,
John

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Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Thursday, October 29, 2015 3:46 PM
To: O'Connor, Darcy
Cc: Shea, Valois; Minter, Douglas; Rathbone, Colleen
Subject: Re: Conference Call with Power Tech Discussion on Dewey-Burdock. Number 866-299-3188 Code: [redacted]
Attachments: Proposed Agenda_Powertech EPA conf call[4].docx

All,

Please see the attached proposed agenda for our discussion next week. If you have any other topics please advise.

Sincerely,

John

From: oconnor.darcy@epa.gov
When: 8:00 AM - 9:00 AM November 3, 2015
Subject: Conference Call with Power Tech Discussion on Dewey-Burdock. Number 866-299-3188 Code: [redacted]
Location: Cactus Room

Proposed Agenda

Conference Call between Powertech (USA) Inc. and EPA Region 8 to discuss Dewey-Burdock Project UIC Permitting

November 3, 2015, 9:00 a.m. MST, 866-299-3188, Code [redacted]

1) Introductions

2) Permitting/Licensing Update (Powertech)

3) EPA Status Update

Minter, Douglas

From: Minter, Douglas
Sent: Monday, November 02, 2015 11:52 AM
To: 'John Mays'
Subject: RE: Meeting Tomorrow

Greetings John: my sense from our last phone call is that you would be calling in with the rest of your colleagues, but perhaps I should have confirmed otherwise?

Honestly, I don't know that we will have much new information to make it worth your coming in. That said, I can check in with my management later today and get back to you if you would like.

Let me know,

Douglas

From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Monday, November 02, 2015 9:34 AM
To: Minter, Douglas
Subject: Meeting Tomorrow

Doug,

Was just checking if you were expecting me at your office tomorrow. Wasn't sure from our discussion but would really like to meet with you directly. If you weren't planning for this no problem and I can call in.

Thanks.

John

Azarga URANIUM

John M. Mays
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Minter, Douglas

From: Minter, Douglas
Sent: Friday, December 04, 2015 9:43 AM
To: John Mays
Cc: Rathbone, Colleen; Shea, Valois
Subject: Example EPA Letter of Invitation to Formally Consult with Tribes
Attachments: List of 38 Tribes.pdf

Greetings John: attached is a list of tribal nations we sent these letters to.

Douglas

From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Thursday, December 03, 2015 9:59 AM
To: Minter, Douglas
Cc: Rathbone, Colleen; Shea, Valois
Subject: Re: SPAM:Example EPA Letter of Invitation to Formally Consult with Tribes

Doug and All,

Many thanks. Can you provide a list of all tribes to which the letters were sent?

Sincerely,

John

John M. Mays

Chief Operating Officer

Azarga Uranium Corporation

5575 DTC Parkway, Suite 140

Greenwood Village, Colorado, USA 80111-3012

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(303) 242-4054 Cell

(303) 790-3885 FAX

jmays@powertechuranium.com
www.azargauranium.com

From: "Minter, Douglas" <Minter.Douglas@epa.gov>
Date: Tuesday, December 1, 2015 at 5:17 PM
To: John Mays <jmays@powertechuranium.com>
Cc: "Rathbone, Colleen" <Rathbone.Colleen@epa.gov>, "Shea, Valois" <Shea.Valois@epa.gov>
Subject: SPAM:Example EPA Letter of Invitation to Formally Consult with Tribes

Greetings John: in response to your recent request, we are attaching an example letter with enclosures that were sent to a number of tribes in and outside of EPA Region 8.

Sincerely,

Douglas Minter

Tribes Located in EPA Region 8 and Tribes with Potential Historic Interest in the Black Hills Area

1	The Apache Tribe of Oklahoma
2	The Blackfeet Tribe of the Blackfeet Reservation
3	The Cheyenne and Arapaho Tribes of Oklahoma
4	The Cheyenne River Sioux Tribe
5	The Chippewa-Cree Tribe of Rocky Boy's Reservation
6	The Confederated Salish & Kootenai Tribes of the Flathead Reservation
7	The Crow Creek Sioux Tribe
8	The Crow Nation
9	The Eastern Shoshone Tribe
10	The Flandreau Santee Sioux Tribe
11	The Fort Peck Assiniboine and Sioux Tribes
12	The Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation
13	The Kiowa Indian Tribe of Oklahoma
14	The Lower Brule Sioux Tribe
15	The Lower Sioux Indian Community
16	The Northern Arapaho Tribe
17	The Northern Cheyenne Tribe
18	The Northwestern Band of Shoshoni Nation
19	The Oglala Sioux Tribe
20	The Omaha Tribe of Nebraska
21	The Paiute Tribe of Utah
22	The Ponca Tribe of Nebraska
23	The Ponca Tribe of Oklahoma
24	The Prairie Island Indian Community (Sioux)
25	The Rosebud Sioux Tribe
26	The Santee Sioux Tribe of Nebraska
27	The Shakopee Mdewakanton Sioux Community (Sioux)
28	The Sisseton-Wahpeton Oyate
29	The Skull Valley Band of Goshutes of the Skull Valley Reservation
30	The Southern Ute Tribe of the Southern Ute Reservation
31	The Spirit Lake Sioux Tribe
32	The Standing Rock Sioux Tribe
33	The Three Affiliated Tribes
34	The Turtle Mountain Band of Chippewa Indians
35	The Upper Sioux Community
36	The Ute Mountain Tribe of the Uintah and Ouray Reservation
37	The Ute Mountain Ute Tribe of the Ute Mountain Reservation
38	The Yankton Sioux Tribe

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Friday, December 04, 2015 10:14 AM
To: Minter, Douglas
Cc: Rathbone, Colleen; Shea, Valois
Subject: Re: Example EPA Letter of Invitation to Formally Consult with Tribes

Doug,

Thanks again.

