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Rules, Announcements, and Directives Branch (RADB)
Office of Administration
Mail Stop: TWB-05-B01M
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Re: Comments on Docket ID NRC-2012-0277; Draft Supplemental Environmental Impact Statement, Proposed Dewey-Burdock In Situ Leach Uranium Mine, South Dakota

Ms. Bladey,

Please accept these comments regarding the above referenced docket ID on behalf of the Oglala Sioux Tribe. At the outset, it is important to bring to BLM's and NRC staff's attention some significant problems with the Dewey-Burdock Draft Supplemental Environmental Impact Statement (DSEIS), particularly with regard to presentation of the scientific and technical bases for a large number of assumptions made in the DSEIS.¹ The NRC staff's use of citations to materials incorporated by reference into the DSEIS is inadequate to justify the scientific conclusions presented.

For example, for reference after reference, the document simply refers to "Powertech 2011" as a source for fundamental conclusions upon which the DSEIS analysis is premised. These assumptions include such basic conclusions as those as to the permeability of the under and over-lying geologic structures (i.e., p. 2-17, 4-56), and the use of "numerical simulations" to evaluate "groundwater conditions" necessary for evaluating monitoring well spacing to detect impacts from lixiviant excursions (i.e., p. 2-16). Many more examples exist throughout the entire DSEIS where it is impossible to identify and assess the referenced materials. The generic citation to "Powertech 2011" is meaningless without more description and detail of where the information is contained in the document. The Powertech 2011 submittal itself is made up of some 5000 pages of documents. See webpage screen shot showing the list of documents which make up this submittal attached as Exhibit 1. This problem exists with regard to the NRC's reliance on other Powertech submittals as well, including those referenced as "Powertech 2009" and "Powertech 2010" among others. This lack of any specificity makes it virtually impossible to find the precise basis for conclusions made in the DSEIS. The use of generic references obfuscates the technical basis for the analysis and conclusions as to the potential impacts of the project to the point it violates the APA and NEPA, and implementing regulations. See 10 C.F.R. Part 51 (appendix A to subpart A, note 1)(allowing incorporation by reference to material outside a NEPA document, but only "without impeding agency and public review of the action" and only where the material's content is "briefly described").

Further, the DSEIS references the draft license produced by NRC Staff for the Dewey-Burdock proposal as support for the conclusions in the document. DSEIS at 2-71, 4-217. However, it appears that NRC Staff recently issued a revised draft license mere days before the close of the public comment

¹ Throughout these comments, to the extent BLM intends to rely on this SEIS as a basis for its approval of any Mining Plans of Operation for the Dewey-Burdock project, the comments herein are specifically directed at BLM as well as NRC staff.

period on the DSEIS, rendering these references stale. This unfortunate timing results in the inability of the Tribe and any member of the public to meaningfully review the new draft license, despite the fact that the DSEIS specifically relies on the draft license as a supporting reference. This document was never made publicly available during the comment period, in violation of NRC regulations which require that “no material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment.” *Id.* NRC regulations also require that “copies of ... any related comments and environmental documents, will be made available on the NRC web site.” 10 C.F.R. § 51.120. Release of a new draft license within just days of the close of comment, without providing any notice, let alone public distribution of the new draft license document itself, does not provide a reasonable opportunity for the public to review and comment.

As a result of these systemic flaws in the manner in which scientific justifications are presented and the lack of time for the public to review information purported to be relied upon in the DSEIS, the document must be re-published in a manner that provides the necessary information, with the commensurate additional public comment period.

Failure to Require or Provide Necessary Baseline Data

Throughout the DSEIS, NRC proposes to allow Powertech to defer collection of critical data that is admittedly necessary to conduct a review of the project and the resulting impacts. According to the DSEIS, substantial information related to baseline conditions at the site, and needed to assess the impacts of the proposed operations, is not proposed to even be collected or reviewed until long after the NEPA process has concluded. This scheme is not allowable under NEPA.

Under NEPA, an agency is required to “describe the environment of the areas to be affected or created by the alternatives under consideration.” 40 C.F.R. § 1502.15. The establishment of the baseline conditions of the affected environment is a fundamental requirement of the NEPA process:

NEPA clearly requires that consideration of environmental impacts of proposed projects take place *before* [a final decision] is made.” LaFlamme v. FERC, 842 F.2d 1063, 1071 (9th Cir.1988) (emphasis in original). **Once a project begins, the “pre-project environment” becomes a thing of the past, thereby making evaluation of the project's effect on pre-project resources impossible. *Id.* Without establishing the baseline conditions which exist in the vicinity ... before [the project] begins, there is simply no way to determine what effect the proposed [project] will have on the environment and, consequently, no way to comply with NEPA.**

Half Moon Bay Fisherman’s Mark’t Ass’n v. Carlucci, 857 F.2d 505, 510 (9th Cir. 1988) (emphasis added). **“In analyzing the affected environment, NEPA requires the agency to set forth the baseline conditions.”** Western Watersheds Project v. BLM, 552 F.Supp.2d 1113, 1126 (D. Nev. 2008) (emphasis added). “The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process.” Council of Environmental Quality, Considering Cumulative Effects under the National Environmental Policy Act (May 11, 1999).

In this case, the DSEIS has not demonstrated that a baseline has been adequately established. For instance, the DSEIS admits that the applicant has failed to acquire necessary information related to groundwater at the site and hydro-geologic information. For example, the DSEIS admits that substantial water quality data collection and aquifer pump tests will only be conducted after license issuance. DSEIS at 2-16, 7-8, 7-14, 7-17. In fact, the document admits that the NRC staff has yet to even require the

company to design proposals for non-production monitoring wells designed to detect leaks of toxic materials above and below the target ore bodies. Id. Despite the critical importance of these monitoring wells, and their design and placement, the DSEIS proposes that the plan for such wells be proposed only after a “pump test” is complete. DSEIS at 2-17. The DSEIS admits that these tests have yet to even be designed, let alone carried out so that the public has the opportunity to comment on the actual plans proposed for this facility. Id.

This scheme deprives the Tribe, the public and any other reviewing parties any opportunity to review or comment on these important plans. Such an “approve first – plan later” tactic renders it impossible to assess or analyze the potential impacts associated with the proposed mining operation. As such, it violates NEPA’s requirement that the affected environment be described in the NEPA document, and within the NEPA process. It is little comfort that “the applicant must present each monitoring well program to EPA for administrative approval before installing proposed wells. In addition, wells completed in overlying and underlying aquifers are subject to sampling procedures, remedial actions, and reporting requirements prescribed in NRC and EPA rules and regulations.” DSEIS at 2-17. These “administrative approvals” have been arbitrarily excluded from the NEPA process, and appear to be completely outside any public review or scrutiny – in violation of NEPA. The same problem exists for the NRC’s reliance on a Safety and Environmental Review Panel (SERP) to review baseline data, including hydrogeologic results and documentation. DSEIS at 2-18. NEPA does not allow the use of such bodies to the exclusion of presenting data in the DSEIS itself. Even if NRC could rely on post-NEPA review by a SERP, the DSEIS fails to discuss the nature of the SERP or how the objectivity would be preserved, let alone how the Tribe and the public could expect to participate in a meaningful way in the review. The time for this review is in the NEPA document, not in some bureaucratic process shielded from timely outside review.

CEQ regulations specifically prohibit an agency from failing to gather necessary data in order to assess the impacts associated with a proposal. 40 C.F.R. § 1502.22 imposes detailed requirements and justifications necessary for any agency to decline to provide necessary and relevant information. None of these tests have been acknowledged, let alone met, by the DSEIS – nor could they likely be, as the test for not acquiring the relevant information turns on the cost to do so being “exorbitant”. In this case, this information is specifically planned to be acquired as part of the project development, but is simply being deferred until after the NEPA process. Deferring the gathering of such information until after the NEPA process based purely on the convenience to the operator, is not allowable.

