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

In the Matter of	)	Docket No. 40-8943-MLA-2
	)	
CROW BUTTE RESOURCES INC.	)	ASLBP No. 13-926-01-MLA-BD01
	)	
(Marsland Expansion Area)	)	May 30, 2018

THE OGLALA SIOUX TRIBE'S MIGRATED, RENEWED, AND NEW MARSLAND EXPANSIONFINAL ENVIRONMENTAL ASSESSMENT CONTENTIONS

The Oglala Sioux Tribe ("Tribe" or "OST") submits the following contentions based on the Board's Scheduling Order dated April 20, 2017 ("Scheduling Order") (ML 17110A258), and the Final Environmental Assessment (April 2018) ("Final EA") (ML 18103A145) for the Marsland Expansion Area License Amendment Application of Crow Butte Resources, Inc. ("Crow Butte" or "CBR", also referred to as the "Crow Butte Operation" or "CBO"). The following contentions are divided into three types: (1) Migrated OST Contention 2 pursuant to LBP 18-02; (2) New Contentions based on information arising between the date of the publication of the draft environmental assessment ("Draft EA) and the publication of the Final EA; and (3) Renewed Contentions that are being re-submitted in order to perfect them for appeal and/or resolution at the international level.

MIGRATED CONTENTION DECLARATION

Pursuant to the Scheduling Order and the Board's Memorandum and Order of March 16, 2018 (Granting in Part and Denying Part Motion to Deny Migration of Environmental Portion of Contention 2) (ML 18075A253), the Tribe hereby makes the following "Migration Declaration": The Tribe declares that the hybrid environmental/scientific migrated contention as stated by the Board in LBP 18-02, revised to refer to the Final EA, is asserted as follows:

<u>OST CONTENTION 2</u>: Failure to Include Adequate Hydrogeological Information to Demonstrate Ability to Contain Fluid Migration

The application and final environmental assessment fail to provide sufficient information regarding the geological setting of the area to meet the requirements of 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2); the National Environmental Policy Act; and NUREG-1569 section 2.6. The application and draft environmental assessment similarly fail to provide sufficient information to establish potential effects of the project on the adjacent surface and ground-water resources, as required by NUREG-1569 section 2.7, and the National Environmental Policy Act.

More specifically, the scope of the safety and environmental concerns encompassed by this contention include the following:

(1) the adequacy of the descriptions of the affected environment for establishing the potential effects of the proposed MEA operation on the adjacent surface water and groundwater resources;

(2) exclusively as a safety concern, the absence in the applicant's technical report, in accord with NUREG-1569 section 2.7, of a description of the effective porosity, hydraulic porosity, hydraulic conductivity, and hydraulic gradient of site hydrogeology, along with other information relative to the control and prevention of excursions;

(3) the failure to develop, in accord with NUREG-1569 section 2.7, an acceptable conceptual model of site hydrology that is adequately supported by site characterization data so as to demonstrate with scientific confidence that the area hydrogeology, including horizontal and vertical hydraulic conductivity, will result in the confinement of extraction fluids and expected operational and restoration performance; and

(4) whether the draft EA contains unsubstantiated assumptions as to the isolation of the aquifers in the ore-bearing zones.

I. INTRODUCTION

Pursuant to 10 C.F.R. § 2.309, and this Board's Scheduling Order, the Oglala Sioux Tribe ("Tribe" or "OST" or the Oglala Sioux Nation) and its citizens, the Lakȟóta Oyate (people), a sovereign nation of the *Očhéthi Šakówiŋ* (the Great Sioux Nation), submit the following Contentions in regard to the Final Environmental Assessment issued by the US NRC on the Crow Butte Resources, Inc. License Amendment Application for the Marsland Expansion Area.

The Final EA for the Marsland Expansion Area (MEA) fails demonstrate that the NRC has jurisdiction over this matter and further fails to meet the requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4231, *et seq.*, the National Historic Preservation Act (NHPA), 16 U.S.C. § 470, *et seq.*, and implementing regulations, including NRC regulations in 40 C.F.R. Part 51, specifically including 10 CFR §51.45, §51.10, §51.70, and §51.71, because the Final EA does not provide analyses that are adequate, accurate, and complete in all material respects to (i) demonstrate compliance with all laws, including treaties, international law, and human rights obligations; (ii) sufficiently demonstrate that spiritual, cultural, and historic resources within the project area and the affected area are identified and protected pursuant to both NEPA and Section 106 of the NHPA; or (iii) adequately describe the affected area and environment and the potential impacts upon them. The Final EA does not satisfy NEPA's "hard look" standard which requires broader considerations of the cultural and historic interests of the Tribe and its citizens (members), including spiritual and other non-tangible interests as well as a comprehensive evaluation and description of known impacts. It fails to conduct a required proper Environmental Justice analysis under NEPA that considers the interests of the Tribe and its members.

On March 16, 2018, after publication of the December 2017 Draft Environmental Assessment (Draft EA) (ML 17334A870) in this proceeding and before publication of the Final EA, the NRC Staff issued a letter in the Powertech Dewey-Burdock proceeding which describes the NRC Staff's adopted approach to resolve the cultural resources survey issues. See Letter dated March 16, 2018 from NRC Staff to OST, attached hereto as Exhibit A (the "NRC PT Survey Letter"). ML 18074A232. The NRC PT Survey Letter provides that the field survey will be conducted using a survey methodology that will be established in coordination with the NRC, with the support of a contractor, and the Lakota Sioux Tribes in, advance of the field survey. Thus, larger landscape-level TCP and non-tangible considerations are on the table and the Lakota Sioux Tribes, including the OST, have the ability to determine and lead the development of the scope/protocol of the survey. In the Powertech Dewey-Burdock proceeding, the OST did obtain two separate visits to the site, with interviews with tribal elders/treaty councils in between – as well as access to all the draft reports, plus formal comment submission opportunities.

This approach has been adopted by the NRC Staff and has been tentatively agreed to by the OST and is being implemented with the cooperation of the licensee in that proceeding. Because the issues arising in the Powertech Dewey-Burdock proceeding related to a failure to agree upon an approach for cultural resources surveys[1] have also arisen in this proceeding and because the same issues are required to be adequately described and evaluated under NEPA, the Final EA should have disclosed the agreed upon approach in Powertech Dewey-Burdock and should have included an adequate description and analysis of the same.

[1] The Board's decision on this issue in the Powertech proceeding and its relevance and application to the issues before the Board the Marsland matter are discussed in more detail in Contentions J and K.

The relevant point is that NRC Staff has acknowledged that a reasonable approach to obtaining competent cultural resources information is to conduct a survey with the participation of the relevant Tribes, including the OST – which has not occurred at the Crow Butte sites, including Marsland. Therefore, the Final EA should have contained a clear and concise description of the Powertech Dewey-Burdock implemented approach and a discussion concerning the potential applicability of the same approach at the Crow Butte sites, including Marsland.

On April 2, 2018, after the December 2017 publication of the Draft Environmental Assessment in this proceeding and before publication of the Final EA, CBO notified the NRC that it had ceased production at the Crow Butte mine. *See*, Letter dated April 2, 2018 from CBO to NRC re: Source Material License SUA-1534; Notification of Cessession [sic] of Production at the Crow Butte Mine (ML 18093A186) (the "Cessation Notice"). The Cessation Notice states that on February 5, 2018, CBR's parent, Cameco Resources, announced its plan to cease production at all United States operations, including the Crow Butte mine.

The Cessation Notice states that as of March 23, 2018, Crow Butte had reduced production and injection flows from Mine Units 7,8,9,10 and 11[2] but that due to disposal limitations associated with Deep Disposal Well No. 1 ("DDW 1), some production and injection flows remain to assist with control of mining fluids. The Cessation Letter also states that DDW 1 had returned to service on March 20, 2018 and that all remaining production and injection will be shut off on or before June 2, 2018 which is 60 days from the Cessation Notice. CBO has represented to NRC that the mining units will thereafter operate only to maintain a 'small' bleed flow for controlling mining fluids.

[2] Mining Units 1-6 had previously ceased production.

The Cessation Notice requests "standby status" for the ISL/ISR mine. It states that "all production equipment will remain in standby to provide the option to restart full operations in the future should market conditions warrant." CBO stated that it will request to defer equipment decommissioning for all mine units. CBO further stated that it would be requesting a change to the License to "Possession Only" in the 'second half of 2018.'

On April 3, 2018, after December 2017 publication of the Draft EA in this proceeding and before publication of the Final EA, CBO submitted to the NRC a request for a license amendment with respect to LC 10.6 for an alternate decommissioning (groundwater restoration) schedule for Mining Units 2,3,4,5 and 6. See April 3, 2018 Letter re: Request for Alternate Decommissioning (Groundwater Restoration) Schedule License SUA-1534 (November 2014) (the "Extension Amendment Request") (ML 18102A539).

Crow Butte initially planned for MU 2 to be in stability monitoring by July 1, 2012 after lixiviant injection ceased in 1996. Stability monitoring started about a year late in June 2013 but several of the monitored constituents still do not meet the concentration limits under 10 CFR 40, Appendix A, Criterion 5(B)(5), after twenty-two (22) years of 'restoration'. Based on this, CBO intends to submit an application for an amendment to allow Alternate Concentration Limit (ACL)s for MU 2. CBO states that ACLs are required because MU2 and MU3 are very close to each other.

MU 3 ceased production in 1999; stability monitoring was initiated in 2013 but the concentration limits in Appendix A, Criterion 5(B)(5) have not been met after 19 years of 'restoration' so CBO plans to submit ACLs for MU 3. CBO began "spot treatment" of MU 3 in September 2017.

MU 4 ceased production in 2003 and has been in 'restoration' for 15 years. CBO plans to initiate stability monitoring of MU 4 in 2019.

MU 5 ceased production in 2007 and has been in 'restoration' for 11 years. CBO plans to initiate stability monitoring of MU 4 in 2019.

MU 6 ceased production in 2010 and has been in 'restoration' for 8 years. CBO plans to initiate stability monitoring of MU 4 in 2021.

NRC should have postponed issuance of the Final EA and should have revised the EA and recirculated an Amended Draft EA for comments to adequately describe and take a hard look at: (1) the impacts from the decommissioning of the Crow Butte Operation; (2) the request for standby status in the context of NRC Policy and Guidance Directive PG 1-27 - Reviewing Requests to Convert Active Licenses to Possession Only Licenses ("Guidance PG 1-27"); (3) the extended timeline for restoration contained in the Extended Restoration Request and the notification that Licensee will request a license amendment in 2020 for ACLs due to the extended restoration timeline; and (4) the request in the Cessation Notice that there be an unspecified time period of delay during which equipment at the mine will not be decommissioned in accordance with NRC regulations, and as described in the Final EA.

As a result, the Final EA fails to adequately describe, analyze or evaluate the impacts of the foregoing April 2018 changes and, further, such failure constitutes a failure to take the requisite hard look and constitutes a violation of NEPA.

Regarding cultural and historic resources, the Final EA carries forward serious problems from the application stage. Substantial issues remain concerning impacts to the Tribe's cultural and historic resources which undermine the sufficiency of the Final EA.

As set forth below in Contention M, despite having years to do so, neither Crow Butte Resources, Inc. (CBR) nor NRC Staff have provided the Tribe, or other interested parties including but not limited to the Tribe and other members and citizens of the Očhéthi Šakówiŋ, a meaningful opportunity to be involved in the assessment or determination of the significance of the identified sites, nor a meaningful opportunity to identify additional sites that may warrant evaluation or listing.

Submitted herewith and incorporated herein as though set forth in full for consideration are: (1) the 2013 Opinion Letter of Dr. Louis Redmond concerning cultural resources at the Marsland Expansion Area (the "2013 Redmond Opinion") (ML13029A820), exhibit D hereto, which details the problems with CBR's approach to cultural resources surveys and tribal consultation under NHPA; (2) the 2015 supplemental Opinion Letter of Dr. Redmond, exhibit E hereto; (3) the Declaration of Michael Catches Enemy (ML15132A470), exhibit F hereto, which sets forth the historic, cultural, and spiritual interests of the Oglala Lakȟóta Oyate (Oglala Lakota people and Tribe) and the Očhéthi Šakówiŋ (the Great Sioux Nation); (4) the Declaration of Dennis Yellow Thunder (ML15132A471), exhibit G hereto, which also sets forth the historic, cultural, and spiritual interests of the Oglala Lakȟóta Oyate and the Očhéthi Šakówiŋ; (5) the OST law, Ordinance No. 11-10, exhibit H hereto, which sets for the policies and protocol for nation-to-nation consultations between the OST and the United States and its agencies, including the NRC; and, (6) the comments of the Yankton Sioux Tribe on the Draft EA, exhibit I hereto.

Also submitted herewith, and incorporated herein by this reference, are the following expert opinions in support of the environmental and safety contentions herein: (1) Updated Expert Opinion on the Environmental Safety of In-Situ Leach Mining of Uranium Near Marsland, Nebraska (15 February 2018) by Dr. Hannan LaGarry, Exhibit B hereto (the "2018 LaGarry Opinion"), Exhibit B hereto; and (2)

The Expert Testimony of Linsey McLean dated February 14, 2018 (the "2018 McLean Testimony"), Exhibit C hereto.

The Final EA fails to demonstrate that the risks to the environment, including both surface and groundwater resources have been adequately considered. As discussed herein, substantial issues remain concerning the lack of information necessary to determine the hydrogeology and geochemistry of the site. The includes, but is not limited to, the lack of a defensible baseline ground water characterization, the lack of a thorough review of the natural and manmade interconnections between aquifers in the area that may allow for cross-contamination with the aquifer slated for chemical mining, and the lack of the required analysis of proposed mitigation measures.

The EA errors are largely of omission – failure of the Final EA to conduct required analyses and failure to review necessary components of the project – and thus do not require an expert opinion in support.

