

July 15, 2014

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

Before Administrative Judges:

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

In the Matter of:)	
POWERTECH USA, Inc.)	
(Dewey-Burdock Project)	Docket No. 40-9075-MLA
In Situ Uranium Recovery Facility))	ASLBP No. 10-898-02-MLA-BD01
)	
_____)	

ANSWERING TESTIMONY OF GWYN MCKEE

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1. CONTENTION 6

1.1 NRC Staff Adequately Described and Analyzed the Effectiveness of Mitigation Measures to the Extent Required under NEPA

Q.1. How do you respond to the allegation that the FSEIS “simply list(s) the mitigation measures, and assert(s) that they may be successful in eliminating or substantially reducing the Project’s adverse impacts, with no scientific evidence or analysis to support those claims” (OST Initial Position Statement at 31)?

A.1. As noted at A.8 of my initial written testimony (Exhibit APP-053), and at A6.2 of the NRC Staff’s initial written testimony (Exhibit NRC-001), mitigation measures for the various resources are described throughout the FSEIS (Exhibit NRC-008-A and 008-B), including:

- Chapter 2 description of the Proposed Action and alternatives.
- Chapter 4 description of potential impacts, including how mitigation measures will avoid or reduce environmental impacts (refer to FSEIS at 4-85 through 4-94 for terrestrial wildlife).
- Chapter 6 summary (list) of mitigation measures, especially summary Tables 6.2-1 and 6.3-1.
- Chapter 7, description of environmental monitoring measures (relevant to assessing implementation of certain mitigation measures).

As noted at A.9 of my initial written testimony, many of the mitigation measures proposed in the FSEIS are in keeping with current recommendations by regional biologists, researchers, and/or regulating agencies for wildlife protection; i.e., the “scientific” community. The fact that these types of mitigation measures are currently recommended and/or in use by professional biologists and land managers throughout the region demonstrates that they have already been sufficiently evaluated by those professionals and deemed appropriate and effective for mitigating impacts such as those expected to occur during the Dewey-Burdock Project. In other words, the use of the same mitigation measures by a variety of professionals throughout the region serves as “scientific evidence” to support their effectiveness for resource protection. Similar logic would apply to measures designed to mitigate impacts to soils, vegetation, and other resources of concern.

To summarize, because many, if not most, of the mitigation measures proposed in the FSEIS are the same as or comparable to those currently in use by the scientific community for the same types of resource concerns (e.g., soil erosion, vegetation reclamation, wildlife protection, etc.), they meet the bar for “scientific evidence or analysis” to support their effectiveness. Therefore, the NRC’s recommendation to employ these types of mitigation measures is entirely appropriate, as they are based on efforts already known to be effective under similar circumstances.

Q.2. Do you agree with NRC Staff's assertion that mitigation measures specific to wildlife protection are described and evaluated in the FSEIS?

A.2. Yes. In addition to descriptions of mitigation measures for various resources outlined in A.1, above, I agree with testimony by NRC Staff at A6.17, which describes where in the FSEIS discussions regarding wildlife protection can be found; i.e., Sections 3.6 and 4.6. I also agree with the NRC Staff's description of specific examples of mitigation measures for wildlife to which Powertech has committed (i.e., minimizing disturbance of surface areas and vegetation, minimizing construction of access roads, constructing access roads and utilities in common corridors to the extent possible, reclaiming disturbed areas promptly, developing an Avian Monitoring and Mitigation Plan [Avian Plan], and adhering to South Dakota requirements for surface water ponds with respect to migratory bird and wildlife protection). All of these mitigation measures are designed to reduce or eliminate potential impacts to wildlife.

Additional examples of specific references to mitigation measures and their effectiveness for wildlife within the FSEIS are found in my initial written testimony at A.8 and A.9 (e.g., adhering to timing and distance restrictions determined by appropriate regulatory agencies to protect active raptor nests during the breeding seasons, engaging with the U.S. Fish and Wildlife Service [Service] regarding the potential for take of protected avian species, etc.). As noted in that testimony, and in A.1., above, such measures have also been evaluated by the scientific community and deemed effective for mitigating impacts to wildlife.

