



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

POWERTECH USA, INC.

(Dewey-Burdock  
In Situ Uranium Recovery Facility)

Docket No. 40-9075-MLA

ASLBP No. 10-898-02-MLA-BD01

Hearing Exhibit

Exhibit Number:

Exhibit Title:

# **Environmental Impact Statement for the Ross ISR Project in Crook County, Wyoming**

## **Supplement to the Generic Environmental Impact Statement for *In-Situ* Leach Uranium Milling Facilities**

### **Final Report**

Manuscript Completed: February 2014  
Date Published: February 2014

Office of Federal and State Materials and  
Environmental Management Programs

County Weed & Pest Manager, Crook County Commissioners, Crook County Community Development Department, and Crook County Emergency Management Department (NRC, 2011a). The Crook County officials and staff shared several concerns and asked many questions about the proposed Ross Project. Topics discussed included the chemical and radiological hazards associated with the Ross Project, the management of drillholes and wells, the potential for drinking-water contamination, the use of ground-water supplies, financial assurance, the management of solid wastes, the mitigation of invasive vegetation species, the decommissioning of the facility and the reclamation of the site itself, and the cumulative environmental impacts.

#### **1.7.3.8 Interactions with Tribal Governments**

Pursuant to Section 106 of the NHPA, the NRC staff initiated discussions with potentially affected Native-American Tribes that possess potential religious, spiritual, and cultural interests at the proposed Ross Project area. On November 19, 2010, the NRC sent a letter to 14 Tribes, notifying them of Strata's intent to submit an application for a license for the Ross Project and soliciting input from these Tribes (NRC, 2010). The NRC then sent letters, dated February 9, 2011, to the following 24 Tribes, inviting the Tribes to participate in formal consultations for the proposed Ross Project (NRC, 2011d):

- Apache Tribe of Oklahoma
- Blackfeet Tribe
- Cheyenne and Arapaho Tribes of Oklahoma
- Cheyenne River Sioux Tribe
- Crow Tribe
- Crow Creek Sioux Tribe
- Eastern Shoshone Tribe
- Flandreau Santee Sioux Tribe
- Fort Belknap Community
- Fort Peck Assiniboine/Sioux Tribe
- Kiowa Tribe of Oklahoma
- Lower Brule Sioux Tribe
- Northern Arapaho Tribe
- Northern Cheyenne Tribe
- Oglala Sioux Tribe
- Rosebud Sioux Tribe
- Salish, Pend d'Oreille, and Kootenai Tribes (Confederated Salish and Kootenai Tribes)
- Santee Sioux Nation
- Sisseton-Wahpeton Sioux Tribe
- Spirit Lake Tribe
- Standing Rock Sioux Tribe
- Three Affiliated Tribes (Mandan, Hidatsa, and Arikara Nation)
- Turtle Mountain Band of Chippewa Indians
- Yankton Sioux Tribe

The NRC staff continued its efforts to engage in consultation with the Tribes that might be affected by the Ross Project with follow-up telephone calls and by e-mail.

On April 15, 2011, the Rosebud Sioux Tribe notified the NRC via e-mail that it was interested in consultation and had concerns about the proposed Project (Rosebud Sioux Tribe, 2011). On April 29, 2011, the SRST notified the NRC via e-mail of its desire to consult (Standing Rock

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Sioux Tribe, 2011). On May 5, 2011, the Northern Cheyenne Tribe notified the NRC via e-mail of its interest to consult (Northern Cheyenne Tribe, 2011). On May 17, 2011, the Cheyenne River Sioux Tribe notified the NRC via e-mail of its interest to consult on the proposed Project (Cheyenne River Sioux Tribe, 2011).