John

John M. Mays

Chief Operating Officer

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(303) 790-3885 FAX

jmays@powertechuranium.com
www.azargauranium.com

From: "Minter, Douglas" <Minter.Douglas@epa.gov>
Date: Friday, December 4, 2015 at 9:43 AM
To: John Mays <jmays@powertechuranium.com>
Cc: "Rathbone, Colleen" <Rathbone.Colleen@epa.gov>, "Shea, Valois" <Shea.Valois@epa.gov>
Subject: Example EPA Letter of Invitation to Formally Consult with Tribes

Greetings John: attached is a list of tribal nations we sent these letters to.
Douglas

From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Thursday, December 03, 2015 9:59 AM
To: Minter, Douglas

Cc: Rathbone, Colleen; Shea, Valois
Subject: Re: SPAM:Example EPA Letter of Invitation to Formally Consult with Tribes
Doug and All,
Many thanks. Can you provide a list of all tribes to which the letters were sent?
Sincerely,
John

John M. Mays

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From: "Minter, Douglas" <Minter.Douglas@epa.gov>
Date: Tuesday, December 1, 2015 at 5:17 PM
To: John Mays <jmays@powertechuranium.com>
Cc: "Rathbone, Colleen" <Rathbone.Colleen@epa.gov>, "Shea, Valois" <Shea.Valois@epa.gov>
Subject: SPAM:Example EPA Letter of Invitation to Formally Consult with Tribes
Greetings John: in response to your recent request, we are attaching an example letter with enclosures that were sent to a number of tribes in and outside of EPA Region 8.
Sincerely,
Douglas Minter

Minter, Douglas

From: Minter, Douglas
Sent: Tuesday, December 15, 2015 10:15 AM
To: Rathbone, Colleen
Subject: FW: Phone call regarding status

fyi

From: John Mays [mailto:jmays@powertechuranium.com]
Sent: Tuesday, December 15, 2015 9:36 AM
To: Minter, Douglas ; O'Connor, Darcy
Cc: Blake Steele
Subject: Phone call regarding status

Doug and Darcy,

When it comes to be a good time for an update, can we to do a conference call so that Blake Steele, our president can listen as well. Having another set of ears on the phone, instead of just mine, is important to explaining status on the permits to our stakeholders.

Sincerely,

John

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jmays@powertechuranium.com
www.azargauranium.com

Minter, Douglas

From: Blake Steele <blake@azargaresources.com>
Sent: Monday, January 04, 2016 7:05 PM
To: John Mays; Minter, Douglas; O'Connor, Darcy
Subject: Re: Phone call regarding status

Dear Doug and Darcy,

Trust you enjoyed the holiday season! I wanted to follow up on John's email below and schedule a conference call at your earliest convenience to discuss the latest status.

Thanks,
Blake

From: John Mays <jmays@powertechuranium.com>
Date: Wednesday, 16 December, 2015 12:36 am
To: "Minter, Douglas" <Minter.Douglas@epa.gov>, "O'Connor, Darcy" <oconnor.darcy@epa.gov>
Cc: Blake Steele <blake@azargaresources.com>
Subject: Phone call regarding status

Doug and Darcy,

When it comes to be a good time for an update, can we to do a conference call so that Blake Steele, our president can listen as well. Having another set of ears on the phone, instead of just mine, is important to explaining status on the permits to our stakeholders.

Sincerely,

John

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jmays@powertechuranium.com
www.azargauranium.com

Minter, Douglas

From: John Mays <jmays@powertechuranium.com>
Sent: Friday, December 09, 2016 10:39 AM
To: O'Connor, Darcy
Cc: Blake Steele; Shea, Valois; Minter, Douglas; Hal
Subject: Letter regarding Class V Application
Attachments: Powertech Letter 09122016.pdf

Darcy,

Please see attached.

Sincerely,

John

John M. Mays
Chief Operating Officer
Azarga Uranium Corporation
5575 DTC Parkway, Suite 140
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(303) 790-7528 x106
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POWERTECH (USA) INC.

December 9, 2016

Darcy O'Connor
Assistant Regional Administrator
Office of Water Protection
US EPA Region 8
1595 Wynkoop St.
Denver CO 80202

Re: UIC Permit Application, Class V Non-Hazardous Injection Wells, Powertech (USA) Inc., Dewey-Burdock Project, Custer and Fall River Counties, South Dakota

Mrs. O'Connor:

In reference to our discussion held on December 6, 2016, Powertech would like to provide this letter in response. Powertech would like to voluntarily retract a portion of its Class V Underground Injection Control application submitted in March 2010 and revised in January 2012. This application previously proposed installation of wells and injection operations into the Deadwood Formation. Powertech is no longer requesting approval and consideration of the Deadwood formation for these purposes. For the purposes of approval of the applied for Class V UIC permit, the proposed installation of wells and injection operations in the application would remain solely within the Minnelusa Formation.

Sincerely

John Mays

John Mays
COO, Powertech USA Inc.

CC: Hal Demuth, Petrotek Engineering
Blake Steele, President, Powertech, USA Inc.

5575 DTC Parkway, Suite 140
Greenwood Village, CO 80111

Tel: 303-790-7528

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info@azargauranium.com