1.2 The Avian Plan is a State Permitting Requirement that Will Be Finalized Prior to Site Construction

Q.3. Please respond to the allegation that “[T]he FSEIS lacks sufficient detail and simply requires plans to be submitted in the future to address other impacts, including...wildlife protections (FSEIS at E-158 to 159 [conceding that the applicant is still in the process of ‘actively working on an avian monitoring and mitigation plan.’])” (OST Initial Position Statement at 34)?

A.3. I addressed the purpose and status of the Avian Plan in my initial written testimony at A.10 through A.12. For example, at A.10, I point out that development of an Avian Plan is a State permitting requirement, not a requirement of the NRC license, and provide references to relevant sections of the NRC guidance document confirming that fact, as shown below.

- Although NUREG-1569 (Exhibit NRC-013) Section 2.8 (ecology) specifies that a description of mitigation measures the applicant plans to use (such as those outlined in Table 6.2-1 [FSEIS at 6-2] and elsewhere in the FSEIS) should be provided in the license application, it does not require a specific mitigation plan such as the Avian Plan to be prepared as part of the licensing process.
- This is illustrated in NUREG-1569 acceptance criterion 2.8.3(4) (Exhibit NRC-013 at 2-30 through 2-31), which indicates that “the application should provide information regarding steps that will be taken to minimize the effect of operating the facility on the

species-environment relationship” but does not indicate the need to develop a specific plan.

Furthermore, mitigation measures for raptors and other avian species are described in the license application and FSEIS (see A.8 of my initial written testimony) in conformance with this NUREG acceptance criterion. NRC Staff also address the Avian Plan at A6.17 of their initial written testimony. I agree with their assertion that considering requirements by other Federal, State, and local agencies as part of the analysis process is in keeping with, and encouraged by, CEQ’s regulations at 40 CFR §§ 1502.16(h) and 1505.2(c). Therefore, whether or not the Avian Plan is complete prior to NRC licensing or issuance of the FSEIS is immaterial.

Q.4. Do you agree with NRC Staff’s conclusion that their approach regarding the Avian Plan is consistent with NEPA?

A.4. Yes. I agree with the statement at A6.7 of the NRC Staff’s initial written testimony that says, “NEPA does not require that all of the mitigation measures an agency specifies in an EIS be in final form.”

1.3 The Service Has No Records of Whooping Cranes Ever Occurring in the Dewey-Burdock Project Area, nor Are They Likely to Occur There with Any Regularity or for Any Extended Period of Time

Q.5. Please respond to the CI’s allegation under Contention 6 that “the Opening Testimony of wildlife biologist Peggy Detmers discusses the failure of the FSEIS to adequately address the existence of whooping cranes during migration and other endangered animals” (CI Initial Position Statement at 9).

A.5. As noted at A.19 of my initial written testimony, no Federal threatened or endangered (T&E) species were documented in or within 1.0 mile of the Dewey-Burdock Project area during baseline inventories conducted for the project (FSEIS at 3-44, 3-55, 3-70, 4-84, 4-95, and 4-147). Additionally, nor were any expected to occur in that area (FSEIS at 4-108).

As further noted at A.20 and A.23 of my initial written testimony, and A14.1 of the NRC Staff’s initial written testimony, the Service identified the whooping crane as one of two Federal T&E species that could potentially occur in the Dewey-Burdock Project area during the initial informal conferencing phase of the project designed to identify specific species of concern in the analysis area. The NRC Staff addressed the whooping crane accordingly in the FSEIS at E-156; Chapter 1, Section 1.7.1, at 1-15; Chapter 3, Section 3.6.3, at 3-55 and 3-58; Chapter 4, Section 4.6.1.1.1.4, at 4-95; and Chapter 5, Section 5.6.3, at 5-38. Those discussions included:

- The potential for each T&E and candidate species to occur in the Dewey-Burdock Project area.
- Historical information regarding presence/absence of these species in the project area.
- The potential for impacts to each species based on their potential occurrence and the habitats present.