By a letter dated April 14, 2011, the THPO for the Turtle Mountain Band of Chippewa Indians informed the NRC that it does not likely have any traditional cultural properties that would be of National-Register significance in the Ross Project area (Turtle Mountain Band of Chippewa Indians, 2011). The NRC was notified by e-mail on August 19, 2011, that the Apache Tribe of Oklahoma was not interested in consultation on the Ross Project (Apache Tribe of Oklahoma, 2011). The Salish, Pend d'Oreille, and Kootenai Tribes notified the NRC by e-mail on December 29, 2011, that these Tribes would defer to Tribes which are nearer to the Project area for consultation on the Ross Project (Salish, Pend d'Oreille, and Kootenai Tribes, 2011). In an attachment to an e-mail dated October 11, 2013, and in response to an invitation from the NRC to participate in the preparation of the Ross Project PA, the Flandreau Santee Sioux Tribe notified the NRC that it has no objections to the Ross Project. However, the correspondence also requested that construction stop immediately and the appropriate persons (State and Tribal Native American Graves Protection and Repatriation Act [NAGPRA] representatives) be notified if human skeletal remains and/or any objects falling under NAGPRA are uncovered during Project construction.

By a letter dated September 2, 2011, the Tribal Archaeologist for the SRST responded to the NRC's February 9, 2011, Section 106 consultation-initiation letter and provided comments on the Class III Inventory by GCM dated December 2010. The letter stated that the SRST does not agree with the determination of "INELIGIBLE" for Sites 48CK2070, 48CK2076, and 48CK2087. The SRST Archaeologist also stated that Site 48CK2082 should be evaluated by Tribal representatives to determine whether the outcropping of sandstone is cultural in origin and that sites which contain ortho-quartzite fire-cracked rock, particularly Sites 48CK2089, 48CK2090, and 48CK2091, should also be evaluated by Tribal representatives. The letter included other general comments as well, including a comment that site-identification efforts should include a survey of the Ross Project area to identify properties of traditional and religious significance to the SRST. By an e-mail dated October 6, 2011, the THPO for the Yankton Sioux Tribe informed the NRC that the Yankton Sioux's THPO concurs with the findings and concerns of the SRST as indicated in the SRST's September 2, 2011, letter.

The NRC staff, along with BLM staff and the Applicant, conducted a site visit with representatives from the Northern Arapaho, the Northern Cheyenne, and the Fort Peck Assiniboine Sioux Tribes on September 13, 2011. The NRC and BLM staffs participated in a consultation meeting with the Northern Arapaho and the Northern Cheyenne Tribes on September 14, 2011, after the site visit. On November 2, 2011, the NRC and BLM staffs as well as the NPS staff for Devils Tower and the Applicant conducted a second site visit with representatives from the Chippewa Cree, Crow Creek Sioux, and the Fort Peck Assiniboine Sioux Tribes and the Santee Sioux Nation. On November 3, 2011, the NRC, BLM, and NPS staffs participated in a consultation meeting with representatives from the Crow Creek Sioux and the Fort Peck Assiniboine Sioux Tribes as well as the Santee Sioux Nation. The Chippewa Cree Tribe, not formerly invited, expressed interest in consulting during planning for the second consultation meeting.

During the September 2011 and November 2011 consultation meetings, the Tribes requested that a survey for properties of religious and cultural significance (or a traditional cultural property [TCP] survey) of the Ross Project area be conducted. By a letter dated February 1, 2012, the

THPO for the Rosebud Sioux Tribe expressed concern for potential adverse effects to the cultural resources within the Project area as well as adverse effects to the viewshed of Matotipila (Devils Tower or Bear Lodge) and the Missouri Buttes. The THPO for the Rosebud Sioux Tribe also indicated that the Tribe supported a TCP survey of the Project area. During the November 2011 site visit, Strata indicated that it would be willing to support such a Tribal field survey. On December 6, 2011, the NRC sent a letter to Strata requesting a written proposal to acquire TCP information. Strata responded with a letter, dated January 12, 2012, in which it stated that in lieu of submitting a proposal for a TCP survey of the Ross Project area, Strata would like to issue a Request for Proposal (RFP) from consultants to conduct the TCP survey, identification, and evaluation. During conversations with several THPOs, the NRC staff was informed that the Tribes did not wish to work with a third-party consultant hired by the Applicant. Therefore, the NRC staff enlisted support from its own third-party consultant to work with the Tribes to obtain information on potential TCPs in the Project area.