On January 29, 2018, the Tribe submitted to the NRC Staff comments on the Marsland Expansion Draft Environmental Assessment (EA) and adopted by reference the joint additional comments submitted that day by Aligning for Responsible Mining and Western Nebraska Resources Council raising each of the contentions set forth below. Such comments are referenced in the Final EA. ML 18046A060; ML 18060A074 (adopted by reference).

II. CONTENTIONS

As required by 10 C.F.R. § 2.309, the Oglala Sioux Tribe sets forth below specific renewed and new contentions based on the Final EA. Each contention raises issues with respect to the sufficiency of the Final EA under the National Environmental Policy Act (NEPA) and various laws including treaties and international law, the National Historic Preservation Act (NHPA), and

applicable regulations, including those of NRC, the federal Advisory Council on Historic Preservation ("ACHP"), and the Council on Environmental Quality ("CEQ"). At minimum, each contention set forth below implicates and asserts violations of 10 C.F.R. §§ 51.10, 51.70, and 51.71, which require NRC compliance with all provisions of NEPA as well as any other applicable international, federal, state, and local requirements, including Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978, 40 CFR Part 192, and the Resource Conservation and Recovery Act (RCRA). NRC regulations at 10 CFR Part 40, including Appendix A thereof, and 10 CFR Part 51 (10 C.F.R. §§ 51.40, 51.10, 51.70, and 51.71) carry forward and supplement these requirements. As described in NRC Regulation Section 40.1(b), the Part 40 Regulations also contain implementations of title II of the Energy Reorganization Act of 1974, as amended (88 Stat. 1242), and titles I and II of the Uranium Mill Tailings Radiation Control Act of 1978, as amended (42 U.S.C. 7901).

NEW CONTENTIONS

OST EA Contention A: Failure of the Final EA to Adequately Describe CBO's Cessation of Operations; Proposal to Be Possession-Only Licensee in "Standby Status" and Impacts of Decommissioning.

The Final EA violates 10 C.F.R. §§ 51.10, 51.70, 51.71, the National Environmental Policy Act and implementing regulations, by failing to conduct the required "hard look" analysis at impacts of the proposed mine associated with CBO's maintenance of the mine in "standby status".

Basis and Discussion:

NEPA "prevent[s] or eliminate[s] damage to the environment and biosphere by focusing government and public attention on the environmental effects of proposed agency action." *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989). It requires the federal agency to ensure "that the agency will inform the public that it has indeed considered environmental concerns

in its decision making process." *Baltimore Gas and Electric Company v. NRDC*, 462 U.S. 87, 97 (1983). Federal courts have ruled that in the mining context specifically, "[w]e must also ensure that the agency took a hard look at the environmental consequences of its action." *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 962 (9th Cir. 2006).

NEPA's analysis and disclosure goals are two-fold: (1) to insure that the agency has carefully and fully contemplated the environmental effects of its action, and (2) "to insure that the public has sufficient information to challenge the agency." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). By focusing the agency's attention on the environmental consequences of its proposed action, NEPA "ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast." *Robertson*, 490 U.S. at 349. "NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. § 1500.1(b). The agency must consider all direct, indirect, and cumulative environmental impacts of the proposed action. 40 C.F.R. §§ 1502.16; 1508.8; 1508.25(c). NRC regulations at 10 CFR Part 40, including Appendix A thereof, and 10 CFR Part 51 (10 C.F.R. §§ 51.40, 51.10, 51.70, and 51.71) carry forward and supplement these requirements. As described in NRC Regulation Section 40.1(b), the Part 40 Regulations also contain implementations of title II of the Energy Reorganization Act of 1974, as amended (88 Stat. 1242), and titles I and II of the Uranium Mill Tailings Radiation Control Act of 1978, as amended (42 U.S.C. 7901).

In this case, the Cessation Notice makes clear that none of the mining units are in production. There are many conclusions in the Final EA related to the Marsland Expansion Area and its operation that assume the continued operation of the Crow Butte mine, including the

continued injection of lixiviant, and having no more than five (5) mining units in restoration phase due to the high level of consumptive use of the water and the large amount of liquid waste required to be disposed of in the Deep Disposal Wells and, possibly, by permitted land application. Now, instead of only five (5) mining units in restoration, there will be ten (10) mining units in restoration, consuming vast amounts of water volumes - over 100 pour volumes. After 22 years, MU 2 is not restored. None of the Crow Butte mining units have been restored despite years of trying and working to lower the regulatory standards to meet the conditions at the site. Crow Butte has acknowledged that it will never be able to return the water to its baseline condition. See Extension Amendment Request. UMTRCA and 40 CFR Part 192,

Guidance PG 1-27 provides NRC policy "To ensure adequate protection of the public health and safety through the proper control and disposition of NRC-licensed material in situations in which a licensee requests a possession-only license." Id. at 1. Section 5.1 of Guidance PG 1-27 provides that "if the licensee has permanently ceased operations, the licensee is required to begin decommissioning pursuant to 10 CFR 30.36(d), 40.42(d), and 70.38(d)." Id. at 3. Section 5.1(a) of Guidance PG 1-27 provides that "if the licensee can proceed with decommissioning, instruct the licensee that they should proceed with decommissioning and license termination. Do not amend the license to authorize possession only. If the expiration date has not passed, the license should be amended to limit activities to decommissioning only." Id.

Therefore, the Final EA should have disclosed that Crow Butte has sought a possession-only license and that NRC policies preclude such an amendment. The appropriate amendment would be to decommissioning only and the Final EA fails to disclose that.

Section 5.2 of Guidance PG 1-27 provides that "Without permanent cessation of operations, the license can only be converted to standby status. The intent of this designation is

to clearly identify licensees that intend to restart operations." Id. at 4. Guidance PG 1-27 further provides that "any license converted to standby status should have an expiration date no greater than 24 months from the date that operations ceased or the issue date (whichever is earlier) unless an extended period of inactivity has been authorized. Id. "When decommissioning is delayed for long periods of time after operations have ceased, there is a risk that safety practices will become lax as key personnel relocate and management interest wanes. In addition, waste disposal costs tend to increase significantly over time and delaying decommissioning will result in higher costs to the public if the government eventually assumes responsibility for the decommissioning. Such requests must explain how postponing decommissioning would be in the public's interest." Id. Such is the case here where, based on news reports, it appears that Crow Butte has terminated most of its personnel and has been renamed internally as the "Crow Butte Operation." Therefore, Crow Buttes' proposed decommissioning schedule and its request to delay decommissioning certain equipment, violates NRC Policy and the Final EA should have contained an adequate description and an evaluation of such fact.

The Final EA provides decommissioning related discussions without any discussion of the cessation of operations at the Crow Butte mine. Specifically, the Final EA provides as follows:

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At Page 1-2 of the Final EA; FN 4, it states:

> As discussed in Section 2.3.4 of this document, the decommissioning regulations in 10 CFR 40.42, "Expiration and Termination of Licenses and Decommissioning of Sites and Separate Buildings or Outdoor Areas," address both decommissioning of separate outdoor areas (e.g., wellfields in the case of ISR facilities) and overall, sitewide decommissioning associated with license termination. **The NRC staff considers a licensee's decision to permanently cease injection of lixiviant in an ISR wellfield to be a decision to permanently cease principal activities in a separate outdoor area. Therefore, aquifer restoration in a wellfield, which**

takes place after lixiviant injection ceases, is a decommissioning activity under the separate outdoor area provisions of 10 CFR 40.42. Consistent with the ISR GEIS, this EA refers to and discusses aquifer restoration separately from subsequent decommissioning activities (such as removal of structures and equipment, cleanup and removal of contaminated soil, and reseeding and recontouring of land) that would occur during the remainder of wellfield decommissioning, and during overall sitewide decommissioning for purposes of license termination. (Bold emphasis added.)

** The Final EA needs to be revised to integrate the fact that Crow Butte has made a decision to cease injection of lixiviant and to move the mine into decommissioning.

At p. xii of the Final EA it states:

> The purpose and need for the proposed action (permitting ISR operations at an expansion area) are to provide an option that allows for CBR to recover uranium from the ore body at a new area for continued yellowcake production at the existing Crow Butte license area.

OST submits that in light of the Cessation Notice and the cessation of operations of the Crow Butte mine described therein, the foregoing is no longer valid. There is no purpose for the proposed action because there is no "continued yellowcake production at the existing Crow Butte license area."

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Section 1.1 of the Final EA refers to the mine as being a commercial recovery facility. The Section fails to disclose that the mine has ceased production and is now in decommissioning and restoration of all the mining units.

> **1.1 Background**
>
> The Crow Butte ISR project (hereafter referred to as "the existing Crow Butte license area") is a commercial uranium recovery facility located in Dawes County, NE.

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1.2 Purpose and Need for the Proposed Action

> The purpose and need for the proposed Federal action, NRC's approval of CBR's proposed license amendment, is to provide an option that allows the licensee to recover uranium at the MEA, process it into uranium-loaded resin at a satellite facility located within the MEA, **and transport the loaded resin to the CPF for further processing into yellowcake. (Bold emphasis added.)**

OST submits that Section 1.2 is now inaccurate because the bolded part above is no longer true because the CPF is now in decommissioning. The Final EA fails to describe that fact and as a result Section 1.2 is inaccurate and misleading in violation of NEPA.

Section 1.2 of the Final EA continues:

> Approval of uranium recovery activities in the MEA would allow CBR to maintain uranium production at currently licensed quantities once uranium recovery activities cease at the existing Crow Butte license area (CBR, 2014, Section 1.2).

OST submits that the foregoing is not true and is misleading in violation of NEPA. Because of the decommissioning of the Crow Butte mine, approval of the uranium activities in the MEA would have no bearing on CBR's ability to maintain uranium production at the currently licensed quantities once recovery ceases at the existing site. The assumption here is that the CPF would continue operating in conjunction with the yellowcake extracted and refined at the MEA but now that CBO has decided to cease production, the MEA is no longer required in connection with uranium production at the Crow Butte mine.

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Section 4.7.1 of the Final EA states:

4.7.1 Socioeconomic Impacts

Impacts associated with the existing Crow Butte license area to the community infrastructure in the city of Crawford or in Dawes County, NE, can give an indication of those that would be expected from the MEA. Operation at expansion areas such as the MEA would enable activities at the existing Crow Butte license area to continue as its reserves are depleted. The NRC recently reviewed socioeconomic impacts as part of its EA for renewing CBR's license for its existing Crow Butte license area (NRC, 2014e). The staff found that there are beneficial small to moderate overall socioeconomic impacts from the operation of the existing Crow Butte license area, primarily in the form of monetary benefits that accrue to the community as a result of tax revenues, jobs, and local purchases.

As of September 2017, CBR employed a workforce of approximately 32 employees, a decrease from the January 2014 workforce level of approximately 68 employees and two contractors with 14 employees, with short-term contractors and employees for specific projects or during the summer (CBR, 2014, Section 4.10.2.1; NRC 2017c). The majority of these employees were hired from the surrounding communities. Given total employment in Dawes County in 2016 of 5,077 workers (see Section 3.7.2), which is down from 5,545 workers in 2010 (BEA, 2015), CBR accounted for less than 1 percent of all employment in Dawes County and about 4 percent of the total payroll for the county. The average wage for CBR employees was approximately $58,821 in 2009, which is higher than the Dawes County median household income of $41,038 in 2015 (see Section 3.7.2). Entry-level workers for CBR earned a minimum of $16.15 per hour, or $33,600 per year in 2009, not including overtime, bonuses, or benefits (CBR, 2014, Section 4.10.2.1,

page 4-30). While the wages shown above are not from the same year, it shows that CBR employees earn incomes higher than other residents of Dawes County.

OST submits that the foregoing is inaccurate and misleading and that the Section needs to be revised to reflect the reduction of personnel at the Crow Butte mine as well as the limited number of personnel that are expected to be required to operate the decommissioning and restoration of the mine. Thereafter, the socioeconomic impacts need to be calculated based on the stated plans and then adequately described and evaluated in a revised or amended environmental assessment, which should then be re-published for comment.

<u>OST EA Contention B</u>: The Final EA Fails to Describe or Evaluate the Impacts From the New Restoration Timeline Stated in the Extension Amendment Request (April 3, 2018), Including Failure to Describe the Expected Increases in Consumptive Use of Water in Restoration.

The Final EA violates 10 C.F.R. §§ 51.10, 51.70, 51.71, the National Environmental Policy Act and implementing regulations, by failing to conduct the required "hard look" analysis at impacts of the proposed extended timeline for restoration and the other information contained in the Extension Amendment Request. The impacts related to consumptive use arising from all ten mining units being in restoration phase, especially in light of the decades of failures to restore and stabilize mining units, are also not discussed. The failure to do so violates NEPA.

<u>Basis and Discussion</u>:

On April 3, 2018, Crow Butte proposed an alternate and extended decommissioning schedule that makes the timelines stated in Figure 5.1 of the Final EA inaccurate and misleading. Further, the timelines expressed in various portions of the Final EA are now inaccurate due to the restoration issues and difficulties expressed by Crow Butte in the April 3rd Extension Amendment Request.

Specifically, the Final EA provides as follows:

- **2.3 Proposed Action**
  CBR estimates that construction and operation activities at the MEA would occur over about a 20-year period. Aquifer restoration at the MEA would begin about 5 years after uranium recovery operations begin and would continue concurrent with operations in other mine units, with restoration ending after about 20 years and final decommissioning activities and surface reclamation completed about 25 years after operations commence. The following sections identify the activities that would take place during these periods.

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2.3.3 Aquifer (Groundwater) Restoration

CBR estimates that groundwater restoration in designated mine units would begin about 5 years after startup and end about 25 years after startup (CBR, 2014, Section 1.1.3.2).

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OST submits that the Final EA needed to disclose that it had been notified by Crow Butte that it intends to request ACLs because it does not believe it will be able to restore the mining units to baseline standards.