Importantly, the details of how the baseline is established and documented is critical to an understanding of the potential impacts associated with the proposed mine. The manner in which baseline water quality information is gathered is crucial to any analysis that relies on the data. The problems that can flow from analysis and models based on poorly gathered information is often characterized as a garbage in/garbage out. This colloquialism is more technically addressed in the attached memo from Dr. Richard Abitz and confirms that the scientific methodology employed for establishing baseline at a proposed ISL mine is important. Abitz Report attached as Exhibit 2. As a precondition to conducting modeling and analysis, NRC and BLM must confirm that a credible scientific method is employed to establish an accurate baseline. Unfortunately, no details with regard to methodology of acquiring baseline are described in the DSEIS. As described by Dr. Abitz, valid statistical methods and a systematic grid covering all horizons of the aquifer must be employed with respect to baseline ground water quality collection. This includes water quality information throughout the vertical extent of the affected aquifers and a spatially representative sampling protocol to provide the necessary information on ground water characteristics outside of the proposed mining zone, to

accurately characterize site conditions. Lastly, as noted by Dr. Abitz, any proposed methodology that seeks to average site conditions is inappropriate, as it results in a baseline plan which is inappropriately skewed toward demonstrating a lower overall water quality. Such an approach could exaggerate the true extent of any naturally diminished water quality resulting from the presence of uranium and other heavy metals in the aquifer region. Dr. Abitz' report, and each of the critiques contained therein (including air sampling protocol issues) along with the references cited, are expressly incorporated into these comments as if fully set forth herein. Apart from failing to set forth a competent baseline in the DSEIS, the issues described in Dr. Abitz' memo have not been described or otherwise addressed in the DSEIS.

Of particular note concerning the lack of meaningful baseline data are the thousands of historic drill and bore holes within the project area. The DSEIS admits that these bore holes exist and could cause serious environmental impacts by providing a pathway for spread of contamination in the groundwater. DSEIS at 3-20. The DSEIS also admits that pump test data is necessary "to demonstrate that solutions can be controlled with typical wellfield bleed rates and to detect and identify leakage due to anomalies such as improperly plugged wells and exploration boreholes." DSEIS 2-18. However, instead of requiring that Powertech collect the necessary data for analysis in the DSEIS, NRC attempts to entirely evade this issue with statements that "[w]hile the applicant cannot confirm that all historic borings were properly plugged and abandoned, the applicant has made commitments to ensure that unplugged drill holes will not impact human health or the environment during operations." DSEIS at 3-20. Such unsupported assertions do not comply with NEPA's "hard look" mandate. NRC does not identify the source of the Powertech's "commitments," nor how Powertech proposes to "ensure" such protections. Indeed, NRC attempts to argue simply that "there is no other evidence indicating that previously unplugged borings are current groundwater flow pathways." *Id.* Citing to a lack of evidence is of little value in terms of NEPA compliance when NRC proposes to simply defer collection of that very data that would provide that information. Simply put, NRC cannot simply state that no evidence exists when there are methods to acquire such information that can, and will be employed at a later date to, analyze this issue. Avoiding scrutiny of a difficult problem by deferring collection and analysis of such critical information until after license approval cannot stand up under NEPA.

Even if deferral of necessary data collection was allowable, there in fact is evidence that the historic drill holes provide a conduit for ground water migration. The DSEIS states that in the southwest corner of the Burdock area there is "groundwater [] discharging to the ground surface from the Fall River aquifer and Chilson aquifer (Chilson Member of the Lakota Formation) through improperly plugged exploratory boreholes." DSEIS at 3-23. This information necessitates a more detailed review of the issue of historic wells or bore holes – and requires that any feasible pump tests or other analysis be performed as part of the NEPA process, with necessary opportunities for public and agency review and comment, in order to assess the potential impacts of the project.

Additionally, the DSEIS identifies areas where the Fall River aquifer proposed to be mined is not hydrologically confined. Instead of requiring the collection of the data necessary to determine the potential impacts of mining in this unconfined aquifer, NRC instead suggests that "[t]he applicant has committed, as part of the license condition, to conduct additional hydrogeological investigations...." DSEIS at 3-37. As with the other fundamental gaps in meaningful data, this lack of baseline data collection as part of the NEPA process severely undermines the public's (and the agencies') ability to understand and evaluate the potential impacts of the operation. Indeed, it appears throughout the DSEIS that any time there is a question about the impacts, instead of requiring collection of the data necessary to do a proper analysis, NRC and BLM simply allow the company to defer collection of any

data to a later (post-NEPA) time – then claim that “no evidence” exists to demonstrate serious impacts would occur. This is backward. The burden is on the applicant in an NRC proceeding to demonstrate the ability to protect the environment and the public health and on NRC to comply with NEPA. Citing to a lack of evidence when it is due to a lack of any meaningful investigation, is not allowable.

Lastly, this lack of meaningful information is not limited to water impacts. For example, with regard to air impacts, the DSEIS states that “[t]he applicant committed to perform additional air dispersion modeling before the final SEIS is prepared.” DSEIS at xxxvii. Deferral of data gathering with respect to air is no more justifiable than for water. Further, presentation of new data in a Final EIS, without disclosing it in a draft and providing for public review and comment, violates NEPA’s public disclosure and participation requirements.

Many of these issues regarding lack of characterization, baseline data collection, or evidence of ability to contain contamination once ISL mining begins were addressed in detail in the Declaration of Robert Moran, which was attached to the Oglala Sioux Tribe’s Petition to Intervene in this matter. Dr. Moran’s previous testimony is attached hereto as Exhibit 3 and is expressly incorporated into these comments, as if set forth fully herein. As a result, NRC and BLM must address each of Dr. Moran’s critiques in the context of the SEIS and its obligation to respond to comments.

Mitigation Measures Are Not Adequately Analyzed

NEPA requires the agencies to: (1) “include appropriate mitigation measures not already included in the proposed action or alternatives,” 40 CFR § 1502.14(f); and (2) “include discussions of: . . . Means to mitigate adverse environmental impacts (if not already covered under 1502.14(f)).” 40 CFR § 1502.16(h). NEPA regulations define “mitigation” as a way to avoid, minimize, rectify, or compensate for the impact of a potentially harmful action. 40 C.F.R. §§ 1508.20(a)-(e). “[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the ‘action-forcing’ function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.” Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 353 (1989).

Specifically in the mining context, federal courts hold that NEPA also requires that the agency fully review whether the mitigation will be effective. See South Fork Band Council v. Dept. of Interior, 588 F.3d 718, 728 (9th Cir. 2009). “The [agency’s] broad generalizations and vague references to mitigation measures ... do not constitute the detail as to mitigation measures that would be undertaken, and their effectiveness, that the [agency] is required to provide.” Neighbors of Cuddy Mountain v. U.S. Forest Service, 137 F.3d 1372, 1380-81 (9th Cir. 1998). The DSEIS’s reliance on a future, as yet-unsubmitted, mitigation to prevent/mitigate adverse impacts to these resources also violates NRC and BLM duties under NEPA and the National Historic Preservation Act [NHPA]. The NHPA, and its implementing regulations, require full review of these impacts as part of the public review process – something which has not occurred here.

Thus, to the extent NRC and BLM rely on mitigation for any impacts, such mitigation must be specifically spelled-out, at least in reasonable detail, and the effectiveness of the proposed mitigation must be analyzed. In this case, the DSEIS expressly relies on mitigation in justifying a preliminary recommendation to issue the proposed license. DSEIS at xlv, xxx. Unfortunately, the proposed mitigation consists overwhelmingly of a list of plans to be developed later, outside the NEPA process. DSEIS at 6-1 through 6-19. Much like the failure to analyze baseline data, the DSEIS fails to provide the

any of the required detailed analysis of proposed mitigation measures, and makes no attempt to evaluate the effectiveness of any of the proposed mitigation. For instance, the DSEIS repeatedly refers to Powertech's commitment to restore groundwater back to its pre-mining condition. "The applicant will also be required to restore groundwater parameters affected by ISR operations to levels that are protective of human health and safety." DSEIS at 2-69. The DSEIS similarly simply states that Powertech will be required to restore aquifers to background concentrations. DSEIS at 4-51, 5-52, 4-64. However, such assurances, without any evaluation of how effective these restorations efforts are expected to be, do not satisfy NEPA.