At this time, the NRC staff was also working with many of the same Tribes to obtain TCP information for other uranium-recovery projects under the NRC staff's review. The Tribes consulting on the Ross Project suggested using a Scope of Work (SOW) that was being prepared for one of the other ISR projects under NRC review and revising it to be applicable for the Ross Project. The Tribes requested introductory information on the Ross Project area to assist them in developing a draft SOW for a TCP survey of the Ross Project area. This information was provided to the Tribes via e-mail on July 25, 2012. In August 2012, the NRC's third-party consultant began contacting the Tribes via telephone and e-mail to invite them to meet in Bismarck, North Dakota, in early September to discuss the SOW (many of the Tribes were planning to be in Bismarck at that time for a meeting with another agency). Strata provided a draft SOW to the NRC to be shared with the Tribes during the meeting. Sixteen Tribal representatives indicated that they would attend the meeting.

On September 4, 2012, the NRC's third-party consultant met with representatives from the SRST and the Three Affiliated Tribes in Bismarck, North Dakota. The SRST representative indicated during this meeting that the Tribes did not wish to use the SOW developed by Strata and would develop a draft SOW for the Ross Project on their own. The Tribal representatives also indicated that a separate cost proposal would need to be developed for the TCP field survey. In October and November 2012, the NRC staff worked with the representatives from the SRST to revise a SOW provided to the NRC by the Tribes for another uranium-recovery project that was currently under NRC review. The Tribes indicated that this latter SOW could be made to be applicable to the Ross Project. Also, on October 23, 2012, Strata hosted three representatives from Makoche Wowapi (a separate company) at the Ross Project area to facilitate that company's preparation of a cost proposal for a TCP survey. Makoche Wowapi had submitted a cost proposal for a TCP survey for another uranium-recovery project that was also currently under NRC review, and many of the THPOs had been discussing naming that company as the preferred consultant to conduct a TCP survey at the Ross Project area.

On November 13 and 14, 2012, the NRC staff provided the draft SOW for the TCP survey to the THPOs and Strata, respectively, via e-mail for review and comment. The THPOs held a teleconference to discuss the draft SOW on November 14, 2012, and invited the NRC staff to participate and to answer questions. During the November 14, 2012, teleconference several THPOs indicated that the draft SOW was acceptable and indicated that Makoche Wowapi should be made their preferred consultant to conduct the TCP survey.

The NRC staff shared the final SOW with the consulting THPOs via an e-mail on November 30, 2012. After no comments were received, the NRC staff also shared the final SOW with

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Makoche Wowapi on December 4, 2012. On December 12, 2012, Makoche Wowapi submitted a cost proposal for the TCP survey to the NRC. Strata notified the NRC staff, by an e-mail dated February 15, 2013, that its negotiations with Makoche Wowapi had come to an end and an agreement had not been reached.

The Ross Project Section 106 consultation is the third in a series of consultations, including those for the Crow Butte and Dewey-Burdock Projects, during which the NRC staff attempted to follow this process, which the staff calls the “SOW approach.” As with the Dewey-Burdock Project, the SOW approach came to an end for the Ross Project when the Applicant and the Tribes’ preferred contractor, Makoche Wowapi, could not reach an agreement on the cost proposal.

The NRC staff considered other alternatives for the Ross Project after the SOW approach had proven unsuccessful for the Crow Butte and Dewey-Burdock Projects, recognizing that it might likely prove unsuccessful for the Ross Project as well. The NRC staff anticipated that resolving cost differences would be time consuming and delay the field-survey work (which is limited in time to late spring, summer, and early fall—approximately six months—due to the harsh winters in Wyoming). However, because of differences between the Projects, such as the total Project area, and because the Ross Project’s consulting parties worked toward the SOW approach, the NRC staff remained optimistic and continued in this manner until the process eventually came to the same end.