At p. 2-9, the Final EA states:

> Under 10 CFR Part 40, Appendix A, Criterion 5B(5), at the "point of compliance" (mine unit after restoration), the concentration of a hazardous constituent must not exceed the following:
>
> • the NRC-approved background concentration of that constituent in the groundwater established before injection of lixiviant for each mine unit in accordance with License Condition 11.3 (NRC, 2014f)
>
> • the respective value given in the table in 10 CFR Part 40, Appendix A, Criterion 5C if the constituent is listed in the table and if the background level of the constituent is below the value listed
>
> • **an alternate concentration limit that would require that CBR submit a license amendment request (License Condition 10.6 (NRC, 2014f)) and receive NRC approval (Bold added for emphasis).**
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> ***

Section 2.3.3 of the Final EA should have disclosed that, as described in the April 3 Extension Amendment Request, the mining units are impacting each other - MU3; MU4; MU7, and that

there is no assurance that the restoration will ever be achieved to compliance with Appendix A, Criterion 5(B).

OST asserts that when restoration takes longer than expected the result will be more consumptive use at very high usage rates - and that the Final EA fails to describe or evaluate the impacts here due to failure to evaluate greater consumptive use when all ten mining units are in restoration as is currently the case.

At 4-19 of the Final EA, it states:

> Aquifer Restoration
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> The ISR GEIS explains that potential environmental impacts on groundwater resources during aquifer restoration are related to the consumptive use of groundwater and waste management practices, including discharge to evaporation ponds (which are not proposed for the MEA and would require a license amendment) and deep disposal of brine. In addition, aquifer restoration directly affects groundwater quality in the vicinity of the wellfield being restored (NRC, 2009a, Section 4.2.4.2.3).
>
> The consumptive use of groundwater during aquifer restoration is generally greater than during ISR operations (NRC, 2009a, Section 4.2.4.2.3). This is particularly true during the sweep phase, when a greater amount of groundwater is generally withdrawn from the production aquifer. During the sweep phase, groundwater is not reinjected into the production aquifer and all withdrawals are considered consumptive. As discussed in Section 4.3.2.2, CBR applied a groundwater model to estimate the potential environmental impacts from consumptive use. The height of the potentiometric surface above the top of the Basal Chadron Sandstone aquifer at the time of maximum drawdown (i.e., in 2028) is projected to be greater than 320 feet (97.5 meters) within the MEA wellfields and greater than 270 feet (82.3 meters) within the MEA permit boundary during ISR operations (2011–2042). Therefore, it can be reasonably expected that the Basal Chadron Sandstone aquifer would remain saturated.
>
> Based on the analysis of consumptive use during operations described above, the NRC staff reached the same conclusions about potential impacts caused by the consumptive use of groundwater during aquifer restoration as it did for those potential impacts

during construction (Section 4.3.2.1). Aquifer restoration would not desaturate the Basal Chadron Sandstone aquifer or destabilize the resource. Therefore, the potential short-term impact from consumptive groundwater use during aquifer restoration would be MODERATE. Water levels would eventually recover after aquifer restoration was complete; thus, the NRC staff concludes that the overall potential long-term impact from consumptive groundwater use during aquifer restoration would be SMALL.

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At 4-24 of the Final EA, there is a failure to disclose that Crow Butte has notified NRC of its intentions to request ACL amendments in 2020, which is during the term of the Marsland license amendment.

The Final EA states at p. 4-24:

The purpose of aquifer restoration at the MEA would be to return the groundwater quality in the production zone to compliance with the groundwater protection standards in 10 CFR Part 40, Appendix A, Criterion 5B(5). These standards, described in License Condition 10.6 (NRC, 2014f), require that the concentration of a hazardous constituent must not exceed (1) the Commission-approved background concentration of that constituent in groundwater, (2) the respective value in the table in paragraph 5C of the regulation if the constituent is listed in the table and if the background value of the constituent is below the value listed, or (3) an alternate concentration limit the Commission establishes. Since the objective of aquifer restoration would be to return the Basal Chadron Sandstone aquifer groundwater to meet groundwater protection standards, the NRC staff concludes that any adverse environmental impacts on the Basal Chadron Sandstone aquifer groundwater quality from aquifer restoration would be SMALL. Furthermore, once groundwater is restored in the exempted region of the Basal Chadron Sandstone aquifer to approved groundwater protection standards, the future impact on groundwater quality in the nonexempt portions of the Basal Chadron Sandstone aquifer would be negligible.

***

Section 5 of the Final EA states:

5 CUMULATIVE IMPACTS

> CEQ regulations implementing NEPA define cumulative effects as "the impact on the environment which results from the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7, "Cumulative Impact"). Unless otherwise stated for a specific resource area, the NRC staff considered cumulative impacts within a 50-mile (80-km) radius of the proposed MEA. This geographical range encompasses the proposed action, all reasonably foreseeable actions in the area, and a reasonable buffer surrounding these areas. The timeframe considered for cumulative impacts is 35 years, starting in 2012, the year the NRC received the application to amend the current license to include the MEA. **This timeframe covers the continued operation of the existing Crow Butte license area, as well as construction, operation, and restoration of the other two proposed CBR ISR expansion areas, in addition to the MEA. (Bold emphasis added.)**

***

The Final EA states at p. 5-1 that:

> Present actions are those that have occurred since the submittal of the MEA application.
>
> Activities at the existing Crow Butte license area are considered a present action. The MEA is approximately 6 miles (9.7 km) southeast of the existing Crow Butte license area.

***

Based on the foregoing, it is clear that the Final EA omits information from the April 2018 Extension Amendment Request in violation of NEPA and that this contention should be admitted.

<u>OST EA Contention C</u>: Evaluating all reasonable alternatives - no-action and proposed action are almost identical - The Final EA Failed to Consider All Reasonable Alternatives in Light of Crow Butte Mine Cessation and Decommissioning

The Final EA fails to adequately analyze all reasonable alternatives as required by 10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations.

Basis and Discussion:

The range of alternatives is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14. See also, 40 C.F.R. Part 51, Appendix A to Subpart A (5) (acknowledging that consideration of alternatives "is the heart of the environmental impact statement"). 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 Envtl. Defense Center v. Bonneville Power Admin.*, 117 F.3d 1520, 1538 (9th Cir. 1997). See also, 40 C.F.R. Part 51, Appendix A to Subpart A (5) (acknowledging that "All reasonable alternatives will be identified."). 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 Envtl. 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).

At this time, since Crow Butte has ceased production and is entering full time restoration and decommissioning, the no-action alternative and the proposed action, in light of the decommissioning, are almost the same. The slight differences should be discussed and considered in an environmental assessment that takes into account the impacts of the cessation and decommissioning.

The failure to consider that the proposed alternative and the no-action alternative are almost the same in light of the cessation and decommissioning, violates NEPA and, accordingly, this contention should be admitted.

The Final EA states:

> **2 PROPOSED ACTION AND ALTERNATIVES**
>
> This chapter describes the proposed Federal action, which is to grant a license amendment requested by CBR that would authorize ISR operations at the MEA. This chapter presents the proposed action (Alternative 1), and the no-action alternative (Alternative 2), in accordance with NEPA requirements.

Based on the foregoing, the Final EA should have described and evaluated the no-action alternative in light of the cessation and decommissioning of the existing Crow Butte site and the failure to do so violates NEPA. Accordingly, this contention should be admitted.

OST EA Contention D: Failure to include results of Cultural Survey approach in Powertech Dewey Burdock in discussion in Final EA - NRC, OST and a licensee agreed on approach in similar proceeding; pertains to discussions in Section 3.6 and 4.6 of Final EA.

As described in Exhibit A, the March 16, 2018 NRC PT Survey Letter, the NRC Staff, OST and a licensee for the Dewey-Burdock site have agreed on protocols and procedures constituting an approach that the parties believe satisfy their respective obligations under NEPA and NHPA. As stated above, NEPA requires that the Final EA contain an adequate description and evaluation of cultural resources, consultation with the OST and TCP surveys under applicable law.

After publication of the Draft EA and before publication of the Final EA, the NRC PT Survey Letter was issued. As a result, the NRC Staff should have included a discussion in the Final EA of the agreed upon approach and then the Final EA should have stated whether it would also employ the same approach at the Marsland site.

The Final EA states at 3.6 and 4.6

3.6 Historic and Cultural Resources

The ISR GEIS (NRC, 2009a, Section 3.4.8 and Appendix D) include a discussion of historic and cultural resources at the State level. This EA discusses additional historic and cultural information specific to the MEA. Further, NHPA Section 106 requires that Federal agencies take into account the effect of an undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion on the NRHP. A**s part of this required evaluation, Federal agencies must consult with Tribes to determine whether there are historic properties of cultural and religious significance to Tribes that may be adversely affected by a proposed undertaking. This mandate is reflected in the NRC's Tribal Protocol Manual (NRC, 2014g) and its Tribal Policy Statement**

(NRC, 2017b). The manual and policy statement are intended to serve as guidance to the NRC staff on effectively consulting and interacting with Native American Tribes concerning activities within the scope of the NRC's jurisdiction.

In accordance with 36 CFR 800.8, "Coordination with the National Environmental Policy Act," the NRC is using the NEPA process to comply with its obligations under Section 106

of the NHPA. The staff conveyed this information to the Advisory Council on Historic Preservation in a letter dated May 3, 2013 (NRC, 2013d).

***

4.6 Historic and Cultural Resources Impacts

Section 3.6 discusses how the NRC fulfilled its responsibilities under Section 106 of the NHPA for CBR's license amendment. At present, a Class III archaeological survey, TCP surveys completed by the Crow and Santee Sioux Nations and the NRC's cultural resources expert, a literature review, and overall Tribal consultations have resulted in the recording of 15 historic resource sites. None of the newly recorded sites is currently evaluated as eligible for listing on the NRHP, although two are recommended as requiring additional evaluation should they be directly impacted by future project development (Graves et al., 2011). In response to information the NRC provided by letter dated November 18, 2014 (NRC 2014f), the NE SHPO concurred with the NRC's finding that the MEA would not impact archaeological, architectural, or historic context property resources (NSHS, 2014).

The foregoing sections should be revised to reflect the contents of the NRC PT Survey Letter.

<u>OST CONTENTION E</u>: The Final EA fails to take the required hard look at the pump test data resulting in a cascading lack of scientific rigor in assumptions and modeling relied on in the analysis and evaluation of potential impacts from the licensed activity.

Despite public comments pointing out the inadequacy, in Section 3.3.2.3 the Final EA states that:

> CBR relied on drawdown and recovery data collected during the aquifer pumping test to estimate the hydrogeological properties of the ore-bearing aquifer and confining layers using one or more combinations of the widely accepted Theis (1935) drawdown and recovery methods and Jacob's Straight-Line Distance-Drawdown method (Cooper and Jacob, 1946).

Final EA p 3-31. In the same Section, the Final EA goes on to demonstrate that, "The results of these tests provide the hydraulic properties of the mine unit that are used to design the wellfield and estimate extraction and injection rates, as applicable." *Id.*

In contrast to Staff's Response to Comment 15-5, at page A-24 this use of the Theis and CooperJacob models violates ASTM standards. [*See for example,* ASTM D5270, Assumptions 5.13: The nonleaky confined aquifer is homogeneous, isotropic, and areally extensive except where limited by linear boundaries. *And,* Scope 1.3 Limitations-The valid use of this test method is limited to determination of transmissivities and storage coefficients for aquifers in hydrogeologic settings with reasonable correspondence to the assumptions of the Theis nonequilibrium method, (See 5.1), except that the aquifer is limited in areal extent by a linear boundary that fully penetrates the aquifer.] [*See also,* ASTM D5269, Assumption 5.2.3: The nonleaky aquifer is homogeneous, isotropic and extensive in area.] The Final EA fails to evaluate, let alone analyze, the appropriateness of using models that assume a confined, homogeneous, isotropic aquifer to demonstrate confinement, particularly in light of clear indication that the aquifer is heterogeneous.

One of the aspects of the cascading effect of this inadequate modeling is detailed in Section 4.2.3.1 on pages 4-16 thru 4-18 of the Final EA. The groundwater model used by CBR, and accepted without critical analysis by NRC Staff, to predict drawdown is based on inputs for transmissivity and storativity derived from the pump test data. Mean values for transmissivity and storativity that deviate by at least an order of magnitude render the model and its drawdown predictions highly suspect. The Final EA fails to enforce any degree of scientific rigor on these model input parameters, and instead, uses these models to anchor its groundwater impact analyses in violation of NEPA's hard look standard.

<u>OST CONTENTION F</u>: The Final EA's failure to critically evaluate the pump test data renders the analysis and evaluation of potential impacts from Restoration incomplete and insufficiently detailed to inform the public.

NEPA's analysis and disclosure goals are two-fold: (1) to insure that the agency has carefully and fully contemplated the environmental effects of its action, and (2) "to insure that the public has sufficient information to challenge the agency." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

By accepting pump test data that relies on demonstrably inaccurate prima facie assumptions, the Final EA does not, and cannot, sufficiently analyze the potential impacts of the proposed aquifer restoration program. Because there is no meaningful nor accurate characterization of the actual hydrogeolocial properties of the target aquifer, the Final EA cannot possibly arm the public with sufficient information to challenge its analysis of the potential impacts from restoration.

The oft repeated and indefensible critique of ISL mining is that no aquifer subject to ISL mining has ever been restored to baseline conditions. The reason complete restoration has never happened, and will never happen, begins here with NRC Staff's failure to demand accurate, evidence-based characterization of pre-mining hydrogeology. By allowing mining to proceed under conceptual conditions that clearly do not fit demonstrable reality, Staff accepts a restoration plan entirely lacking in scientific rigor.