Here, historic evidence demonstrates that ISL uranium mines have a very poor record of restoring ground water aquifers – in fact, none have ever actually restored an aquifer. Indeed, as recently described by the U.S. Geological Survey, **"to date, no remediation of an ISR operation in the US has successfully returned the aquifer to baseline conditions. Often at the end of monitoring, contaminants continue to increase by reoxidation and resolubilation of species reduced during remediation."** J.K. Otton, S. Hall, "In-situ recovery uranium mining in the United States: Overview of production and remediation issues," U.S. Geological Survey, 2009 (IAEA-CN-175/87)(emphasis added)(attached as Exhibit 4). Similar post-mining increases in contamination levels in impacted aquifers are described in more detail in other USGS publications. See Hall, S. "Groundwater Restoration at Uranium In-Situ Recovery Mines, South Texas Coastal Plain," USGS Open File Report 2009-1143 (2009)(attached as Exhibit 5). Independent research focused on ISL uranium mining efforts in Texas also demonstrated the ineffectiveness of industry and regulatory agency assurances of the ability to restore aquifers to pre-mining water quality. Darling, B., "Report on Findings Related to the Restoration of In-Situ Uranium Mines in South Texas," Southwest Groundwater Consulting, LLC (2008) (attached as Exhibit 6). These issues echo the issues regarding repeated failures of industry and regulators to meet pollution control assurances as set forth in the Oglala Sioux Tribe's successful Petition to Intervene in the Dewey-Burdock licensing process. Petition to Intervene at 1-11 (attached as Exhibit 7). Lastly, recent investigative journalism pieces have also exposed the lack of effective mitigation for ISL uranium mining operations such as that proposed at Dewey-Burdock. See Lustgarten, Abrahm, "On a Wyoming Ranch, Feds Sacrifice Tomorrow's Water to Mine Uranium Today," ProPublica, Dec. 26, 2012 (attached as Exhibit 8).

The ISL industry's historic and ongoing inability to control aquifer contamination and restore groundwater impacted by ISL uranium mining must be acknowledged and competently addressed within the NEPA process. While the DSEIS presents some general methods for restoration of the groundwater following mining operations, it does not provide detail as to how this proponent expects to succeed where all others have failed, assess any objective criteria for the effectiveness of these methods, nor how these issues affect the potential impacts of the proposed project. A detailed evaluation of the effectiveness of any proposed mitigation measure is required by NEPA. This lack of analysis of proposed mitigation measures is expansive, and not limited to ground water mitigation. The current mitigation measure list consists of a multi-page chart which simply lists each proposed mitigation measure, with no elaboration or other analysis of how the operator expects to accomplish these items, or how effective each is expected to be (if at all), as required by NEPA. To comply with NEPA, each mitigation measure must be detailed with specific description, supporting data, and analysis of process and effectiveness within the context of a Draft NEPA document. As it stands, the NRC and BLM must conduct this necessary work, then re-issue the DSEIS for meaningful public and agency review.

Cumulative Impacts Have Not Been Adequately Addressed

“The CEQ regulations require agencies to discuss the cumulative impacts of a project as part of the environmental analysis. 40 C.F.R. § 1508.7.” Davis v. Mineta, 302 F.3d at 1125 (10th Cir. 2002). “Of course, effects must be considered cumulatively, and impacts that are insignificant standing alone continue to require analysis if they are significant when combined with other impacts. 40 C.F.R. §1508.25(a)(2).” New Mexico ex rel. Richardson, 565 F.3d at 713, n. 36. Federal courts have recently interpreted the cumulative impact requirement in the mining context:

In a cumulative impact analysis, an agency must take a “hard look” at all actions. [A NEPA] analysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment. ... Without such information, neither the courts nor the public ... can be assured that the [agency] provided the hard look that it is required to provide.

Te-Moak Tribe of Western Shoshone, 608 F.3d 592, 603 (9th Cir. 2010) (rejecting NEPA document for mineral exploration that had failed to include detailed analysis of impacts from nearby proposed mining operations).

A cumulative impact analysis must provide a “useful analysis” that includes a detailed and **quantified** evaluation of cumulative impacts to allow for informed decision-making and public disclosure. Kern v. U.S. Bureau of Land Management, 284 F.3d 1062, 1066 (9th Cir. 2002). The NEPA requirement to analyze cumulative impacts prevents agencies from undertaking a piecemeal review of environmental impacts. Earth Island Institute v. U.S. Forest Service, 351 F.3d 1291, 1306-07 (9th Cir. 2003).

The NEPA obligation to consider cumulative impacts extends to all “past,” “present,” and “reasonably foreseeable” future projects. Great Basin Mine Watch v. Hankins, 456 F.3d 955, 971-974 (9th Cir. 2006) (requiring “mine-specific ... cumulative data,” a “quantified assessment of their [other projects] combined environmental impacts,” and “objective quantification of the impacts” from other existing and proposed mining operations in the region).

This cumulative impacts analysis thus must address not only past uranium mining in the region, including the abandoned and unreclaimed uranium mines within the project area, but also present and foreseeable uranium development. In particular, Powertech admits that this facility is proposed to be used as a processing site for ongoing uranium mineral development in the region, even identifying specific projects that would provide future feed the Burdock regional processing/milling facility:

It is likely that the CPP at the Burdock site will continue to operate for several years following the decommissioning of the Proposed Action well fields. The CPP may continue to process uranium from other ISL projects such as the nearby Powertech (USA) satellite ISL projects of Aladdin and Dewey Terrace planned in Wyoming, as well as possible tolling arrangements with other operators.

Dewey-Burdock Project Application for NRC Uranium Recovery License Fall River and Custer Counties South Dakota Technical Report at p. 1-8. Indeed, Powertech specifically asserted that future processing of ore from the Aladdin and Dewey Terrace facilities are part of the “Proposed Action” included in the Dewey-Burdock license application:

It is likely that the CPP at the Burdock site will continue to operate for several years following the D&D of the project well fields. **The Proposed Action is for the plant to continue to receive and process uranium loaded resins from other Proposed Projects such as Powertech's nearby Aladdin and Dewey Terrace Proposed Satellite Facility Projects planned in Wyoming or from other licensed ISL operators or other licensed facilities generating uranium-loaded resins that are compatible with the Powertech (USA) production process.**

Dewey-Burdock Project Application for NRC Uranium Recovery License Fall River and Custer Counties, South Dakota, Environmental Report, February 2009 at p. 1-25 (emphasis added).

Despite the project proponent's inclusion of these future activities in the application, the DSEIS mentions these mining projects only briefly in the "affected environment" portion of the document with no analysis of the impacts. See DSEIS at 3-6. This omission is glaring light of acknowledgment that the Aladdin project is only 8 miles away (DSEIS at 3-6) – and Powertech's aggressive advancement of the Aladdin project and Dewey-Terrace project. See Powertech press release and NI 43-101 report (attached as Exhibit 9). Other mining development in and around the Black Hills region must be evaluated, including the Cameco operations in Nebraska and the proposed Bear Lodge rare earth minerals mine.

Also of concern with respect to cumulative impacts are those associated with the Black Hills Ordnance Depot. Issues of soil and ground water contamination associated with this site are well-documented. The cumulative impact analysis must address potential exacerbation of ground water contamination associated with chemicals from the Depot caused by the proposed Dewey-Burdock project, including ground water pumping both for mining purposes and for fresh water use, along with deep injection disposal.