Q.6. What information did the Service provide to the NRC regarding the presence, or potential for occurrence, of whooping cranes and other T&E species in the project area?

A.6. As noted in A.19, A.20, and A.23 of my initial written testimony, and A14.4 and A14.7 of the NRC Staff's initial written testimony, the Service advised the NRC in writing that the agency had no records of any federally listed species occurring in the area of the project. The Service also provided the following information specific to whooping cranes:

- While whooping cranes may occur in Custer County, the agency has no information indicating that whooping cranes are located within the project boundary itself.
- The whooping crane generally migrates through the eastern portion of Custer County on its way to northern breeding grounds and southern wintering areas; the Dewey-Burdock Project is in the southwestern corner of Custer County, near the Wyoming state line.
- Whooping cranes use a variety of foraging and roosting habitats, but most are associated with mesic areas such as wet meadows, rivers, lakes, stock ponds, freshwater and alkaline basins, other areas of shallow water, etc. Such habitats are extremely limited in the Dewey-Burdock Project area, which is heavily dominated by upland vegetation.
- Whooping cranes do not normally stay in any one area for long during migration.
- The agency has no records of T&E species in Fall River County, which includes the southern portion of the Dewey-Burdock Project area.
- Nevertheless, the NRC Staff included whooping cranes in their impact analysis in the FSEIS. The Service recommended vigilance in watching for whooping cranes during spring and fall migrations, as well as cessation of activities where birds are present and agency notification of any sightings of this species.

Q.7. How do you address the CI's position that results from the Service's web-based search system for species of concern conducted by their wildlife witness (Ms. Peggy Detmers) indicates that whooping cranes migrate into and through the Dewey area?

A.7. I respectfully submit that the CI are not interpreting the results of their witness's search of the Service's Information, Planning, and Conservation (IPAC) web system correctly, nor is Ms. Detmers herself. Ms. Detmers' initial written testimony is presented as Exhibit INT-010. The IPAC results are listed as Exhibit INT-010q, but that document does not appear to have been submitted by CI, either in their initial submittal on June 20 or their resubmittal on July 7. Nevertheless, I had coincidentally run that same IPAC analysis for the Dewey-Burdock Project earlier this year to identify current Federal T&E species for the area; due to their similarity in timing, results from both system searches were identical.

- In red highlighted font at the top of the IPAC results page, the Service notes that "The Endangered Species Act species list below is for planning purposes only – it is not an official species list."
- The official list of T&E species to be analyzed in the DSEIS and FSEIS was provided to the NRC by the Service in March 2010; that list included the whooping crane and black-

footed ferret (Exhibit NRC-129). The Service also identified the greater sage-grouse as a candidate species in Fall River County that could potentially occur in the area. Though candidate species currently have no legal protection under the Endangered Species Act (ESA), NRC Staff included the sage-grouse in its analysis.

- Species included on the IPAC list may or may not actually occur in the project area itself. That is, the IPAC list does not in any way provide definitive information that “whooping cranes migrate into and through” the project area as stated in the CI’s opening statement at 11; thus the Service’s recommendation on the IPAC results page to contact their agency for an official species list for any given project, as needed.

I would further respectfully submit that Ms. Detmers’ initial written testimony at 1 indicating that “the whooping crane does indeed migrate through” the Dewey-Burdock Project area is not supported by the exhibits she provided, or by the Service’s own information regarding whooping crane migration routes and documented sightings.