There is no evidence suggesting the target aquifer is homogeneous. Rather the pump test results reported in Section 3.3.2.3 are indicative of a highly fractured system that allows imbibition of contaminants into the rock matrix, which is closer to a dual porosity model. This is precisely the reason that the proposed restoration plan will not work and CBO will eventually have to modify its restoration plan with subsequent modeling such as the MODFLOW2000 approach currently implemented at the original facility as described in the April 3, 2018 Extension Amendment Request.

Later adoption of MODFLOW2000-based restoration shields from NEPA analysis important details necessary to challenge its appropriateness, such as the chosen model domain, grid spacing, selected boundary conditions, possibility of numerical dispersion, calibration/assumption errors and the appropriateness of model validation. Without this information, the public is unable to appreciate, let alone challenge NRC Staff's analysis of the potential impacts of mining and restoration nor any prospects for long term safety during attempted closure.

In Section 4.2.3.1 at page 4-19, the Final EA emphasizes that, "aquifer restoration directly impacts groundwater quality in the vicinity of the wellfield being restored." That Section goes on to rely on the groundwater consumption model provided by CBR, as discussed above, that uses suspect data from the pump test described in Section 3.3.2.3, before concluding that, "Based on the analysis of consumptive use described above, the NRC Staff reached the same conclusions about potential impacts from the consumptive use of groundwater during aquifer restoration as it did for those potential impacts during construction."

Also in Section 4.2.3.2, on page 4-24 the Final EA states that, "CBR would mitigate impacts to groundwater quality in the production zone by undertaking the groundwater restoration activities described in Section 5.4.1.4 of CBR (2014) after uranium recovery was completed." This abject lack of analysis and evaluation, particularly in light of the April 3, 2018 Extension Amendment Request fails to live up to the hard look standard that NEPA requires. One thing is reasonably certain, the groundwater restoration activities described by CBR will not be adequate to mitigate impacts to groundwater quality, due in no small part to the flawed assumptions that NRC Staff accepts for the conceptual characterization of the site hydrogeology.

Not only does this lack of scientific rigor fail to apply the hard look standard that NEPA requires, but it fails to adequately inform the public with sufficient information to challenge the agency action, in further violation of NEPA standards.

OST CONTENTION G: The Final EA fails to provide an adequate baseline groundwater characterization or demonstrate that grown water and surface water samples were collected in a scientifically defensible manner using proper sample methodologies

The Final EA violates 10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations – each requiring a description of the affected environment and impacts to the environment – in that it fails to provide an adequate baseline groundwater characterization or demonstrate that ground water and surface water samples were collected in a scientifically defensible manner, using proper sample methodologies.

Basis and Discussion:

10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations, require a description of the affected environment containing sufficient data to aid the Commission in its conduct of an independent analysis. Further, 10 C.F.R. Part 40, Appendix A, criterion 7 requires the applicant to provide "complete baseline data on a milling site and its environs."

In this situation, …

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). 40 C.F.R. § 1502.22 imposes detailed requirements and justifications necessary for any agency to decline to provide necessary and relevant information.

Here, the 'proposed action' is a license amendment but it could as easily have been filed as a new license application. The Marsland site is proposed to contain its own arrays of wells, its own processing plant and six deep disposal wells (DDWs). The Marsland site proposed to borrow the Crow Butte Central Processing Plan for the final stage of processing. The Final EA fails to explain how the Marsland site will be able to operate now that the Central Processing Plant is being decommissioned with the rest of the CBO.

The manner in which baseline water quality information is gathered is crucial to any analysis that relies on the data. The quality and calibration of the technology used to gather the baselines is equally important.

Rather, NEPA requires a sufficient amount of baseline data to be taken for each licensing action, and reporting data and an analysis of the total amount of data under scientifically defensible

protocols. NEPA also requires that the public and its experts have enough information to replicate the results.

The problems that can flow from analysis and models based on poorly gathered information is often characterized as a garbage in/garbage out.

As a precondition to conducting modeling and analysis, NRC must confirm that a credible scientific method is employed to establish an accurate baseline.

Valid statistical methods and a systematic grid covering all horizons of the aquifer must be employed with respect to baseline ground water quality collection. The improvements in methods and technologies (including those found in the region due to the expansion of fracking) have been constant and have become less costly as the technologies age and proliferate.

Based on this evidence, the Final EA fails to adequately describe the affected aquifers at the site and on adjacent lands and fails to provide the required quantitative description of the chemical and radiological characteristics of these waters necessary to assess the impacts of the operation, including potential changes in water quality caused by the operations.

Based on the foregoing, this contention should be admitted.

EA Contention H: The Final EA Fails to Adequately Analyze Ground Water Quantity And Quality Impacts due to extended restoration timetable of April 2018 and Known Need for ACLs

The Final EA violates the National Environmental Policy Act in its failure to provide an analysis of the ground water quantity impacts of the project. Further, the Final EA presents conflicting information on ground water consumption such that the water consumption impacts of the project cannot be accurately evaluated. These failings violate 10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations.

Basis and Discussion:

10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations, require the agency to provide sufficient data for a scientifically-defensible review of the environmental impacts of the operation and for the Commission to conduct an independent analysis. The Final EA as published fails to meet these requirements in that it does not provide reliable and accurate information as to the project's ground water consumption. Thus, the Final EA has not met the requirements of NRC regulations and NEPA.

Section 4.3.2 of the Final EA (Groundwater Impacts) includes a discussion of the consumptive use of water.

The Final EA at p. 4-19 states that: "based on expected consumptive use rates and available drawdown above the top of the Basal Chadron Sandstone aquifer, the NRC finds that the potential short-term impact from consumptive groundwater use during operations at the MEA to be MODERATE.

The entire discussion in the Final EA at Section 4.3.2 needs to be revised and republished to reflect the information contained in the April 2018 Cessation Notice and Extension Amendment Request, including the acknowledgment that restoration goals will not be achieved and that ACLs will be requested.

OST further submits that now that the Crow Butte mine is in full time restoration, the Final EA should include the discussion similar to that found in Section 4.6.2.2.1 (Ground water Quantity Impacts from Consumptive Use) of the Final Environmental Assessment (2014) in the CBR License Renewal proceeding (the "LR EA").

Section 4.6.2.2.1 of the LR EA states that the "CBR facility is licensed to process 9,000 gallons per minute (gpm) [34,065 lpm] of leach solution." Id. However, that number does not

include and is in addition to the consumption of water for restoration and decommissioning. See LR EA Section 2.1.

The LR EA also says that the piezometric surface of the Basal Chadron is being lowered year after year in comparison to the prior renewal period and that it will likely be lowered even more by the restoration and decommissioning activities, concluding that the impacts are MODERATE.

The Final EA fails to describe or evaluate the cumulative impacts related to MODERATE impacts from restoration of the existing Crow Butte site additive to MODERATE impacts from the Marsland site, were it to commence operations (which would be allowed under the Proposed Action notwithstanding the cessation of activities if the proposed 'standby status' is granted by NRC Staff). Such failure constitutes another violation of NEPA.

It is unclear why NRC Staff has this confidence given that the first, last and only time NRC Staff approved a mine restoration was for the smallest mine unit, MU 1, in 2003. Here we are 15 years later and Crow Butte is still restoring Mine Units 2-6 consuming vast quantities of groundwater in the process with no end in sight and is about to add another five (5) mining units to the restoration activities. Further, as stated in the April 3 Extension Amendment Request, Crow Butte has not been able to restore any of the mining units to comply with NRC regulations - i.e., to baseline.

The NRC Staff has stated that it is likely that more than eleven (11) pour volumes of water will be required to restore each mine unit but it could be much more, as described in the April 3 Extension Amendment Request. That would mean that Crow Butte expects to consume more than 110 pour volumes of water to restore the 10 mining units currently in restoration at the

existing Crow Butte site. The Final EA fails to disclose, describe or evaluate such large consumptive use of water. Such failure violates NEPA.

Specifically, the LR EA, Section 4.6.2.3 (Aquifer Restoration Impacts on Groundwater) provides that:

> **The potential environmental impacts to ground water quantity and quality during aquifer restoration are the same as those for operations, except ground water consumption is increased** and there may be potential impacts from the introduction of brine slurries resulting from reverse osmosis in to waste storage ponds and deep disposal wells. In addition, aquifer restoration directly affects ground water quality in the vicinity of the well field being restored. (Emphasis added.)
>
> ***
>
> **The consumptive use of ground water from bleed during aquifer restoration is generally greater than during ISR operations**. This is particularly true during the sweep phase, when a greater amount of ground water is generally withdrawn from the production aquifer. **During the sweep phase, ground water is not reinjected into the production aquifer and all withdrawals are considered consumptive**. (Emphasis added.)
>
> ***
>
> CBR is concurrently restoring individual mine units while maintaining ISR operations within other mine units. The final approval of ground water restoration for Mine Unit 1 was granted by the NRC in 2003 (CBR, 2007). At that time, ground water restoration activities are occurring at Mine Units 2 through 6 (CBR, 2012). The restoration of these mine units(MUs) are projected to gain regulatory approval in 2015 for MUs 2 and 3, 2019 for MU 4, 2022 for MU 5, and 2021 for MU 6, respectively (CBR, 2012). However, restoration activities at Mine Units 2, 3, 4, 5, and 6 are still in progress. **To accelerate ground water restoration, CBR has increased the flow capacity through the RO circuit from 200 to 1,150 gpm [757 to 4352 lpm], and the flow through the IX circuit has been increased from 200 to 1,200 gpm [757 to 4542 lpm] (CBR, 2012). I**n addition to the upgrades to the IX and RO circuits, CBR has installed new restoration pipelines and manifolds to allow for the increased flows and to improve wellfield isolations. In 2011, CBR began operating a second deep disposal well to help accommodate the disposal of additional waste water generated by the increased RO and IX flow. **(Emphasis added.)**
>
> ***
>
> The NRC performed a water-balance analysis in Section 5.7.9.4 of the SER and based on the restoration analogues in the most recently approved license application and representations made by CBR, restoration of a mine unit will need at least extract eleven pore volumes of ground water for restoration (NRC 2014). **Given the historical flow rates,**

it is anticipated that CBR may need to extract more than eleven restoration pore volumes for all mine units; thus, the restoration schedule may extend beyond that proposed by CBR. The extension of the restoration periods, as well as the greater than expected consumptive use rates, could significantly increase the drawdown in the potentiometric surface of the Basal Chadron aquifer, but it should still remain saturated. Consequently, the short-term impact from consumptive ground water use during aquifer restoration may be MODERATE. However, water levels would eventually recover after aquifer restoration is complete resulting in an overall SMALL impact from consumptive ground water use. (Emphasis added.)]

OST submits that the foregoing analysis was omitted from the Final EA but should have been included in the Final EA to provide the public with relevant information, i.e., that the restoration activities at the existing Crow Butte site are consuming large quantities of water for many years without success at compliance with Appendix A, Criterion 5(B) requirements concerning water quality.

Specifically, the Final EA, at 4-19 states:

> The consumptive use of groundwater during aquifer restoration is generally greater than during ISR operations (NRC, 2009a, Section 4.2.4.2.3). This is particularly true during the sweep phase, when a greater amount of groundwater is generally withdrawn from the production aquifer. During the sweep phase, groundwater is not reinjected into the production aquifer and all withdrawals are considered consumptive. As discussed in Section 4.3.2.2, CBR applied a groundwater model to estimate the potential environmental impacts from consumptive use. The height of the potentiometric surface above the top of the Basal Chadron Sandstone aquifer at the time of maximum drawdown (i.e., in 2028) is projected to be greater than 320 feet (97.5 meters) within the MEA wellfields and greater than 270 feet (82.3 meters) within the MEA permit boundary during ISR operations (2011–2042). Therefore, it can be reasonably expected that the Basal Chadron Sandstone aquifer would remain saturated.
>
> Based on the analysis of consumptive use during operations described above, the NRC staff reached the same conclusions about potential impacts caused by the consumptive use of groundwater during aquifer restoration as it did for those potential impacts during construction (Section 4.3.2.1). Aquifer restoration would not desaturate the Basal Chadron Sandstone aquifer or destabilize the resource. Therefore, the potential short-term impact from consumptive groundwater use during aquifer restoration would be MODERATE. Water levels would eventually recover after aquifer restoration was complete; thus, the NRC staff concludes that the overall potential long-term impact from consumptive groundwater use during aquifer restoration would be SMALL.

Section 4.3.2.2 (Groundwater Quality) of the Final EA states:

Groundwater Restoration
CBR would mitigate impacts to groundwater quality in the production zone (Basal Chadron Sandstone aquifer) by undertaking the groundwater restoration activities described in Section 5.4.1.4 of CBR (2014) after uranium recovery was completed.

The purpose of aquifer restoration at the MEA would be to return the groundwater quality in the production zone to compliance with the groundwater protection standards in 10 CFR Part 40, Appendix A, Criterion 5B(5). These standards, described in License Condition 10.6 (NRC, 2014f), require that the concentration of a hazardous constituent must not exceed (1) the Commission-approved background concentration of that constituent in groundwater, (2) the respective value in the table in paragraph 5C of the regulation if the constituent is listed in the table and if the background value of the constituent is below the value listed, or (3) an alternate concentration limit the Commission establishes. Since the objective of aquifer restoration would be to return the Basal Chadron Sandstone aquifer groundwater to meet groundwater protection standards, the NRC staff concludes that any adverse environmental impacts on the Basal Chadron Sandstone aquifer groundwater quality from aquifer restoration would be SMALL. Furthermore, once groundwater is restored in the exempted region of the Basal Chadron Sandstone aquifer to approved groundwater protection standards, the future impact on groundwater quality in the nonexempt portions of the Basal Chadron Sandstone aquifer would be negligible.