The DSEIS Fails to Consider All Reasonable Alternatives

The range of alternatives is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. NEPA requires agencies to "rigorously explore and objectively evaluate" a range of alternatives to proposed federal actions. See 40 C.F.R. §§ 1502.14(a) and 1508.25(c). "An agency must look at every reasonable alternative." Northwest Env'tl. Defense Center v. Bonneville Power Admin., 117 F.3d 1520, 1538 (9th Cir. 1997). An agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. City of Tenakee Springs v. Clough, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to considering more environmentally protective alternatives and mitigation measures. See e.g., Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094, 1122-1123 (9th Cir. 2002) (and cases cited therein).

NEPA requires that an actual "range" of alternatives be considered, so that the Act will "preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only one alternative (i.e. the applicant's proposed project)." Colorado Env'tl. Coalition v. Dombeck, 185 F.3d 1162, 1174 (10th Cir. 1999), *citing* Simmons v. United States Corps of Engineers, 120 F.3d 664, 669 (7th Cir. 1997). This requirement prevents the EIS from becoming "a foreordained formality." City of New York v. Department of Transp., 715 F.2d 732, 743 (2nd Cir. 1983). See also Davis v. Mineta, 302 F.3d 1104 (10th Cir. 2002).

Numerous unexplored and unreviewed alternatives exist. For instance, the NRC should consider an alternative that precludes adoption of any Alternate Concentration Limits (ACL's) for ground water restoration. This is a reasonable alternative, as this is the law in places such as Colorado. Further, NRC

should consider an alternative of allowing the proponent to move forward with mining of additional well-fields only upon a demonstration that it has operated without excursions, and has restored and demonstrated long-term stability of restoration in previously-mined well-fields. Along these lines, NRC should consider an alternative of allowing operations at either the Dewey or Burdock areas only upon a demonstration that the other area has been successfully mined without excursion and with full, stable, restoration, and only allowing uranium extraction to occur in areas of the aquifers demonstrated to be confined – and disallow any extraction from aquifers, or portions of aquifers, for which the applicant has not yet demonstrated confined conditions.

The Project Does Not Comply with the 1872 Mining Law or the Administrative Procedure Act

The operation violates the 1872 Mining Law and the Administrative Procedure Act. Powertech proposes to use lode mining claims for purposes entirely unrelated to the extraction of valuable minerals, despite the requirement that all lode mining claims contain valuable mineral deposits. In fact, the materials provided by Powertech to the BLM and EPA demonstrate that Powertech intends not to extract minerals from lode claims, but solely for deep disposal of toxic mining wastes. Instead of applying only the “unnecessary or undue degradation” under 43 C.F.R. part 3809 to these operations, the BLM must apply its full panoply of FLPMA authorities, including a public interest review and payment of fair market value.

The DSEIS rests on the erroneous assumption that Powertech that has a statutory right to develop federal mineral resources at the site. Thus, according to the DSEIS, Powertech has a statutory right to conduct its processing and waste injection disposal and other operations based solely on the fact that the company has blanketed the projects lands with mining claims. Here, Powertech has filed lode mining claims covering the federal surface lands and the private surface/federal mineral lands in the project area, including those where no actual mining is proposed (i.e., dumping, processing, and other ancillary uses).

According to the DSEIS, the filing of these claims establishes a right under the mining laws and confines the analysis of the project under BLM authority to only a review of whether the operation will cause “unnecessary or undue degradation” under FLPMA. DSEIS at xxvii – xxviii. This position is wrong. Such “rights” can only accrue to the company if these claims are valid under the 1872 Mining Law. Here, there is no evidence in the record that these claims are valid.

Without valid rights under the mining laws, Powertech is subject to the full scope of the BLM’s authority under FLPMA, the Multiple Use Sustained Yield Act, and other laws mandating that BLM manage these lands for non-mineral uses. This includes discretionary authority over the project based on a required public interest analysis, and the Fair Market Value (FMV) requirement for the use of public lands not covered by valid mining claims.

The DSEIS’s review and the BLM’s proposed approval of the Project are based on the overriding assumption that Powertech has statutory rights to use all of the public lands and subsurface at the site under the 1872 Mining Law. However, where Project lands have not been verified to contain, or do not contain, such rights, the BLM’s more discretionary multiple use authorities apply. Mineral Policy Center v. Norton, 292 F.Supp.2d 30, 46-51 (D.D.C. 2003); 30 U.S.C. § 22 (only “valuable mineral deposits” are covered by the Mining Law).

A proper application of BLM's multiple use, public interest, and sustained yield mandates to those areas not covered by valid claims would result in a very different Project review, alternatives, and level of protection for public land resources and values, as well as reducing or eliminating the adverse impacts to the use of these lands by members of the public and commenters.

The Mineral Policy Center court specifically recognized the federal government's duty to apply its broader, multiple use authority when mineral development operations are proposed on lands not subject to valid and perfected claims:

While a claimant can explore for valuable mineral deposits before perfecting a valid mining claim, without such a claim, she has no property rights against the United States (although she may establish rights against other potential claimants), and her use of the land may be circumscribed beyond the UUD standard because it is not explicitly protected by the Mining Law.

292 F.Supp.2d at 47.

The court was equally clear as to what was required to "perfect" a mining claim:

The Mining Law gives individuals the right to explore for mineral resources on lands that are "free and open" in advance of having made a "discovery" or perfected a valid mining claim. United States v. Locke, 471 U.S. 84, 86, 105 S.Ct. 1785, 85 L.Ed.2d 64 (1985). The Mining Law provides, however, that a mining claim cannot be perfected "until the discovery of the vein or lode." 30 U.S.C. § 23.

Id. at 46 n.19. For mining claims for which BLM has not determined are valid, pursuant to the Mineral Policy Center decision:

[b]efore an operator perfects her claim, because there are no rights under the Mining Law that must be respected, BLM has wide discretion in deciding whether to approve or disapprove of a miner's proposed plan of operations.

Id. at 48. In its review of the Project, the DSEIS never even considers this "wide discretion" to "approve or disapprove" any part of Powertech's Plan of Operations.

Regarding the requirement for the federal government to obtain Fair Market Value for the use of public lands not covered by valid claims, the court held that, under FLPMA, "the United States [must] receive fair market value of the use of the public lands and their resources unless otherwise provided for by statute." 43 U.S.C. §1701(a)(9). The court held that unless the lands were covered by valid claims (i.e. the situation "otherwise provided for by statute" in § 1701(a)(9)), the agencies must comply with their Fair Market Value duty:

Operations neither conducted pursuant to valid mining claims nor otherwise explicitly protected by FLPMA or the Mining Law (i.e., exploration activities, ingress and egress, and limited utilization of mill sites) must be evaluated in light of Congress's expressed policy goal for the United States to "receive fair market value of the use of the public lands and their resources." 43 U.S.C. § 1701(a)(9).

Id. at 51.

At Dewey-Burdock, the DSEIS fails to consider the application of these multiple use authorities, and related Fair Market Value requirements pursuant to Mineral Policy Center – in violation of FLPMA, the Mining Law, and their multiple use mandates, as well as the APA’s prohibition on arbitrary and capricious decisionmaking.

As the Interior Department has held:

Generally, absent the discovery of a “valuable mineral deposit” on each of the unpatented lode mining claims, ASARCO would not be entitled to the “exclusive right of possession and enjoyment of all the surface [of the claim]” and subsurface rights under 30 U.S.C. §§ 22 and 26, good against the United States, or ultimately to a patent of the claimed lands, pursuant to 30 U.S.C. §§ 22 and 29 (2000). Best v. Humboldt Placer Mining Co., 371 U.S. 334, 335-36 (1963); Wilbur v. Krushnic, 280 U.S. 306, 316-17 (1930); Cameron v. United States, 252 U.S. 450, 460 (1920); Cole v. Ralph, 252 U.S. 286, 294-96 (1920). In such circumstances, BLM would have discretion to modify or even reject an MPO filed to engage in mining operations and related activity. Great Basin Mine Watch, 146 IBLA 248, 256 (1998) (“Rights to mine under the general mining laws are derivative of a discovery of a valuable mineral deposit”).