- Ms. Detmers submitted two maps showing general migration corridors for birds in support of her position that whooping cranes migrate through the Dewey-Burdock Project area itself.
 - Exhibit INT-010c (cited at 2 in Ms. Detmers’ initial written testimony) depicts a general avian migration corridor referred to as the “Central Flyway.”
 - Exhibit INT-010d (cited at 2 in Ms. Detmers’ initial written testimony) shows a rough depiction of the general whooping crane migration route across the central portion of the U.S.
- Neither of these maps was obtained from current Service documents regarding whooping crane migrations and confirmed sightings across the central U.S.
 - The Central Flyways map was obtained from a “Bird Nature” website discussing the four major migration routes for birds across North America.
 - The whooping crane migration route map appears to have been retrieved from an inset shown on a personal website maintained by a professional biologist who was tracking migrating cranes in Texas and offered the website as a way to inform interested lay persons about the activities and plight of this species.
 - The date on that web page was April 1998.
 - The map inset was created by Claudia Fonkert, who appeared to be a geography student at Macalester College in Minnesota in the late 1990s rather than a professional biologist.
- While both exhibits show avian migration corridors crossing South Dakota, including those of whooping cranes, neither provides clear evidence of whooping cranes migrating into or through the Dewey-Burdock Project area, as stated by Ms. Detmers.
- Likewise, Ms. Detmers’ citation of the Service’s species profile for whooping cranes, provided in her initial written testimony at 3, provides a link for South Dakota that

indicates that whooping cranes are known or believed to occur in Custer County, though it does not provide more specific information than that.

- In contrast, in its March 2010 correspondence to the NRC regarding potential T&E species for the project, the Service indicated that whooping cranes generally migrate through the eastern portion of Custer County; the Dewey-Burdock Project is in southwestern South Dakota, as shown in Exhibits INT-010i and INT-010m.
- The Service website cited by Ms. Detmers also provides a link to the most recent (2012) 5-year Review of the agency's recovery plan for the whooping crane.
 - Ms. Detmers did not include that recent document among her exhibits supporting her initial written testimony.
 - In contrast, I did include the 5-year Review (Exhibit APP-060) among the exhibits supporting my initial written testimony, and also supporting the information provided to the NRC by the Service, that whooping cranes have never been documented in the Dewey-Burdock Project area.
 - Exhibit APP-060, Figure 3 at 14 shows the whooping crane migration corridor across the U.S. While this map is also at a broad scale, it is nevertheless evident that none of the confirmed whooping crane sightings in the central flyway (illustrated by red dots) have been located in the Dewey-Burdock Project area.
 - Exhibit APP-061, also produced by the Service, illustrates that no whooping cranes were documented in the Dewey-Burdock Project area during fall migrations monitored from 1943 through 1999.
- Furthermore, as noted in my initial written testimony at A.19, no T&E species, including whooping cranes, have been documented in the survey area since annual monitoring was initiated in December 2012.
 - Due to the enhanced monitoring of other species that has occurred since then, a biologist has been on site approximately every 2 to 3 weeks during the majority of the last 18 months.
 - Under the current monitoring schedule, the longest potential gap that could ever occur without a site visit would be limited to the time from early December through mid-January each year (i.e., 6 weeks in winter), when most Federal T&E species would be absent from the area, thus reducing the risk of not being detected, if present.
 - Although the entire survey area is not covered during every site visit, the frequent presence of a professional biologist in the area enhances the opportunity for sightings of T&E species, should they occur in the project area.
 - Documentation that T&E species including whooping cranes were not observed in the project area during the most recent wildlife monitoring reporting period (December 2012 through November 2013) is available in the 2013 Wildlife Monitoring Report for the Dewey-Burdock Project, which is provided as Exhibit APP-071. Page 20 of that report confirms that no listed or candidate species under the ESA were observed in the Dewey-Burdock survey area during the year-long baseline inventory period

from 2007-2008 or during the time period of December 2012-November 2013. Page 21 cites multiple documents indicating that whooping cranes have never been recorded in the Dewey-Burdock survey area, including the recent 5-year review noted above.

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In Situ Uranium Recovery Facility))	

AFFIDAVIT OF GWYN MCKEE

I declare under penalty of perjury that my statements in prefiled Exhibit APP-070 (Gwyn McKee Answering Testimony) are true and correct to the best of my knowledge and belief.



Gwyn McKee

Executed in Sheridan, WY
this 15th day of July, 2014