CBR would use a network of buried pipelines during ISR operation and restoration for transporting fluids between the pump house and the satellite facility. Although the liquids carried in these pipes during restoration would have lower levels of hazardous constituents than those used during the operation phase, the failure of pipeline fittings or valves, or failures of well mechanical integrity, could result in leaks or spills of these fluids, which could impact water quality in shallow aquifers. The monitoring and impact reduction activities for groundwater aquifers during project operation described in Section 4.3.2.2 would also limit the estimated impacts on groundwater aquifers during aquifer restoration. Based on these considerations, the NRC staff determined that the potential adverse impact on shallow aquifers during aquifer restoration would be SMALL.

OST submits that the failure to include in the Final EA a discussion of the information contained in the April 2018 Extension Amendment Request, constitutes a violation of NEPA.

For all the foregoing reasons, this contention should be admitted.

EA Contention I: The Final EA Fails to Adequately Analyze Cumulative Impacts That Include Decommissioning of Central Processing Plant and Existing Mining Units

The Final EA fails to adequately analyze cumulative impacts associated with the proposal as required by 10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations.

Basis and Discussion:

"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). The decommissioning of the Crow Butte mine and the simultaneous restoration of all ten (10) mining units are "reasonably foreseeable" future projects.

This cumulative impacts analysis thus must address not only past uranium mining in the region by CBR or others, but also present and foreseeable uranium development - including the existing Crow Butte site, the North Trend Expansion Area, the Three Crows Expansion Area and the MEA (the "CBR Expansion Areas"). OST notes that it is not possible for NRC Staff to simply take the issue off the table. NEPA requires that the NRC Staff prepare and publish a new draft environmental assessment or an amendment to the Final EA that describes and evaluates the cumulative impacts of the decommissioning of the Crow Butte mine.

Failure to describe the 2018 cessation and decommissioning of the Crow Butte mine is evidence of a failure to take the required 'hard look' and as a result, the Final EA violates NEPA.

The Final EA fails to 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.

Based on the foregoing, this contention should be admitted.

RENEWED CONTENTIONS

OST's EA Contention J: Failure to Discuss or Demonstrate Lawful Federal Jurisdiction and Authority Over Crow Butte's Activities

The Final EA fails to demonstrate lawful federal jurisdiction and NRC authority over the territory and lands upon which Crow Butte seeks the renewal of its license. "Objections to a tribunal's jurisdiction can be made at any time …." *Sebelius v. Auburn Reg'l Med. Center*, 568 U.S. 145, 153 (2013). The NRC Staff responded to this objection by the OST by standing on its previous inaccurate, incomplete, and insufficient discussion contained in the Draft EA. Final EA, p. A-32. The Draft and Final EA purportedly satisfy this jurisdictional requirement through discussions of the "connection between Native American Tribes, including the Great Sioux Nation, and wester Nebraska" and of the insufficient "consultations" with OST and other Tribes, citing Sections 3.6.2, 3.6.3, 3.6.4, and 3.6.5. *Id*. If anything, these sections of the Final EA (Draft EA) acknowledge and *support* the ancestral and treaty claims of the OST and the Očhéthi Šakówiŋ to the Unceded Lands where the MEA is found (*see*, FEA, pp. 3-52 – 3.53).

Nowhere in these sections nor anywhere else in the Final EA is there any discussion or demonstration of the source of the assertion of jurisdiction by the United States through the NRC over this territory. The Final EA does mention the creation of the Great Sioux Reservation by the 1868 Ft. Laramie Treaty (FEA, p. 3-52) and the subsequent unlawful exercise of plenary power by Congressional fiat in breaking up the communal lands of the Očhéthi Šakówiŋ through the General Allotment Act (FEA, p. 3-52) and then the partitioning of the Great Sioux Reservation into five smaller reservations, including the Pine Ridge Reservation (Oglala Sioux) (FEA, p. 3-52 – 3.53), but nowhere does the Final EA discuss any reduction of the *territory* of the Očhéthi Šakówiŋ secured by the 1851 and 1868 Ft. Laramie Treaties. To the contrary, the Final EA, correctly notes that the Očhéthi Šakówiŋ, and the United States, in the 1868 Treaty specifically and expressly *retained the Unceded Lands* as reserved from cession by the Očhéthi Šakówiŋ at the same time it

identified the Great Sioux Reservation as the location of residence for its people.[3] The subsequent purported breaking up of the Reservation or its lands either by the General Allotment Act or into smaller reservations had no impact on the *territory* and the territorial boundaries of the Očhéthi Šakówiŋ. *See, e.g., Choctaw Nation v. Oklahoma*, 397 U.S. 620, 631 (1970); *Murphy v. Royal*, 875 F.3d 896, 918, 919-20 (10th Cir. 2017), *cert. granted* (2018) (presumption against disestablishment or diminishment of Native territorial boundaries / the transfer of land from communal to private ownership under the General Allotment Act did not diminish the territorial boundaries of Native nations).

OST therefore renews its continuing objections to the NRC's jurisdiction here.

Basis and Discussion:

The CBR commercial uranium milling facility is located on lands belonging to the sovereign Očhéthi Šakówiŋ and its people including the Oglala Sioux Tribe as part of the "Unceded" territory secured by treaty, and not within the territory or on lands of the United States or any of its subdivisions by which the NRC may exercise any lawful jurisdiction or authority without the consent of the Očhéthi Šakówiŋ and Tribe. The natural resources that CBR seeks a license from the NRC to exploit, degrade, and destroy for private profit also belong to the Očhéthi Šakówiŋ and its people. It is the lawful possessor of sovereign jurisdiction and authority, to the exclusion of the United States, over the territory upon which both the land and its natural resources lie and is the rightful caretaker of that land and its natural resources, including its minerals and its surface and ground water and air. The United States is the *de facto* wrongful colonial occupier of

[3] The Final EA purports a purpose for that retention by the Očhéthi Šakówiŋ of the Unceded Lands from cession (FEA 3-52), but as a matter of law the purpose for the retention is irrelevant. Even under federal colonial Indian law, without an express and unequivocal cession by a Native nation, none exists. *See, e.g., Choctaw Nation v. Oklahoma*, 397 U.S. 620, 631 (1970).

and *de facto* wrongful exerciser of colonial authority over that Unceded Tribal territory and lacks lawful, *de jure,* jurisdiction or authority over the activities that occur within that Territory or over the land and its natural resources found within. *Kiobel v. Royal Dutch Petroleum Co.,* 569 U.S. 108, 115 (2013) (presumption against exterritorial jurisdiction); *Ex parte Kan-gi-shun-ca (otherwise known as Crow Dog*), 109 U.S. 556 (1883).

By Article V of the Fort Laramie Treaty of September 17, 1851, 11 Stat. 749, with the Očhéthi Šakówiŋ (which included the Oglala Lakȟóta), the United States recognized and acknowledged the territory of the Očhéthi Šakówiŋ and the Tribe, including the territory containing the lands and minerals at issue here. Then, by Article XVI of the Fort Laramie Treaty of 1868, 15 Stat. 635, with the United States, the Očhéthi Šakówiŋ again secured against the United States its territory and lands, including the "Unceded Territory" containing the lands and minerals being under CBR's application for the issuance of a license by the NRC for the United States. By the Treaty of 1868, Articles II and XVI, the United States "solemnly" agreed that "no persons" would be authorized without the prior consent of the Tribe "shall ever be permitted to pass over, settle upon, or reside in the territory described in this article …." Neither treaty provided for any right of abrogation in any party to the treaty. Rather, Article XII of the Treaty of 1868 expressly provided and agreed that no further cession of any Sioux territory or lands could be made by the Očhéthi Šakówiŋ "unless [by treaty] executed by at least three fourths of all the adult male Indians, occupying or interested in same."

Following the discovery of gold in the sacred Paha Sapa, the Black Hills, in 1874 by a large US military expedition led by General George Custer which entered Očhéthi Šakówiŋ territory under false pretext, the US government abandoned its treaty obligation to preserve the integrity of the Očhéthi Šakówiŋ territory from trespassing prospectors and settlers. *United States v. Sioux*

Nation of Indians, 448 U.S. 371, 376-79 (1980). In 1876, the US government declared that people from the Očhéthi Šakówiŋ found lawfully within the "unceded" Očhéthi Šakówiŋ territory in Nebraska to be "hostiles" and engaged in a war campaign against them. *Id*., 448 U.S. at 379. The next year after unsuccessful attempts to negotiate the cession of the Black Hills by the Sioux, the United States in unlawful exercise of colonial authority attempted a wrongful taking through the ratification of a fraudulent treaty that opened up the Black Hills and the Sioux territory and lands in Nebraska, including the Article XVI territory and lands, for settlement. Act of February 28, 1877, 19 Stat. 254; *Sioux Nation*, 448 U.S. at 381-84, 424.

After over a century of challenges by the Očhéthi Šakówiŋ to this unlawful attempted abrogation of the Treaty of 1868, the United States Supreme Court in 1980 per Justice Blackmun finally considered the challenge and agreed the 1877 treaty was fraudulent, but held that the Congressional ratification of the fraudulent treaty was an "effective" – not express – abrogation of the 1868 Treaty. *Sioux Nation*, 448 U.S. at 382-83. The Court then ruled that the Act of 1877 was a "taking" by the United States under its colonial "plenary" power over Indian nations and awarded the Očhéthi Šakówiŋ purported "just compensation" for the theft of its ancestral, treaty protected, territory, lands and natural resources. *Id*., 448 U.S. at 410-12, 423-24 (citing *Lone Wolf v. Hitchcock*, 187 U.S. 553, 566 (1903) on the exercise of plenary power). However, the Očhéthi Šakówiŋ, and particularly the Oglala Sioux, have not given up its claim to its treaty lands and territory, rejected and refused to accept the award and demanded, and continues to demand, the relinquishment of their territory and lands from colonial rule and occupation by the United States. *See, e.g., Hearing Before the Select Committee on Indian Affairs, United States Senate*, 99TH Cong., 2d Sess., S. 1453 (Sioux Nation Black Hills Act) http://www.gpo.gov/fdsys/pkg/CHRG-99shrg63488/pdf/CHRG-99shrg63488.pdf; *Oglala Sioux Tribe of the Pine Ridge Indian*

Reservation v. U.S. Army Corps. of Eng'rs, 570 F.3d 327 (D.C. Cir. 2009); Lazarus, Edward. Black Hills/White Justice: The Sioux Nation versus the United States, 1775 to the Present (1991).

Parsing the language of Justice Blackmun in *Sioux Nation*, the Act of 1877 was not a proper abrogation of the 1868 Treaty but, rather, was an exercise of the assumed colonial, plenary, power of Congress over Indian nations and peoples that "effectively" abrogated the Treaty, in essence an "implied" abrogation. *See, e.g., Horner v. United States*, 143 U.S. 570 (1892); *Whitney v. Robertson*, 124 U.S. 190 (1888); G. Hackworth, Digest of International Law, 185-98 (1943). The colonial power's own law, what is known as "federal Indian law", on abrogation of Indian treaty rights requires a "clear showing of legislative intent" "not lightly implied." *United States v. Santa Fe Pac. RR Co.*, 314 U.S. 339, 353 (1941); *Menominee Tribe v. United States*, 391 U.S. 404 (1968). Generally, this requires an express statement of Congress in order to abrogate treaty rights. *Leavenworth, Lawrence, & Galveston RR Co. v. United States*, 92 U.S. 733, 741-42 (1876); *Frost v. Wenie*, 157 U.S. 46, 60 (1895); *also*, *Mattz v. Arnett*, 412 U.S. 481, 504-05 (1973); C.F. Wilkinson & J.M. Volkman, *Judicial Review of Indian Treaty Abrogation: As Long as Water Flows, or Grass Grows upon the Earth – How Long a Time is That*, 63 Cal.L.Rev. 601 (May 1975).

However, treaties between sovereign nations are not governed by principles of domestic law, let alone that of a colonial power, but by international law and grounded on the fundamental principle of *pacta sunt servanda*, that treaties must be obeyed. *See*, Vienna Convention on the Law of Treaties ("Vienna Convention"), art. 26 (May 23, 1969), 1155 U.N.T.S. 331, 339 ("Every treaty in force is binding upon the parties to it and must be performed by them in good faith."). This principle has been recently restated by the United State as a signatory[4] in regards to treaties with indigenous nations in the United Nations Declaration on the Rights of Indigenous Peoples

[4] 78 Fed.Reg. 26384 (May 6, 2013).

("UN DRIP"), art. 37, sec. 1 (September 13, 2007) ("Indigenous peoples have the right to the recognition, observance and enforcement of treaties, agreements, and other constructive arrangements concluded with States or their successors and to have States honour and respect such treaties, agreements and other constructive arrangements."). Even when provisions of a treaty allow a party to unilaterally withdraw from the agreement, the withdrawing state is not released from obligations that occurred, nor excused from violations that existed prior to the date that its withdrawal took effect. *See*, Vienna Convention, art. 70(1), 1155 U.N.T.S. at 349.

Unilateral withdrawal as here from treaties that do not contain exit provisions may be a breach of the treaty, particularly where treaty provisions expressly foreclose unilateral withdrawal by the parties – "absolute and undisturbed use and occupation," "no persons …shall *ever* be permitted to pass over, settle upon, or reside in the territory described in this article" (1868 Treaty, art. II) (emphasis supplied). Vienna Convention, art. 56 (an agreement "which contains no provision regarding its termination and which does not provide for denunciation or withdrawal is not subject to denunciation or withdrawal …."); *see also, e.g.*, U.N. Human Rights Commission, 53rd Sess., General Comments under article 40, paragraph 4, of the International Covenant on Civil and Political Rights, General Comment No. 26(61), at 102 ¶s 1-5, U.N. Doc. A/53/40 (1998).[5] "[T]reaties with the Indians must be interpreted as they would have understood them." *Choctaw Nation v. Oklahoma*, 397 U.S. 620, 631 (1970). Clearly, the Očhéthi Šakówiŋ did not understand

[5] Abrogation of a treaty by a state under the doctrine of changed circumstances, *rebus sic stantibus*, requires a fundamental change in circumstances that occurred since the making of the treaty and which could not have been foresee at the time. Vienna Convention, art. 62. Further, the doctrine requires that the abrogating party have approached the other party in a good faith effort to settle the problem. Vienna Convention, arts. 65, 66. *See also, International Law Commission Report* (1966), 2 Y.B. INT'L L. COMM'N, U.N. Doc. A/CN.4/SER.A/1966/Add.1.

the provisions of the 1868 Treaty as granting the United States any right to unilaterally abrogate the Treaty. Furthermore, abrogation of the 1868 Treaty whether express or implied would merely place the parties, the Očhéthi Šakówiŋ and the United States, in the position they were in prior to the treaty under the Fort Laramie Treaty of 1851[6]. For those reasons, the abrogation of the 1868 Treaty would not result in any taking of any territory or lands of the Očhéthi Šakówiŋ.