Center for Biological Diversity, 162 IBLA 268, 278 (2004). “[T]he location of a mining claim does not render a claim presumptively valid and the Department may require a claimant to provide evidence of validity before approving an MPO or allowing other surface disturbance in connection with the claim.” Id. at 281.

In addition, BLM’s decision not to require the payment of Fair Market Value, and to limit its authority over the use of the ancillary lands, must be supported by substantial evidence in the record—evidence which does not exist. The agency cannot simply assume, without any evidence (and indeed the evidence points to the contrary) that the lands to be buried by the dumps and processing facilities are covered by valid mining claims. The Supreme Court has explained:

[A]n agency [decision] would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto Ins. Co., 463 U.S. 29, 43 (1983).

In this case, Powertech claims maps show that the lands proposed for the waste disposal, and other non-extractive uses do not contain the requisite valuable minerals (e.g., the mineralized zone is limited), the DSEIS’s assumptions of “rights” under the Mining Law are erroneous. At a minimum, the agencies’ assumptions of these rights/entitlements should be investigated and supported by detailed factual evidence – evidence lacking in the DSEIS.

The DSEIS Fails to Adequately Address Impacts to Cultural Resources, or Comply with the NHPA

The DSEIS violates NEPA and the NHPA because it fails to include a comprehensive analysis of cultural impacts. In fact, it appears that despite the application having been pending for some three years, there has yet to be done a competent cultural resource inventory of the site. Simply put, the NRC should not have released the admittedly incomplete DSEIS. Powertech had an obligation at the application stage to provide a competent analysis of cultural resources – and it failed to do so. The fact that the company has been either unwilling or unable to gather competent information does not provide a basis to pressure NRC staff to issue an incomplete DSEIS. It is not an excuse that the NHPA section 106 consultation duties are the responsibility of NRC and BLM, rather than that of Powertech. Powertech has no reasonable expectation that its proposed mine in an area of significant cultural importance would not require the requisite detailed review of cultural resources and impacts thereto. The fact that NRC decided instead to issue the DSEIS rather than complete its information violates NEPA's requirements to provide meaningful public comment or review. NRC should suspend the DSEIS process until such information is available, and reissue the draft when the necessary information is acquired and fully reviewed. Making matters worse, NRC appears poised to forgo any draft analysis of the cultural resources impacts, instead indicating only that "[r]esults of the [section 106] consultation will be presented in the final SEIS." DSEIS 1-22. NEPA and the NHPA prohibit any attempt to forgo a complete draft analysis of cultural impacts by going directly to final.

NRC Staff states that it is continuing to consult with certain Tribes. However, some of this consultation has not been as productive as anticipated by the Tribes, including the Oglala Sioux Tribe with respect to historical and cultural survey. See letters from the Tribes to NRC regarding the proposed contract by KLJ with the Turtle Mountain Band of Chippewa Indians and the Three Affiliated Tribes, attached as Exhibit 10. These two Tribes contacted the NRC by letter and stated that the proposed project would not have an affect on historic properties of importance and the THPO also stated that "determination of No Historic Properties Affected Is granted for the project to proceed." DSEIS at 1-17 to 1-18. Despite this response to project, the NRC accepted their participation and contract for the survey.

Furthermore, the Oglala Sioux Tribe and other Sioux Tribes by letters and email to NRC expressed concerns about the proposed contract and company selected (See Letters and Emails to NRC from Tribes from October 2012 to November 2012, including in Exhibit 10). The Oglala Sioux Tribe did request additional time to review the proposed contract but only given additional time to select one individual to participate in the survey with KLJ. (See email from NRC to Oglala Sioux Tribe dated November 2, 2012, included in Exhibit 10).

Significant Historical and Cultural Impacts Are Anticipated for Small Impacts to Local Economy

During the construction phase of the proposed project it is anticipated that there will be a small to large impact upon the historical and cultural resources. DSEIS at xxxix.

NRC is willing to issue a license by allowing Powertech to have an unexpected discovery plan to mitigate or relocate if possible of any historical or cultural resources are found. A plan which has not been drafted or presented to the public or other governmental agencies for review and comment. Id.

The proposed project is expected to have a small impact upon the socioeconomics of the area throughout all phases of the project DSEIS at xl. According to NRC, Operations of the Proposed Dewey-Burdock ISR Project will create new jobs but because of the small workforce size and because most

skilled workers will be drawn from areas outside of the region of influence, impacts on employment will not be noticeable. DSEIS at xl-xli.

The DSEIS Improperly Relies on Other Non-NEPA State and Federal Permits To Defer Review of Impacts

The DSEIS repeatedly relies upon state and other federal agencies to require appropriate mitigation measures to lessen impacts, and uses those permitting processes to simply defer analysis of impacts to these other agencies. For instance, in making its determination that impacts from the use of Class V underground waste injection wells is “small”, the DSEIS defers to the fact that “EPA will evaluate the suitability of the formations proposed for Class V well injection. Class V injection disposal will be allowed only when the applicant demonstrates liquid waste can be isolated safely in a deep aquifer.” DSEIS at 4-44. NRC similarly defers to a future EPA analysis related to the UIC Class III well permitting process and to the South Dakota state processes. DSEIS at 3-39, 4-54, 4-67, 4-68, B-3. In this way, the DSEIS simply defers analysis of the potential impacts to EPA permits under the Safe Drinking Water Act (SDWA). However, neither EPA UIC permits nor any South Dakota state permits are subject to NEPA.

The NRC is prohibited from such blind reliance on other agencies to conduct its analysis of the baseline, potential impacts, and proposed mitigation associated with a uranium mine proposal. See 10 C.F.R. § 51.71 (“The environmental impact of the proposed action will be considered in the analysis with respect to matters covered by environmental quality standards and requirements irrespective of whether a certification or license from the appropriate authority has been obtained.”). The DSEIS’ reliance on South Dakota permitting processes similarly cannot excuse NRC and BLM responsibilities to fully review the environmental impacts. South Fork Band Council v. BLM, 588 F.3d 718, 726 (9th Cir. 2009)(“A non-NEPA document -- let alone one prepared and adopted by a state government -- cannot satisfy a federal agency's obligations under NEPA.”).

Failure to Properly Account for Waste Disposal

The applicant proposes to rely on Reverse Osmosis (RO) for treatment of its liquid wastes. DSEIS 3-105. In fact, for the deep waste disposal alternative, Powertech proposes to rely primarily on RO for water treatment. DSEIS at 2-36, 4-33. The DSEIS does not competently account for the extent of the waste that will be generated. The DSEIS states, without any support, that Powertech will recover 70% of the treated water as usable permeate. DSEIS at 2-36, 4-33. However, according to government estimates, reverse osmosis can result in a loss of upwards to 95% of the liquid, which would be left in the waste, leaving a more significant waste stream than analyzed in the DSEIS. See University of North Dakota State University, “Reverse Osmosis” AE-1047 (2008), attached as Exhibit 11. This government document states that reverse osmosis is also prone to fail if not meticulously maintained, and further is not advised for larger volumes of water due to the significant water loss and waste associated with the process. The DSEIS must accurately review Powertech’s plan regarding waste disposal to analyze and compensate for these factors.

The DSEIS also fails to adequately address disposal options should the Class V Underground Injection Control permit be denied. The DSEIS states that “[i]f EPA does not grant the applicant a UIC permit, the applicant would need to rely solely on the proposed land application or seek an NRC license amendment to approve another disposal option before it initiated operations.” DSEIS at 2-54. The DSEIS must detail these other potential disposal plans as part of its discussion of impacts, alternatives analysis, and discussion of mitigation.

With respect to the proposed land application disposal, the DSEIS does not detail the water quality expected from the operation, nor detail any anticipated effectiveness of the proposed water treatment proposals. DSEIS at 2-49. The DSEIS does not detail any information regarding plans should the un-reviewed water treatment plan not perform as expected. These gaps are not condonable under NEPA. The effectiveness of any treatment plan directly affects the anticipated impacts of the proposal. Simply stating that Powertech “would” clean the water to standards, without any detailed analysis, does not meet NEPA’s analytical requirements.