At that point, the NRC staff had become aware that an alternative approach could be successful. This alternative approach, which the NRC staff calls the “open-site approach,” involves a project area being made available for a specific time period, during which each consulting Tribe may send representatives to the project site to conduct a field survey. The respective license applicant would provide compensation to the Tribe(s) and reimburse the individual Tribal representatives for expenses, and the Tribe would provide a subsequent survey report. This approach was being used for the Crow Butte and Dewey-Burdock Projects and had been used successfully by another Federal agency. Therefore, after Strata informed the NRC that it had not reached an agreement with Makoche Wowapi, the NRC staff requested that Strata provide a compensation plan and dates that the Ross Project area could be open to the Tribes. The NRC staff requested this information from Strata in order to recommend the open-site approach to the Ross Project Consulting Tribes.

The NRC staff incorporated many key aspects of the former SOW into an open-site-approach proposal that was sent to the Tribes with a letter from the NRC staff dated March 11, 2013. Specifically, the SOW described the methodology of the field survey and the required contents of the survey report. Below are the aspects of the SOW that also appeared in the open-site-approach proposal offered to the Tribes:

- Survey of the entire 696-ha [1,721-ac] Ross Project area
- Compensation provided to the Tribes by the Applicant
- Field-survey representatives and monitors to make up the field-survey crew provided by the Consulting Tribes
- Field-survey participants reimbursed for lodging, meals, mileage, and incidental expenses by the Applicant
- Consulting Tribes to provide a written summary of the field survey after a certain drafting period following completion of the survey, including an identifying label (e.g., TCP-1), location, and description of all identified sites of Tribal significance

- Provisions for confidentiality of TCP sites and other information
- Recommendations concerning the NRHP eligibility of identified sites by the Consulting Tribes

Several Consulting Tribes expressed interest in conducting a survey after reviewing the open-site-approach proposal provided by the NRC; however, this proposal was not put forth as a last and final option. The NRC staff intended to be responsive to continuing consultation with any Tribes that did not wish to follow the open-site approach. As such, the NRC staff communicated with the SRST THPO in March 2013 regarding alternative approaches, and, in April 2013, the SRST's THPO provided an alternative-approach template to the NRC staff. The NRC staff and the SRST call this alternative approach the "Tribal-working-group (TWG) approach." This approach uses a work plan that allows several Tribes to form a TWG to conduct a field survey. The TWG approach differs from the open-site approach in its compensation and reimbursement specifications and in its reporting requirements, including the stipulation that the NRC staff would be responsible for initially drafting and distributing a "Tribal field survey report" to the TWG following the field survey.

The NRC staff revised the work-plan template that was provided by the SRST's THPO to make it appropriate for the Ross Project and shared it with the SRST THPO and with Strata. The NRC staff, the SRST THPO, and Strata agreed on all aspects of the work plan except the requirement that the Tribal field-survey participants be hired by either Strata or the NRC as temporary employees. This requirement was included in the work plan by the TWG in order to ensure that Tribal field-survey participants, who are not necessarily employees of a specific Tribe, would be insured against any injuries that could potentially occur or damage that they might cause to private property during a survey. Instead of being hired as temporary employees, the NRC staff recommended that the Tribal field-survey participants obtain insurance to protect themselves from the costs that could be associated with these types of incidents. Unfortunately, after extensive back and forth negotiation between the parties, the NRC staff and the SRST were not able to resolve this issue, and the SRST notified the NRC staff that the Tribe declined to participate in a Ross Project field survey.