Therefore, as held by Judge Blackmun, any taking of the territory and lands at issue would have had to occur pursuant to the "plenary" power unilaterally assumed under in the subsequent *Lone Wolf* decision by the colonial occupier, the United States, over the territory, lands, and affairs of the sovereign Očhéthi Šakówiŋ and its people. *Sioux Nation*, 448 U.S. at 410-12, 423-24. There lies the problem. Neither the sovereign Očhéthi Šakówiŋ nor the sovereign Oglala Sioux Tribe nor the Oglala peoples, the Lakȟóta, have ever accepted or acceded to the colonial rule and plenary power of the United States over them as a matter of law, and do not now. They recognize the *de facto* exercise of plenary power over them by the United States as an occupying colonial state, but that does not and has never made that brute exercise of colonial power lawful or provide any basis for the unlawful taking of any territory or jurisdiction or lands or natural resources of the Očhéthi Šakówiŋ, the Oglala Sioux Tribe, or the Lakȟóta Oyate.

Even opinions and rulings of the Supreme Court, acts of Congress, and exercise of executive colonial authority by the Executive Branch and the agencies of the United States as a matter of international law are not binding upon the Očhéthi Šakówiŋ or the Oglala Sioux Tribe, any more than they are binding upon Mexico or Canada unless consented to by the other sovereign.

[6] The abrogation of the 1868 Treaty would withdraw the provision under Article XVII abrogating and annulling all prior treaties and agreements.

They are exercises of colonial rule by a dominant nation over another nation which was illegal under the Law of Nations in 1823, 1831, 1832, 1851, 1868, and 1877[7] as it has remained to be illegal – and condemned - under modern international law.

In 1960, almost 60 years ago and during a period of struggles liberation from colonial rule by peoples across the World, the United Nations General Assembly (including the United States) adopted the *Declaration on the Granting of Independence to Colonial Countries and Peoples*, UN Gen. Ass. Res. 1514 (December 14, 1960), by which the international community of nations condemned colonialism as a gross violation of the Charter of the United Nations and the collective "inalienable" fundamental human rights[8] of all peoples "to complete freedom, the exercise of their

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[7] *See, e.g.*, Emer de Vattel, The Law of Nations (1758) (Liberty Fund, Inc. reprint, 2008), particularly Book I, Chapter XII (on treaties); Book II, Chapter IV (sovereignty and independence of nations), Chapter VII, Section 93 (violation of territory), Chapter XIII (dissolution of treaties, violation of treaties), Chapter XV (faith of treaties); and Book III, Chapter IX (war, things belonging to the enemy), Chapter XI (unjust war), Chapter XIII (acquisitions by war and conquest). The application of principles of international law, specifically de Vattel and The Law of Nations, to the relationship between Native nations and the United States and to the treaties between them, were acknowledged and then purposefully and racially distorted by Chief Justice John Marshall in the Cherokee Nation decisions that created the colonial legal principles known as "federal Indian law," including the doctrines of discovery (colonial ownership of indigenous lands and territory), and of plenary power and "trust" authority over the indigenous nations peoples found on the lands and territories they colonized. *See*, *Johnson v. M'Intosh*, 21 U.S. 543, 568 notes h and I, 571, note k (1823); *Cherokee Nation v. Georgia*, 30 U.S. 1, 53 (1831); *Worcester v. Georgia*, 31 U.S. 515, 520, 561 (1832).

[8] "Inalienable" or "fundamental" human rights are often referred to as "*jus cogens*" or "preemptory" rights under international law, essentially fundamental, existential, natural, rights that do not require a treaty to establish them and rights which are so fundamental that they cannot be compromised or derogated by treaties or agreements of nations. *See*, Gennady M. Danilenko, *International Jus Cogens: Issues of Law-Making*, 2 Eur.J.Int'l.L. 42 (1991). By Resolution 1514, the UN General Assembly acknowledged the right of a peoples to "complete freedom" including the "exercise of their sovereignty" and "the integrity of their national territory" as *jus cogens* rights. *Accord*., Anaya, James, Indigenous Peoples in International Law (Oxford / 2004), 97 (the collective human right of all peoples to self-determination).

sovereignty and the integrity of their national territory," and further absolutely and without any reservations condemned the continuation of colonialism "*in all its forms.*" The United Nations General Assembly therein declared further that "[a]ll peoples have an [equal] right to self-determination" and that "[i]nadequacy of political, economic, social or educational preparedness should neve serve as a pretext for [a colonial power] delaying independence [of any peoples under colonial rule]." The General Assembly then instructed its colonial power members, including the United States, to take "immediate steps" in all territories subject to colonial rule which have not yet attained independence, "to transfer all powers to the peoples of those territories, without any conditions or reservations, in accordance with their freely expressed will and desire, without any distinction as to race, creed or colour, in order for them to enjoy complete independence and freedom."

In 1965, the United Nations adopted the International Convention on the Elimination of All Forms of Racial Discrimination (December 21, 1965). United Nations, Treaty Series, vol. 660, p. 195 ("ICERD"). The ICERD was signed by the United States signed in 1966 and ratified by Congress in 1994, becoming part of the supreme *domestic* law of the United States. US Constitution, art. VI, cl. 2. Even if the United States assumes the position that the treaty has not yet been fully implemented within domestic law, under the international law of treaties, a signatory state cannot act to undermine a treaty it has signed but not fully executed. The ICERD again fully condemned colonialism "and all practices of segregation and discrimination associated therewith, in whatever form and wherever they exist," and specifically noted UN Resolution 1514 as a premise for the treaty. ICERD, Preamble, ¶3. That condemnation of colonialism by the international community in the UN Resolution and the ICERD was the basis for the rejection of

the federal (colonial) Indian law's doctrine of discovery and discriminatory treatment of indigenous peoples by the Australian Supreme Court in its *Mabo I* and *II* decisions[9].

The claim by the United States of lawfulness in the exercise of plenary power over the Očhéthi Šakówiŋ is a legal fiction constructed to "legalize" an illegal taking of Očhéthi Šakówiŋ territory and lands - no less a fiction than the "natural law" of Nazi Germany, Lebensraum, modeled after the prior exercise of colonial plenary power by United States over indigenous nations and peoples, that purportedly justified and legalized the German invasion and the occupying and taking of the territories and lands of Poland and other "less civilized" nations of eastern Europe and the Nuremburg Laws that "legalized" the removal and killing, the genocide, of "lesser" peoples in Europe, and, previously, indigenous peoples in Africa. Robert N. Clinton, *There Is No Federal Supremacy Clause for Indian Tribes*, 34 Ariz.St.L.J. 113, 184-86 (2002) ("Clinton"); Shelley Baranowski, Nazi Empire: German Colonization & Imperialism from Bismarck to Hitler (2011), 141; Olusoga, David and Erichsen, Casper, The Kaiser's Holocaust: Germany's Forgotten Genocide (Farber / 2010), 86-87, 108-109.

Any and all power of the United States in its relations with other sovereign nations is and always has been constrained by international law, the "law of nations," and any and all exercise of power of the United States government additionally arises from and is subject to its own Constitution. *See, M'Culloch v. Maryland*, 17 U.S. (4 Wheat.) 316 (1819). The United States Constitution fails to provide any support for the colonialist exercise of plenary power by the United States over sovereign indigenous nations, including the taking of indigenous territory, lands, and resources and the removal of indigenous peoples from their ancestral, treaty secured, territory and

[9] *Mabo v. Queensland (No. 1)*, 166 LCR 186, HCA 69 (1988); *Mabo v. Queensland (No. II)*, 175 CLR 1, HCA 23 (1992).

lands. Clinton, 169-205; Mark Savage, *Native Americans and the Constitution: The Original Understanding*, 16 Am. Ind. L. Rev. 57 (1991); *also*, Howard J. Vogel, *Rethinking the Effect of the Abrogation of the Dakota Treaties and the Authority for the Removal of the Dakota People from Their Homeland*, 39 William & Mitchell L. Rev. 538, 564-78 (2013); Note, *Congressional Abrogation of Indian Treaties: Reevaluation and Reform*, 98 Yale L.J. 793, 806-08 (Feb. 1989).

Article 26, Section 1 of the UN DRIP executed by the United States provides that: "Indigenous peoples have a right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired." Article 26, Section 2 provides: "Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired." Article 26, Section 3 further provides: "States *shall* give legal recognition and protection to these lands, territories and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned." (emphasis added)

In another matter very similar to the one at bar, two members of the Western Shoshone tribe, sisters Mary and Carrie Dann, challenged the authority of the federal government over ancestral tribal lands, secured by treaty, which were being considered for gold mining. The Danns and other Western Shoshone contended that the United States had unlawfully abrogated the treaty and taken the tribal lands which had been trespassed and encroached upon by settlers for which an award of compensation had been issued by the federal government. *United States v. Dann*, 470 U.S. 39 (1985); *Western Shoshone National Council v. Molini*, 951 F.2d 200 (9th Cir. 1991). Like the Očhéthi Šakówiŋ, the Western Shoshone rejected the award, challenged the exercise of plenary power by the United States in taking the lands, and demanded the return of the tribal lands. *Id.*

The courts held that federal Indian law did not provide a remedy for the return of lands that had been wrongfully taken from the Western Shoshone and that the unaccepted award of compensation had mooted the demand for the return of the land. *Id.*

The Dann sisters then submitted a petition with the Inter-American Commission on Human Rights (IACHR), the human rights tribunal of the regional international body of the Americas, the Organization of American States, of which the United States is a member, requesting a determination of whether federal Indian law deprived them and the Western Shoshone of various human rights, including the indigenous peoples collective right to property, the right to equality under the law, and the right to an effective remedy. The right to equality was violated in that indigenous peoples were the only peoples or race being collectively denied the right to property and a remedy to protect that right. In late 2002, the IACHR issued its landmark ruling concluding that United States failed under international law to ensure the Dann's collective human right to property and equality under the law[10] by denying them a remedy that included the return of the land wrongfully taken from the Western Shoshone peoples. *Dann v. United States*, Case 11.140, Report No. 75/02, Doc. 5. 1 at 860 (2002), ¶s 171 and 172. The IACHR then recommended that the United States revised its domestic laws, federal Indian law, to provide an effective remedy that includes the return of wrongfully taken indigenous property. *Id*., at ¶173, Recommendations 1 and 2.

Following the IACHR *Dann* decision, the Western Shoshone National Council submitted a petition to the United Nations Committee on the Elimination of Racial Discrimination

[10] In *Mabo v. Queensland (No. 1)*, 166 LCR 186, HCA 69 (1988), for example, the High Court of Australia applied the International Convention on the Elimination of All Forms of Racial Discrimination in voiding a domestic law that would have denied the Torres Strait indigenous peoples a collective right to property equal to that of non-indigenous Australians.

("Committee") requesting the issuance of a warning of human rights violations by the United States and urgent action recommendations to correct those violations. The Committee is the international body tasked with obtaining state compliance with the International Convention on the Elimination of All Forms of Racial Discrimination (December 21, 1965), United Nations, Treaty Series, vol. 660, p. 195 ("ICERD"), which the United States has signed and ratified. The Committee granted the petition, found that there was "credible information alleging that the Western Shoshone indigenous peoples are being denied their traditional rights to land," expressed its concern by the lack of action by the United States, expressed its concern regarding the position of the United States "that Western Shoshone peoples' legal rights to ancestral lands have been extinguished through gradual encroachment," and noted that the position asserted by the United States was "made on the basis of processes [under federal Indian law], which did not comply with contemporary international human rights norms, principles, and standards that govern determination of indigenous property interests [citing the IACHR *Dann* decision]." *Id*. at ¶s 4, 5, and 6. The Committee then opined that the United States had violated its obligation under the ICERD to guarantee the Western Shoshone peoples' collective equality before the law without discrimination based on race, colour, or national or ethnic origin. *Id*. at ¶s 7 and 8. The Committee drew the attention of the United States to the Committee's General Recommendation 23 (1997) on the rights of indigenous peoples, in particular their right to own, develop, control and use their communal lands, territories and resources (*Id*. at ¶ 9) and urged the United States to: "a) Freeze any plan to privatize Western Shoshone ancestral lands for transfer to multinational extractive industries and energy developers;" and "b) Desist from all activities planned and / or conducted on the ancestral lands of Western Shoshone or in relation to their natural resources, which are

being carried out without consultation and despite protests of the Western Shoshone peoples…." (*Id.* at ¶ 10).

The very same rule applies here to the protection of the collective human right of the Očhéthi Šakówiŋ, the Oglala Sioux Tribe, and its people to their sovereignty and to their ancestral, treaty-secured, lands and territory upon which the current and proposed CBR activities are taking place and are proposed to take place under license from the colonial authority, the United States.