Further, the DSEIS fails to properly account for impacts to wildlife resulting from land application of ISL wastes. The U.S. Fish and Wildlife Service has expressly stated that the agency “do[es] not recommend land application using center pivot irrigation for the disposal of in-situ mining wastewater.” U.S. Fish and Wildlife Service letter to NRC 9/5/07 (attached as Exhibit 12). This expert wildlife agency has published detailed information on the risks of selenium contamination resulting from disposal of ISL wastes via land application. U.S. Fish and Wildlife Service Contaminant Report Number R6/715C/00 (attached as Exhibit 13). The DSEIS must fully account for these impacts and present credible evidence and scientific evaluation addressing why these concerns do not apply in this instance. Anything short of a full review violates NEPA’s requirement to take a “hard look” at all environmental impacts.

The proposed project does include the option of surface water treatment of the waste produced during the mining process. The applicant identified several federally and state endangered species but failed to state how they will be affected by the project’s waste via land application. DSEIS at 3-43 to 3-60.

Reliance on the Generic Environmental Impact Statement is Unwarranted

At the time the GEIS was issued, substantial critical public comments regarding the process for the GEIS were lodged. NRC appears to not have taken up a discussion of any of the critiques offered on that document. As such, reliance on GEIS is not warranted. Because the GEIS itself did not comply with NEPA, both in process and in substance, it cannot be relied upon in this SEIS. NRC must fully review the comments submitted on the GEIS and assess how those comments affect this SEIS. Failure to do so allows the agency to rely on the GEIS without compliance with NEPA – a violation of NEPA that carries forward to the SEIS for the Dewey-Burdock proposal.

Solid 11e2 byproduct Impacts and Environmental Justice

Where a byproduct materials license is being contemplated in the licensing action, NEPA demands that on-site creation and storage of the solid 11e2 byproduct must be fully analyzed in a DSEIS along with an analysis of the plan for off-site shipment and disposal of the waste. Yet, the DSEIS does not analyze the impacts or potential mitigation measures for a range of alternatives available for storing and disposal of solid 11e2 byproduct during operations and during decommissioning and closure. Although some amount of 11e2 byproduct will be created during the operations phase, particularly related to maintenance, repair, and the rolling closure of well-fields, the anticipated type and amount of wastes are not identified in the DSEIS beyond a generic reference. DSEIS 2-10. Further, the DSEIS does not analyze the impacts or alternative plans to store these vaguely referenced solid 11e2 byproduct materials. Instead, the DSEIS contains only a vague intent to ship these materials to the Energy Fuels facility near Blanding, Utah and the Ute Mountain Ute Community at White Mesa. The DSEIS does not reveal that Energy Fuels does not have a disposal cell that is currently licensed to accept direct disposal

of such wastes at any of the Canadian Corporation's U.S. holdings. The confirmed lack of suitable on-site locations for disposal of solid 11e2 byproduct were not revealed or analyzed in the DSEIS.

Because off-site transport and off-site disposal of 11e2 byproduct is an integral part of the present federal action, these impacts and the impacts of on-site storage in anticipation of transport for off-site disposal must be revealed and analyzed in the DSEIS. This DSEIS for the licensing of the creation, storage, transport, and disposal of solid byproduct materials must include disclosure and analysis of reasons why the past and present management of the White Mesa Mill have been unable to meet state and federal standards. According to data published on the Mine Safety Health Administration website, recent inspections identified violations that resulted in tens of thousands of dollars of fines. Other issues of ongoing groundwater contamination and off-site air deposition of radioactive materials at the White Mesa Mill must also receive NEPA analysis. Because NRC relies on White Mesa as the disposal site for the wastes, the agency must analyze impacts associated with the operation and disposal of the Powertech wastes at the White Mesa location. Similarly, alternative disposal sites were improperly not identified or analyzed in the DSEIS – despite admissions that alternate sites may be necessary due to lack of any existing contract for solid 11e2 byproduct disposal space.

Additional and serious environmental justice issues are raised by the assumption that these solid 11e2 byproduct materials will be sent to San Juan County, Utah. Census data confirms that San Juan County, Utah is comprised of 49% “American Indian and Native Alaska persons.” <http://quickfacts.census.gov/qfd/states/49/49037.html>. “White persons not Hispanic” only comprise 44.2% of San Juan County's population, and 29.4% of the county population lives below the poverty line. *Id.*

The NRC's past practice of relying on project proponent assumptions and future promises to find a disposal site at some date after licensed wastes are created did not work at reactors. This repudiated practice of creating waste without a confirmed disposal site cannot be allowed to extend to the D-B ISL project. Even if this were permissible under UMTRCA and applicable NRC rules (esp. Appendix A), which it is not, NEPA requires that NRC must fully disclose and analyze the foreseeable impacts of solid 11e2 byproduct disposal. A new DSEIS must be prepared that confirms whether or not a licensed site currently exists to accept Powertech's solid 11e2 byproduct. Because the answer is likely 'no,' the lack of licensed disposal capacity contradicts Powertech's assumptions and a DSEIS built on the assumption that Powertech can obtain a contract for waste disposal space. A new DSEIS analysis must also analyze other potential alternative sites to ensure off-site capacity will be maintained open via license and contract to ensure space is available for disposal of solid 11e2 byproduct materials during decommissioning.

The present DSEIS is fatally flawed, as it fails to disclose and analyze the impacts of creation, storage, transport, and disposal of solid 11e2 byproduct. A new NEPA scoping notice must issue that reveals the project area for the 11e2 byproduct license includes the Utah disposal site and the transportation routes, as well as other reasonable alternative disposal plans.

Threatened and Endangered Species

Endangered Species Act Section 7 consultation was not completed, and imperiled species were glossed over in the DSEIS. However, the DSEIS at Section 3.6.1.2.2 “explains that sharp-tailed grouse (*Tympanuchus phasianellus*), ruffed grouse (*Bonasa umbellus*), and Greater sage-grouse (*Centrocercus urophasianus*) could potentially occur in the proposed project area.”

Although the Greater Sage-grouse is a candidate species, NEPA analysis is still required for impacts. Although relevant information is available, the DSEIS chose to ignore the studies and draft recommendations.

In August 2012, FWS issued a draft report to help achieve sage-grouse conservation objectives before the 2015 decision. Recommendations from these studies could be implemented at the proposed Dewey-Burdock ISR Project when they are finalized and become available.

DSEIS at 4-84. NRC need not, and indeed cannot, issue the DSEIS without incorporating the information into the analysis of impacts, and potential mitigation measures for this imperiled species.

The result is that the DEIS fails to provide the required analysis of the conservation objectives that could be adopted to protect the imperiled Greater sage grouse, and its habitat. There is no valid basis to delay the analysis until after the licensing decision is made. Instead, NEPA requires that the analysis be conducted at the earliest possible time. To the extent that generation of additional information is anticipated about foreseeable impacts, the supplementation process cannot be used to defeat NEPA's timely disclosure and analysis purposes.

Further, language used in the DSEIS could misinform the public and the decisionmaker, particularly where the indirect effects to the endangered whooping crane is expected to occur at the site during migration. DSEIS at 4-92.

No federally listed species are known to occur on the proposed Dewey-Burdock ISR Project site (FWS, 2010). No federal- or state-listed sensitive plant species, endangered or threatened plant species, or designated critical habitats were observed within the proposed project site during baseline wildlife surveys (Powertech, 2009a); therefore, there will be no direct impact to these species.

DSEIS at 4-91. Observation of a listed species within the project site is not relevant to the question of whether or not there will be a direct impact to these species. The analysis, having been arbitrarily constrained, must be presented in a new DSEIS that recognizes the on and off-site impacts on wildlife, including but not limited to those species listed under the Endangered Species Act.