The Tribal field survey of the Ross Project area was conducted by 27 Tribal members representing 10 Tribes. Tribes that elected to participate in a field survey had the option to participate in either the open-site approach or the TWG approach. The first Tribal Field Survey was conducted during the period of May 13 – 17, 2013, and included 6 Tribes, 4 of which conducted the Survey according to the TWG approach. The second Tribal Field Survey was conducted during the period of June 3 – 7, 2013, and included 4 Tribes, all of which conducted that Survey in accordance with the open-site approach. Certain aspects of the TWG approach, such as Strata's providing lodging and transportation to and from the Project area each day, were incorporated into the open-site approach during the second Survey as well because these aspects worked well during the first Tribal Field Survey. Each multi-Tribe field-survey crew worked together with the support of the NRC and Strata staffs to plan the site-specific survey methodology used in addition to the approach provided in the open-site and TWG proposals. Strata provided compensation and *per diem* in accordance with the two approaches as well as maps, work space, and transportation in the field. The NRC Project Managers, with an NRC third-party subconsultant, provided global positioning system (GPS) support for both field-survey crews as well as planning and oversight. The NRC staff and its third-party subconsultant prepared and distributed a preliminary *Tribal Field Survey Report* to the TWG Tribes for their input. The NRC staff also received *Field Survey Reports* from the Cheyenne and Arapaho Tribes of Oklahoma and the Northern Arapaho Tribe. The NRC staff and its subconsultant prepared a final *Tribal Field Survey Report*, which documents the NRC staff's eligibility

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determinations for the identified TCPs. This *Report* will be provided to the WYSHPO for concurrence. Any sites of Tribal interest that are determined to be eligible TCPs by the NRC in consultation with the WYSHPO will be addressed in accordance with the final PA for the Ross Project.

### 1.8 Structure of the SEIS

As noted in SEIS Section 1.4.1, the GEIS evaluated the broad impacts of ISR projects in a four-state region where such projects are anticipated (NRC, 2009b), but it did not reach site-specific decisions for new ISR projects. The NRC staff has evaluated the extent to which the information and conclusions in the GEIS could be incorporated by reference into this SEIS. The NRC staff also determined whether any new and significant information existed that would change the expected environmental impacts beyond those evaluated in the GEIS.

SEIS Section 2 describes the Proposed Action and the reasonable Alternatives considered for the proposed Ross Project; Section 3 presents the affected environment (i.e., as the Ross Project area is today); and Section 4 evaluates the environmental impacts of the Applicant's implementing the Proposed Action and two Alternatives. Section 5 presents the potential cumulative impacts of the Ross Project, while Section 6 describes the environmental measurement and monitoring programs proposed for the Ross Project. A cost-benefit analysis is provided in Section 7, and the environmental consequences as a result of the Proposed Action and Alternatives are summarized in Section 8.

### 1.9 References

10 CFR Part 2. Title 10, "Energy," *Code of Federal Regulations*, Part 2, "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders." Washington, DC: U.S. Government Printing Office (GPO).

10 CFR Part 20. Title 10, "Energy," CFR, Part 20, "Standards for Protection Against Radiation." Washington, DC: GPO.

10 CFR Part 40. Title 10, "Energy," CFR, Part 40, "Domestic Licensing of Source Material," Washington, DC: GPO.

10 CFR Part 40. Title 10, "Energy," CFR, Part 40, Appendix A, "Criteria Relating to the Operation of Uranium Mills and to the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material from Ores Processed Primarily from their Source Material Content." Washington, DC: GPO.

10 CFR Part 51. Title 10, "Energy," CFR, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." Washington, DC: GPO.

75 *Federal Register* (FR) 1088. *Federal Register*, Vol. 75, No. 1497, p. 1088, "Notice of Availability of a Memorandum of Understanding between the Nuclear Regulatory Commission and the Bureau of Land Management." January 8, 2010.

76 FR 41308. *Federal Register*, Vol. 76, No. 134, p. 41308-41312. "Strata Energy, Inc. Ross In Situ Recovery Uranium Project, Crook County, WY; Notice of Materials License Application, Opportunity to Request a Hearing and To Petition for Leave To Intervene, and Commission Order Imposing Procedures for Document Access to Sensitive Unclassified Non-Safeguards