As matters of both domestic and international law, there was no lawful exercise of plenary power by the United States over the Očhéthi Šakówiŋ and its peoples through the Act of 1877, or through the US Supreme Court's exercise of colonial rule in its unilateral abrogation of the 1868 Ft. Laramie Treaty in the *Sioux Nation* decision, and there was no lawful taking of, occupation of, or colonial rule over, the territory or lands or natural resources of the Očhéthi Šakówiŋ or the Oglala Sioux Tribe, including the territory, lands, and natural resources at issue here. When an exercise of colonial rule is challenged by the raising of settled principles of international law, binding upon the United States and its agencies, including the US NRC and the US EPA, it is not proper to cite to a colonial court's decision, such as the *Sioux Nation* decision, applying condemned doctrines of colonial law rather than international law. That is a wholly circular response asserting that the law of colonial rule justifies the exercise of colonial rule over an occupied nation and peoples – that might makes right. It is a shameful avoidance not only of the rule of law but also of the continuing and heinous violations of the fundamental collective human rights, *jus cogens* rights, and the sovereignty and territorial integrity, lands and natural resources and water resources, and the spirituality, culture, and even the survival, of other nations and peoples for the private gain of a toxic mining enterprise. The Environmental Assessment fails to even discuss let alone demonstrate lawful jurisdiction and authority of the United States or its NRC under international

law and the law of treaties to issue any license to CBR for any activities upon this territory and land without the prior consent of the Očhéthi Šakówiŋ and the Oglala Sioux Tribe.

OST's EA Contention K: Failure to Obtain the Consent of the Oglala Sioux Tribe as Required by Treaty and International Law

Attendant to the sovereignty of the OST by the Očhéthi Šakówiŋ, is the collective human right recognized by international law of "free, prior, and informed *consent*" by the Tribe to the CBR activities under license of the United States or any other unauthorized encroachment upon the Tribe's territory or the development or contamination of the Tribe's natural resources. The Final EA does purport to respond to OST's Draft EA challenge on this issue by referencing dismissively the Final EA's discussion, unchanged from the Draft EA, of consultation. FEA, p. A32 (citing Final EA Sections 3.6.4 and 3.6.5). Consultation is not consent. As with jurisdiction, nowhere in the Final EA does it address this issue. The term "consent" is mentioned only one time in the entire 279-page document and nowhere is there any discussion of the law of free, prior, and informed consent as it pertains to indigenous peoples, including the Očhéthi Šakówiŋ and the Oglala Lakȟóta (OST). Furthermore, as discussed below in Contention M, the Final EA summarization of the nature and extent of the so-called consultation was inadequate and not meaningful in and of itself.

Basis and Discussion:

By the Treaty of 1868, Articles II and XVI, the United States "solemnly" agreed that "no persons" would be authorized without the prior consent of the Tribe "shall ever be permitted to pass over, settle upon, or reside in the territory described in this article …." Most recently, the international community with near unanimity has acknowledge in Article 19 of the UN DRIP, executed by the United States, that "States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and

informed consent before adopting and implementing legislative or administrative measures that may affect them." Article 10 provides: "Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and …where possible, with the option of return." The requirement of "free, prior and informed consent" of the affected indigenous peoples before the State's adoption or implementation of legislative or administrative measures is an express rejection of the exercise of plenary power by a state over indigenous peoples. See also, ILO Convention 169, art. 6, sec. 2 and art. 26, sec. 2 (1989). A peoples' "right of consent" clearly arises out of their collective human rights to self-determination, to territorial integrity, and to property, including both the land and resources found within their territorial boundaries.[11]

Article 19 of the UN DRIP is informative concerning the requirements and scope of adequate and meaningful consultation by states with indigenous peoples. It provides: "***States shall consult and cooperate in good faith with the indigenous peoples*** concerned through their own representative institutions ***in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them***." (emphasis supplied) This requirement of consultation for the purpose of obtaining, if possible, the free, prior and informed consent of the indigenous peoples potentially affected by the state measures, recites and affirms the settled doctrine found in the landmark treaty ILO Convention 169 (1989), art. 6, sec. 2: "The consultations carried out in application of this Convention shall be undertaken, in good faith and in a form appropriate to the circumstances, with the objective of

[11] For example, the Inter-American Court on Human Rights enforced the "right of consent" in regards to the territory, lands, and natural resources of indigenous peoples in Suriname. *Saramaka People v. Suriname*, IACHR (Nov. 28, 2007), Series C No. 72, ¶s 130, 131, 133 – 192, 194, Relief ¶s 5, 8 (*citing*, Article 32 of the UN DRIP and ILO Convention 169).

achieving agreement or consent to the proposed measures. The following article elaborates on that process: "In addition, they shall participate in the formulation, implementation and evaluation of plans and programmes for national and regional development which may affect them directly. …Governments shall ensure that, whenever appropriate, studies are carried out, in co-operation with the peoples concerned, to assess the social, spiritual, cultural and environmental impact on them of planned development activities. The results of these studies shall be considered as fundamental criteria for the implementation of these activities. …Governments shall take measures, in co-operation with the peoples concerned, to protect and preserve the environment of the territories they inhabit." *Id*., at art. 7, secs. 1, 3, and 4.

As previously mentioned, the United States is a signatory state of the UN DRIP and although under its provisions the treaty is not binding international law, it does provide guidance in determining the meaning and scope of "consultations" with indigenous peoples, including the Oglala Lakȟóta Oyate through the Oglala Sioux Tribe. Particularly in light of the IACHR *Dann* decision and the companion UN CERD Early Warning and Urgent Action decision regarding the Western Shoshone, and the recommendations of both directing the United States to bring federal Indian law in compliance with its international human rights obligations concerning indigenous peoples, the UN DRIP consultation provisions are in line with those recommendations as they define the consultation process as for the purpose of obtaining free, informed consent to the state action from the affected indigenous peoples, for the purpose of obtaining the cooperation of affected indigenous peoples in the formulation, implementation and evaluation of state plans and programmes that may directly affect them, and for the purpose of protecting the interests, the environment of the territories they inhabit, of the affected indigenous peoples. Only then, does

consultation have meaning and become adequate in recognizing and protecting the collective human rights of indigenous peoples affected by state licensure of activities that may affect them.

If informed consent is not freely given by the affected indigenous peoples, either the consultation was unsuccessful and the activities cannot proceed, or if the state proceeds without the consent, it must properly justify and demonstrate lawful excuse for the violations of the collective human rights of the affected indigenous peoples, including the collective human right to self-determination, as it further infringes upon and violates the sovereignty of the affected indigenous peoples and nation. Nowhere in the Environmental Assessment is it demonstrated that the Tribe and its people have been adequately "informed" of how the expansion of the CBR activities for several more decades may affect them, and nowhere in the EA is it demonstrated that the Tribe has given its free consent to the issuance of license for the Marsland expansion or the activities of CBR. Nowhere in the Environmental Assessment is there any discussion, let alone justification, found excusing the NRC from its violations of the collective human rights of the Očhéthi Šakówiŋ, the Tribe, and the Oglala Lakȟóta Oyate in the issuance of the license expansion to CBR. Without this showing, the Final Environmental Assessment is insufficient and inadequate and the issuance of the license expansion would be unlawful.

OST EA Contention L: **Failure to Meet Applicable Legal Requirements Regarding Protection of Historical, Cultural, and Spiritual Resources**

The Final EA fails to meet the requirements of NEPA, the NHPA, and 40 C.F.R. §§ 51.10, 51.70 and 51.71, along with the NRC, ACHP, and CEQ regulations because it lacks an adequate description and "hard look" of either the affected environment or the impacts of the project on archaeological, historical, and traditional cultural resources, including non-tangible historic, cultural, and spiritual interests of Native peoples such as the Očhéthi Šakówiŋ, the OST, and the Oglala Lakȟóta Oyate.

As a result, the Final EA fails to comply with Section 51.60 because its analyses are not adequate, accurate and complete in all material respects concerning archaeological sites and materials within the project area. No specific, proper, or sufficient survey was performed for this license expansion in order to demonstrate that archaeological sites within the project area are properly identified, evaluated and protected and to show that it has submitted a proper analytic discussion under Sections 51.45 and 51.60 and the NRC Staff relied on old survey that were done in 1982 and 1987.

10 C.F.R. § 51.71(d) and NEPA require that the Final EA include an analysis of all environmental impacts of a proposed action, including cultural impacts. 10 C.F.R. § 51.70(a) places an affirmative duty on NRC Staff to conduct all NEPA "hard look" analysis in conjunction with other surveys or studies required under federal law. This includes necessary surveys required under NEPA and the NHPA.

The OST in its comments to the Draft EA challenged the sufficiency of the EA on this issue as did the Yankton Sioux Tribe. ML 18046A060; 18060A058, Exhibit I hereto. In response, the NRC Staff cited Sections 3.6.3.3, 3.6.4, 3.6.5, and 4.6 of the Final EA which are essentially unchanged from the Draft EA. FEA, pp. A-32 and A-33. These Sections further describe a procedure that is virtually identical to that employed by the NRC Staff in the Crow Butte License Renewal Application proceeding as both the License Renewal and Marsland historic and cultural resource assessments were conducted jointly by the NRC Staff. As discussed below, the NRC Board in the License Renewal proceeding found that the cultural resources assessment in the License Renewal Final EA did not meet the "hard look" requirements of NEPA because, among other reasons, the assessment did not consider intangible interests of the Očhéthi Šakówiŋ, and specifically the Oglala Lakȟóta Oyate (OST), and did not include any significant participation by

the OST in the assessment. Nothing has been changed or added by the NRC Staff to the discussion / assessment since the Board's findings and ruling to address or correct these fundamental deficiencies in regard to the Marsland Expansion Area or Application.

Basis and Discussion:

The Final EA states at Section 3.6.3 describes several historic and cultural property field surveys of parts of the Marsland expansion and surrounding area apparently conducted in 2005, 2010, and 2011 under Section 106 of the National Historic Preservation Act (NHPA) to identify "historic and cultural properties." According to the Final EA, Section 3.6.2.2 and Section 3.6.2.3, the NRC Staff was aware that the MEA lies within the ancestral territory of the Očhéthi Šakówiŋ specifically occupied and used by the Oglala Lakȟóta Oyate through at least 1873 when the Red Cloud Agency was established just west of what is now Crawford, Nebraska, through the Sioux Wars of 1876-1877, and through 1887 when that area of the Unceded Lands was unlawfully taken by Congress from the Očhéthi Šakówiŋ and opened to settler colonialists.

It does not appear from the Final EA that any of these surveys were conducted by, under the supervision of, in the presence of, or even under the direct consultation with any qualified Native persons, let alone qualified members of the Očhéthi Šakówiŋ or the Oglala Lakȟóta Oyate or the Oglala Lakota Tribe. Among the applicable requirements are those under the National Historic Preservation Act and related Executive Orders which required to fully involve the Tribe in all aspects of decision-making affecting Tribal interests such as those directly impacted by the project, including the license expansion. See, e.g., Executive Order, 13175 and 36 C.F.R. 800.2(c)(2)(ii)(A). These mandates require NRC to consult with Tribe as early as possible in the decision-making process. Here, as discussed further below, the NRC has not meaningfully engaged in the required consultation process. As indigenous archaeologist, Dr. Louis Redmond,

opines below, the mere fact that the MEA field surveys failed to located even a single indigenous historic or cultural property (see, Section 3.6.3.1 (Table 3-10) and Section 3.6.3.3 (Table 3-11)) given the 12,000-year occupation and use of that area by the Očhéthi Šakówiŋ, the Oglala Lakȟóta Oyate, and other indigenous peoples (Section 3.6.2.1) strongly evidences the insufficiencies of these NHPA Section 106 surveys.

> I do find several problems with the lack of any Native American properties located during the survey.
>
> First, I worked in this general area from 1992 through the Fall of 1995 as the Forest Archeologist for the Nebraska National Forest. It was my experience that whenever we surveyed areas near or bordering on water resources, ponds, creeks, et cetera, we would almost invariably find prehistoric camp sites and related process sites. Throughout this proposed project area, there are a number of both permanent and intermittent water resources of all kinds, including creeks, springs and natural ponds.

Statement of Dr. Louis Redmond, January 28, 2013 (ML13029A820), Exhibit D hereto.

In addition, Dr. Redmond further opines that the lack of subsurface testing when large scale ground disturbances are being contemplated is a violation of field survey standards and protocols:

> [T]his project will eventually cause significant ground disturbance, and yet there is no evidence that any type of subsurface testing process for any level of cultural materials took place. It would seem that some form of subsurface testing to at least below the alluvium level be performed over at least the area where most of the surface impacts will occur. I would suggest that this type of processing be instituted on at least the higher elevations near water resources where the alluvium layer would be shallower due to natural erosional processes.

Id.

In his Opinion Letter, Dr. Redmond suggests that the MEA survey was performed during winter months when the ground was likely covered by snow and ice thereby concealing possible finds. It seems clear that CBR's TCP surveys would benefit from the involvement of tribal officials who would be able to point out common sense like the fact that it is hard to locate Native

American properties when the ground is frozen and snow-covered as it often is in November and February when the Marsland TCP survey was conducted.

Dr. Redmond opines:

> [T]he survey that was performed in this area was over approximately 4,500 acres, which was surveyed between November 2010 and February 2011. It was also my experience in working in this area that during that time of the year, snow and ice covered most of the ground surface, at least greater than 85%. **My problem with this scenario is that it would be relatively impossible to locate 99% of prehistoric/Native American sites without a much higher level of ground surface observation, i.e., greater than 60-75%, preferably greater than 90%**. As stated in the synopsis of the cultural report, this area of the Nebraska Panhandle has not been subjected to even minor investigation. **Due to this lack of research, it would appear intuitively evident that an investigation with little or no ground surface visibility would be insufficient to state that no Native American/prehistoric materials were present.**

Id.

As Dr. Redmond states, there is scant if any research or literature related to Native American sites in the subject area of the Nebraska Panhandle and due to this lack of research and the investigation during a time when there is little or no ground surface visibility, the lack of a finding of TCPs should not be interpreted as grounds for a conclusion that no such TCPs exist in the area. If the survey were done by CBR in the summer and complied with standard protocols for such surveys, then Tribe's concerns would be less. However, it appears that CBR intentionally scheduled the Marsland TCP survey for a time when it would be highly unlikely to find TCPs due to the weather and ground conditions.