Despite the USFWS determination that Whooping Cranes are expected to occur at the site, NRC staff made an arbitrary and contrary conclusion that finds no basis in the record:

NRC staff conclude that migrating whooping cranes will not likely occur at the proposed site based on their traditional migratory pathway (FWS, 2009). If cranes navigate west of the traditional migratory pathway, NRC staff conclude that it is likely cranes will select other appropriate habitat for roosting, resting, and foraging during the proposed ISR facility lifecycle, and that construction activities will not affect the existence of the species' population in the proposed project area.

DSEIS at 4-92. The appendix contains no effort to consult or gain USFWS concurrence in the NRC staff conclusion. Where the action clearly "may adversely effect" the whooping crane, consultation with USFWS must take place. NRC staff has not sought consultation, even though both USFWS and the DSEIS confirm that a "no effect" determination is not available for the Powertech Project. As confirmed by the Supreme Court, where staff's conclusions deviate from those of the USFWS regarding species impacts, "the action agency must not only articulate its reasons for disagreement (which ordinarily requires species and habitat investigations that are not within the action agency's expertise), [the action agency]

runs a substantial risk if its (inexpert) reasons turn out to be wrong.” Bennett v. Spear, 520 U.S. 154, 169 (U.S. 1997)(discussing possible criminal and civil penalties that may be imposed on agencies and “its employees”).

The DEIS also forwards an unreasonably bounded analysis regarding the Black-footed ferret:

Black-footed ferrets (*Mustela nigripes*) are not present in the site vicinity at this time (BLM, 2009a; FWS, 2010; SEIS Section 3.6.3). However, the presence of the black-tailed prairie dog (*Cynomys ludovicianus*) in the northwestern corner of the proposed project area provides potentially suitable habitat for the black-footed ferret.

Because there have been no occurrences of black-footed ferrets within the proposed project area and the prairie dog colony on the site is likely too small to support and sustain a breeding population of black-footed ferrets (as described in SEIS Section 3.6.3), NRC staff conclude that the proposed project construction would not result in a direct effect on current or future ferret populations.

DSEIS at 4-92 - 4-93. As with the whooping crane, the DSEIS does not document any attempt to seek USFWS concurrence or consolation regarding a listed species that the Powertech project “may effect.” Instead, the DSEIS reveals that suitable habitat exists within the project area.

On operations, the DSEIS makes a “no-jeopardy” conclusion without benefit of the ESA Section 7 consultation process. Although impacts are identified, there is no evidence that NRC’s determination is based on the necessary expertise and investigations.

“the impacts are expected to noticeably alter important attributes of the terrestrial environment; however, staff do not expect these impacts to threaten the continued existence of any species.”

DSEIS at 4-105(emphasis supplied”). See Bennett v. Spear, 520 U.S. 154, 158 (U.S. 1997)(describing statutory Section 7 process that is required to ensure an agency does not threaten the “continued existence” of listed species). As described above, the NRC and its employees ignore the ESA consultation requirements “at its own peril.” Id. at 169. Further, there is no basis to segregate the ESA consultation from the NEPA analysis.

Impacts from disposal of 11e2 byproduct materials, water disposal and decommissioning activities are expected to have a “MODERATE impact on vegetation, small- to medium-sized mammals, raptors, upland game birds, waterfowl and shorebirds, nongame and migratory birds, and reptiles. . .” DSEIS 4-106. However, a detailed examination of the impacts on wildlife from waste disposal is not provided. Most egregious, the impacts of transporting solid 11e2 byproduct materials to Utah are not analyzed. There is no mention of these foreseeable disposal and decommissioning impacts in the 2009 and 2010 correspondence with USFWS. For example, all travel routes to Utah implicate the listed Lynx. Proper consultation with USFWS will no doubt reveal other listed species beyond those identified by NRC staff.

Many other impacted and listed species must be examined in a correlated ESA consultation and NEPA analysis that is based on a project area for the 11e2 byproduct license that includes the assumed Utah disposal and the transportation routes. Section 7 consultation with USFWS must be engaged based on a full range of foreseeable impacts of the 11e2 byproduct licensing action, including the confirmed need for off-site disposal of solid radioactive materials during operation and closure.

Air Emissions

The DSEIS lacks current and confirmed information on air emissions and their impacts on various “receptors” in the region. Although not identified or analyzed in the DSEIS, these “receptors” include people, plants, animals, water bodies, soil, National Parks, etc. Instead of analysis based on a competent air emission dispersion model, the DSEIS provides a model based on admittedly incomplete and erroneous information.

This modeling used the initial emission inventory the applicant provided (Powertech, 2010a). However, the applicant revised the mobile source emission inventory in part to incorporate mitigation measures and improve the accuracy of the emissions expected from the ISR activities (Powertech, 2012d).

4-110. Instead of delaying the DSEIS to allow Powertech to provide correct information and modeling data, the DSEIS was released prematurely.

The applicant has committed to update the air dispersion modeling before the final SEIS is prepared (Powertech, 2012d). The final SEIS analyses would be based on this updated modeling. SEIS Section 4.7.1 describes the scope of this update, which would include PSD and Air Quality Related Values modeling for the Wind Cave National Park. The applicant has yet to complete the formal air quality permit process including providing any SDDENR-required documentation and information (Powertech, 2010a).

DSEIS at 4-114. Further, an emission inventory for PM_{2.5} particulate emissions, to which radioactive elements may attach and be dispersed via regional dispersion, were not available and were not considered in the DEIS dispersion modeling. DSEIS at C-16.

A DSEIS based on Powertech’s “commitment to provide accurate and useful information on air emissions in a final SEIS does not fulfill NRC’s NEPA duties. That portions of the emissions permitting is being done by another agency does not relieve NRC of the NEPA duty to analyze the direct, indirect, and cumulative impacts of the project in the DSEIS that is subjected to comment by the public and other agencies.

Further, averaging of wind speed and direction data across years, days, and hours masks the effects of notorious wind gusts that buffet the region. The annual wind rose data fails to account for seasonal differences in wind direction and velocity. DSEIS at 3-6. Narrower intervals should have been collected and used to provide a reliable impacts analysis. The DSEIS methodology is not compliant with any accepted methodology, resulting in an analysis that masks impacts of wind gusts and major wind storm events. The DSEIS does not analyze the impacts of radioactive and non-radioactive particulate emissions will vary greatly across the range from calm surface to the wind-driven waves that the freeboard is designed to hold. DSEIS at 2-57. However, the varying particulate and radon emission rates from the disposal of liquid 11e2 byproduct via evaporation are not analyzed.

The DSEIS makes no mention of the foreseeable impact of major wind storm events, including tornadoes, on the facility or the dispersion of emissions from the facility.

Unresolved questions of radioactive contamination at the site are related the DSEIS reliance on incomplete and incorrect emissions and meteorological data. Even though “[e]levated gamma readings are also present in the northern part of the Dewey area and are likely due to the deposition of windblown dust from the abandoned surface,” (DSEIS at 3-102), the DSEIS does not attempt to explain

the meteorological basis for the “Northeast Anomalous Area.” DSEIS at 3-94-96. An explanation is provided by published Custer, S.D. wind rose data that shows the dominant wind direction during the summer months in many parts of South Dakota blows from southeast, not the northeast, as is assumed by the annually averaged wind rose used in the DSEIS.

<http://climate.sdstate.edu/windrose/windrose.shtm> . The frequent south and east to north and west emissions dispersal in summer, along with the high wind speeds in July and August, has consequences for “receptors” to the north and east of the Powertech site.

There is no indication that the National Park Service has been invited to participate as a cooperating agency or to otherwise participate in the air emissions analysis, only a suggestion that such input will come after the DSEIS comment period has closed. DSEIS at 4-112. Although the DSEIS does not identify the specific “receptors,” the analysis of the air emissions and the impact on human health and environment must be provided for review and comment in a DSEIS.

Global Warming and Long-Term Impacts

The cumulative impacts analysis limits global warming to an arbitrary 10 year period. Although the project lifetime of the D-B ISL Project is not easily discerned from the DSEIS, it appears that there is a 6 year construction period, followed by 12 year operations, followed by an uncertain number of years for decommissioning. DSEIS at 4-205. The project lifetime set forth in the DEIS thus appears to exceed 20 years. This is in addition to the use of the CPP for additional satellite mines and proposed tolling agreements for other mining operations in the region.

The DSEIS should be reissued with a clearly articulated project lifetime and a cumulative impacts analysis that corresponds with the project lifetime and the foreseeable long-term impacts of the proposed project. Particular to global warming, the carbon disposal capacity of Earth’s atmosphere throughout the lifetime of the project should be addressed in a similar manner to the analysis used for the diminishing availability of solid waste disposal facilities. DSEIS at 3-106 (discussing waste disposal limitations based on receiving capacity). Whether the waste stream is carbon emissions or solid waste, the recognized lack of disposal capacity going forward must be analyzed beyond the arbitrary 10 year period used to bound the global warming analysis.

Cooperating Agencies

Consistent with NEPA’s “one EIS” requirement, all agencies of the federal government are required to cooperate in the analysis of a federal action to ensure a comprehensive and efficient analysis of the impacts on the environment from the perspective of present and future generations. 42 USC §§ 4331(a), 4332(2). The NEPA regulations implement the mandate that Federal agencies prepare NEPA analyses and documentation “in cooperation with State and local governments” and other agencies with jurisdiction by law or special expertise. 40 CFR §§ 1501.6, 1508.5. This requirement is consistent with the NEPA mandates that prevent the federal officials from delaying and segmenting analysis of a project so as to avoid the required analysis of the full project by sweeping difficult problems under the rug. Thus, it is mandatory for all federal agencies to be included as cooperating agencies where such agencies have jurisdiction or special expertise. Although it is not mandatory for all federal, state, and local governments to participate, it is the lead agency’s duty to take the necessary steps at the “earliest possible time” to provide a meaningful opportunity for such government entities to participate as cooperating agencies.

The NRC staff, in preparing the DSEIS, was required to utilize the analysis and proposals of the “cooperating agencies” to the “maximum extent possible.” 40 CFR §§ 1501.6(a)(2). Instead, the NRC has ignored its lead agency responsibilities by unilaterally producing a NEPA analysis that fails to provide the required “hard look” at a range of issues, informed and identified by the participation of relevant state, federal, local, and Tribal agencies.

The DSEIS does not identify any attempt by the NRC to invite or to ensure the participation of all relevant cooperating agencies. This unlawful approach insulates the NRC from the give-and-take NEPA analysis promotes among those agencies with jurisdiction and special expertise. Inviting the participation of “cooperating agencies” is necessary to examine the full range of infrastructure problems and environmental impacts. The participation of these cooperating agencies will allow responsible federal and state agency personnel to voice their concerns and to work with other agencies to identify and address impacts, alternatives, and mitigation measures identified in other portions of these comments.

The DSEIS identifies many entities that are required, by law, to be invited to participate in the NEPA process. Federal agencies with expertise and/or jurisdiction over impacts of the project include the Army Corps of Engineers, Fish and Wildlife Service, Environmental Protection Agency, Federal Energy Regulatory Commission, and U.S. Department of Transportation, among others. Local and state entities include agencies from South Dakota, Wyoming, Colorado, and Utah such as the Department of Transportation, Department of Public Health and Environment, Wildlife and Parks, Water Engineers Office, and neighboring municipalities.

Relevant Indian Tribes, including the Oglala Sioux Tribe should also have been invited to participate as cooperating agencies on a government-to-government basis. Instead, the Tribal interests have been relegated to cultural and archeological interests. Other Tribal governments, including the Ute Mountain Ute Tribe located next to the proposed 11e2 byproduct disposal cells, must be invited to participate as cooperating agencies.

The “cooperating agency” requirement cannot be remedied at this late stage in the NEPA process. Instead, the NRC needs to return to the scoping stage, where the cooperating agencies can assist in constructing a NEPA analysis that reveals the full range of impacts and alternative courses of action that are familiar to the regional governments, but are largely foreign to distant NRC staff. By meeting this requirement, the analysis benefits the fullest range of federal, state, and local government agencies and the public interest.

There is no indication that BLM actually participated in the NEPA process. Instead, the DSEIS confirms that, “To fulfill this requirement, the applicant submitted a POO to BLM for the Dewey-Burdock ISR Project on August 26, 2009. Powertech modified the POO and resubmitted it to BLM on January 28, 2011.” DSEIS at xxvii, same at 1-1. Nothing more appears to have been done to involve BLM in this NEPA process. Although the POO review involved BLM’s FLPMA jurisdiction and land management duties, there is no indication in the DSEIS that BLM has been engaged in the NEPA process in any way other than being named a cooperating agency in the DEIS.

Staff Recommendations Have Unlawfully Preceded Final EIS

It is a basic requirement of NEPA that “the moment at which an agency must have a final statement ready ‘is the time at which it makes a recommendation or report on a proposal for federal

action.” Kleppe v. Sierra Club, 427 U.S. 390, 406 (U.S. 1976) *quoting* Aberdeen & Rockfish R. Co. v. SCRAP, 422 U.S. 289, 320 (1975) (SCRAP II) (emphasis in original).

By contrast, NRC staff has issued numerous recommendations in support of the issuance of the requested license. The most recent are a series of draft licenses - one in July 2012 and one in January 2013. Where the draft licenses serve as an agency recommendation on the action to be taken on the application, staff has acted under its relevant authorities in a manner that violates the statutory mandates of NEPA for fully informed, reasoned decisionmaking. Id.

Although it may have been proper to include a draft license as the “preferred alternative” to be compared across a range of alternatives, the DSEIS did not take that approach. Instead, the draft license has been prepared concurrently with the DSEIS. When the Tribe requested more time to provide comments on the draft license, this request was denied. Email exchange attached as Exhibit 14. Instead, staff confirmed that the DSEIS was issued without first obtaining the necessary information:

To the contrary, the analysis in certain sections of the DSEIS presumes that Powertech will later submit information to address outstanding issues, and the changes to the draft license reflect information that Powertech has submitted over the last five months.

Id. The courts have long rejected NRC staff’s current approach as contrary to one of the substantive statutory purposes of an EIS, which “helps insure the integrity of the process of decision by precluding stubborn problems or serious criticism from being swept under the rug.” Silva v. Lynn, 482 F.2d 1282, 1285 (1st Cir. 1973). Assembling and including information on outstanding issues before the DSEIS is released for comment is a crucial part of the give and take of the NEPA process.

Moreover, where comments from responsible experts or sister agencies disclose new or conflicting data or opinions that cause concern that the agency may not have fully evaluated the project and its alternatives, these comments may not simply be ignored. There must be good faith, reasoned analysis in response.

Id. See also National Audubon Society v. Hoffman, 132 F.3d 7, 12 (2d Cir. 1997)(An EIS “insures the integrity of the agency process by forcing it to face those stubborn, difficult-to-answer objections without ignoring them or sweeping them under the rug’ and serves as an ‘environmental full disclosure law so that the public can weigh a project’s benefits against its environmental costs.’”).

Instead of the following the process required by NEPA, the DSEIS has been prepared in a manner where outstanding issues are being unlawfully shielded from scrutiny of the public and other agencies, both of which are integral to the NEPA process. See 40 C.F.R. § 1508.7 (EIS must analyze direct impacts of a proposed action and the indirect and cumulative impacts of “past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” These deficiencies cannot be remedied by simply issuing a final SEIS or addressing these “outstanding issues’ after license is issued based on of staff recommendations in the form of a series of draft licenses, all of which were prepared without NEPA scrutiny. These NEPA deficiencies must be remedied by reissuing a scoping notice that identifies these issues, and presents them for review by the Tribe, the public and other agencies in the NEPA document at the earliest possible time.

Submitted this 10th day of January, 2013,

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