The Final EA also distinguishes between an NHPA Section 106 "field survey" (Final EA, Section 3.6.3) and an "ethnographic field study" for "traditional cultural properties" (Final EA, Sections 3.6.5.1 and Section 3.6.5.2). The Final EA also states at Section 3.6.5 that the NRC Staff was well aware of the potential for this area to have significant religious or cultural significance which "may not be represented in archaeological or historic contexts." EA, Section 3.6.5.1. The

Final EA, for example, refers to an ethnographic filed study conduct by Sebastian LeBeau, a member of the Cheyenne River Sioux Tribe of an area 25 miles west of the Marsland Expansion Area which "indicates there is a potential for Lakota places of religious or cultural significance to exist in this part of western Nebraska. While LeBeau's investigation …was not a complete survey …or a systematic analysis [of the site], it did point out some possibility for the existence of places of Lakota spiritual value, offering sites, and sites used for gathering of natural resources to be present in the vicinity of the MEA." Final EA, Section 3.6.5.1 and 3.6.5.2.

While the OST was invited to conduct a TCP survey at its own expense, no offer was made to involve OST tribal representatives and elders in the TCP surveys being conducted at CBR's expense. The Final EA describes a "spiritual walk" by representatives of the Crow Nation (located approximately 500 miles from the MEA) and the Santee Sioux Nation (located approximately 400 miles from the MEA) during the winter of 2012 and although neither of their tribes had the greatest history of association with the area, that belongs to the Oglala Sioux Tribe (reservation located about 50 miles from the MEA), they identified "12 potential places of religious or cultural significance." Final EA, Section 3.6.5.2 However, these identified "places of religious or cultural significance" were summarily dismissed as they were not "potentially eligible for listing on the NRHP." *Id*. In other words, while purporting to consider "TCP"s that "may not be represented in archaeological or historic contexts" (Final EA, Section 3.6.5.1), the NRC Staff the proceed to dismiss those very properties as not falling within the more narrow properties subject to protection under the NHPA.

These "intangible" TCPs are specifically what the NRC Board held in the previous License Renewal proceeding had to be considered by the NRC Staff, and was not, under the broader NEPA "hard look" requirement. *In the Matter of Crow Butte Resources, Inc. (In Situ Leach Facility,*

Crawford, Nebraska), 83 N.R.C. 340, 2016 WL 8260624 (ASLBP No. 08-867-02-OLA-BD01) (May 26, 2016) ("*Matter of Crow Butte*, May 26, 2016") at 402-03. That alone is a violation of NEPA and renders the Final EA insufficient in its consideration of the spiritual and cultural significance of the MEA to the Očhéthi Šakówiŋ, the Oglala Lakȟóta Oyate, and the Oglala Sioux Tribe, among other interested indigenous peoples and nations with ancestral ties to the area.

Binding, on Point Collateral Rulings in the CBR License Renewal Proceeding and the Powertech Proceeding

On May 26, 2016, the NRC Board in a collateral proceeding issued its own opinion and ruling on the adequacy of these same procedures and substance of consultation in regards to the CBR License Renewal proceeding. The Board found that:

> the NRC Staff's literature reviews focused largely on Euro-American resources and Euro-American cultural artifacts …would not be expected to uncover sites of significance to Indian tribes – which for the most part are recorded orally. Furthermore, it is highly unlikely that literature searches would lead to the identification of specific TCPs within the license area, regardless of whether they could qualify as historic properties under the NHPA. Dr. Nickens for the NRC Staff testified that literature reviews and historical background checks "should be a corollary" to a TCP study or survey because a literature search cannot "'ascribe the cultural meaning" to a TCP Lakota people would"'

LR Decision, May 26, 2016, 83 N.R.C. at 389. These solely Euro-American literature sources were employed in regard to the MEA as well. See, Section 3.6.2. From the Final EA, no attempt was made to obtain the oral history of the the Očhéthi Šakówiŋ or the Lakȟóta Oyate, or any of the indigenous nations or peoples having current and ancestral ties to the area. The Board remarked that "the area around the Crow Butte mine is 'steeped in history.' This calls for *greater* scrutiny of the license area, not less." *Id.*, 83 N.R.C. at 390.

As to the conditions for an appropriate survey, the Board noted that the NRC Staff's own expert, Dr. Nickens, "actually acknowledged that a more structured process with the involvement of tribal elders is a better TCP survey approach. He further stated '[a]nd I agree with [Mr. Catches

Enemy (the indigenous OST expert)] that a proper TCP survey, as I've stated previously involved elders and bringing the elders to the filed as possible and so forth." *Id*., 83 N.R.C. at 389. Mr. Catches Enemy testifying for the OST proposed a more structured approach consisting of spiritual advisors and elders staying on site on dates and times and under conditions of their direction over a significant amount of time necessary to determine the spiritual and cultural sites and character of the area. *Id*. Clearly, despite that decision having been issued by the Board to the NRC Staff almost 2 years ago, the NRC Staff has ignored the NRC Board's clear ruling and direction on this very issue.

The NRC Board went further in considering the adequacy of the very same November 2012 TCP survey by the Crow Nation and the Santee Sioux Nation heavily relied upon by the NRC Staff in the Draft and Final EAs for the Marsland Expansion Area.

> Even setting aside all of these considerations, however, the November 2012 TCP Survey still cannot satisfy the NRC Staff's Identification Obligations under NHPA because the TCP surveyors were not appropriate for the task. As discussed above, neither the Crow Nation nor the Santee Sioux Nation, the two groups participating in the November 2012 TCP Survey, are Lakota tribes and neither has a sufficient relationship to the license area. In fact, the Crow Nation had previously advised Crow Butte's contract of its lack of connection to the license area, a fact that was passed on to the NRC Staff.
>
> We do not dispute that Mr. Goodman and others on the NRC Staff genuinely believed that the Santee Sioux and the Crow Nation could identify the TCPs of tribes other "than just the Santee Sioux Nation and the Crow Nation." But the evidence does not support any such belief. Indian tribes are distinct nations -- a concept recognized in the NRC Staff's own NUREG-2173, which notes that each Indian tribe has a unique history and experience "with its own customs, culture, concerns, interests and needs."
>
> Significantly here, the Crow Nation is not a Sioux nation, and therefore it is neither Lakota nor Dakota. Moreover, the Crow Nation reservation is located in southern Montana. Dr. Nickens, the NRC Staff's own expert, acknowledged that, unlike the Oglala Sioux Tribe, which considers the area in and around the Black Hills its ancestral homeland, the Crow Nation had little involvement in Nebraska.
>
> Similarly, although the Santee Sioux Nation is a Sioux nation, and a Dakota tribe,

> it is not a Lakota tribe. Moreover, the Santee Sioux reservation area is located on the opposite end of Nebraska, 300 miles from the license area, and as Dr. Nickens explained, the Santee Sioux originated in Minnesota. Although it moved westward from Minnesota, it did not move into Nebraska until it was settled on a reservation in the far eastern part of the state.

Id., 83 N.R.C. at 499-400. The Board found "by a preponderance of the evidence that the NRC Staff's TCP survey of the Crow Butte License area did not meet its Identification Obligations under NHPA." *Id*., 83 N.R.C. at 402. It is that very same insufficient showing by the NRC Staff, that very same evidence, that underlies the Final EA for the Marsland Expansion.

Then, the Board examined whether the NRC Staff satisfied its "hard look" obligations under NEPA. As mentioned previously, the Board remarked that NEPA required the agency to go further.

> The NHPA and NEPA both impose procedural steps to improve agency decisionmaking, and many of the NHPA's requirements overlap with those of NEPA. Of particular importance here, NEPA requires each federal agency to undertake a "hard look" at the environmental impacts of each major federal action -- which would include impacts of license renewal on TCPs. Satisfying NEPA means satisfying, at a minimum, the NHPA's Identification Obligations, **and even going further in certain cases. For example, NEPA requires a look at intangible, not just tangible, properties, and it is not limited to a focus on historic properties in the same way as the NHPA.**

Id., 83 N.R.C. at 402 (emphasis provided) (citations omitted). For this reason, the NRC Staff's summary dismissal of even the intangible spiritual and cultural sites and character identified by the Crow Nation and the Santee Sioux Nation in their 2012 TCP survey because they were not eligible for the National Register was a violation of NEPA under this rule. The Board found that "by a preponderance of the evidence that the EA is deficient for failing to take a hard look at potential TCPs within the Crow Butte license area, including the EA's failure to analyze the

objections raised by the tribes with respect to the inadequacy of the open site TCP survey." *Id*., 83 N.R.C. at 404.

On December 23, 2016, the Commission affirmed the Board's ruling in a related matter, *Powertech,* that the NRC Staff had failed to satisfy NEPA's "hard look" requirement, that NEPA requires more than mere satisfaction of the NHPA consultation requirement.

> The NHPA imposes several obligations on federal agencies, which proceed in a step-by-step manner. The consultation requirement continues throughout the steps. The first step is identifying any historic properties that might be affected by the federal undertaking (here licensing), and in doing so, making a reasonable and good faith effort to seek information from consulting parties, including Native American Tribes, to aid in that identification. …
>
> But, as discussed by the Board, the identification of historic properties is not the end of the NHPA consultation process. After it identifies eligible sites that might be affected by the project, an agency must assess and resolve potential adverse effects in consultation with tribes that attach religious and cultural significance to those sites. In its ruling on Contention 1B, the Board found that the Staff had not adequately consulted with the Tribe on the second and third steps; that is, despite its good faith effort to consult in order to identify historic properties, the Staff had not demonstrated that it provided the Tribe with the opportunity to identify concerns about those properties and participate in the resolution of any adverse effects. The Board, after a merits hearing, reasonably concluded that the Staff's consultation with the Tribe was insufficient to meet these requirements.

Powertech, Commission Decision, 84 N.R.C. at 249.

That same analysis of the NHPA / NEPA process and substance employed by CBR and the NRC Staff to the MEA applies equally here.

The Final EA is insufficient.

OST EA Contention M: **Failure to Meet Applicable Legal Requirements Regarding Protection of Historical, Cultural, and Spiritual Resources by Reason of the Failure to Involve or Consult the Oglala Sioux Tribe as Required by Federal and International Law**

As discussed above in Contentions J, a proper and complete historical, cultural, or spiritual resource survey of the Marsland Expansion Area could not have been completed without the

proper participation of the Oglala Sioux Tribe and other interested indigenous peoples with ties to the impacted area. As further discussed above in Contention I, that participation requires under international legal obligations not only the "consent" of the Tribe, but also the "*consultation* to obtain the consent of the Tribe".

In addition to the Final EA's failure to demonstrate that those requirements have been met, it further fails to demonstrate that proper and sufficient consultation was had under federal law, specially Section 106 consultation under the National Historic Preservation Act and the consultation required under NEPA's hard look requirement.

In 2011, the OST itself enacted a detailed law, Ordinance No. 11-10 (Exhibit H hereto) proclaiming its territorial interests recognized by the United States by treaty between nations, and setting forth specific policies, guidelines, and procedures for consultations between the United States and the OST. A copy of that ordinance is submitted herewith. The law expressly invokes President Clinton's Executive Order No. 13084 (1998) which directs all federal agencies to respect tribal self-government and sovereignty whenever a federal agency engages in matters that may significantly affect Native tribal governments. It also invokes Clinton Executive Order No. 13175 (2000), which directs all federal agencies to consult and collaborate with tribal officials in the development of federal policies that have tribal implications. And, it invokes President Obama's Memorandum of November 5, 2009, that directs federal agencies to implement President Clinton's Executive Order 13175. Ord. 11-10, p. 3 (Exhibit H). Rather than demonstrate compliance with the OST law and Presidential directives, the Draft and Final EA ignore the OST law and stress that the NRC is not bound by the Presidential directives. FEA, Section 3.6.4. Instead it substitutes a "case-by-case approach" that as discussed below falls far short of what is required under federal and tribal law.

Basis and Discussion:

On specific consultation, the Final EA states merely that it "formally initiated the Section 106 consultation process for the MEA by contacting the 21 Tribal governments by letters dated September 5, 2012", "mailed a letter to each of the consulting Native American Tribes on October 31, 2012, offering access to all of the CBR project areas," "sent a letter to all consulting Native American Tribes on January 3, 2013, to update them on the ongoing consultation activities," and "sent an unredacted copy of the Tribal field survey report" to each of the consulting Native American Tribes, on April 2, 2013. Final EA, Section 3.6.4 and Section 3.6.5.2. The Final EA notes that several of the "consulting Tribes" "responded to this report disagreeing with the findings." Section 3.6.5.2 (Cheyenne River Sioux Tribe, Yankton Sioux Tribe, Standing Rock Sioux Tribe). There is no indication in the Final EA whether or how the NRC Staff responded to or followed up, if at all, to these formal disagreements from a number of interested nations of the Očhéthi Šakówiŋ. With the exception of the previously mentioned "spiritual walk" by the Crow Nation and the Santee Sioux Nation (Section 3.6.5.2), the EA provides no further detail of any other response or participation by any of the 21 Tribes to whom the letters had been sent.

The Section 106 and TCPs that are found within the MEA relate most closely to *Oglala* and *Lakȟóta* history, and nobody or entity is more qualified to judge their existence or importance that the Oglala Lakȟóta Oyate (people) themselves - which is precisely why consultation is required and those determinations are not left to the federal agency or company proposing action. This is very difficult to explain to tribal members who are infused with the wisdom of nature and common sense and often fail to comprehend the ways of the mining company and the NRC Staff.

The National Environmental Protection Act, NEPA, guarantees a right of 'meaningful' consultation to Indian tribes when there is major federal action. NEPA mandates that the government "preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice." 42 USC § 4331(b). NEPA then triggers the National Historic Preservation Act (NHPA), 16 U.S.C.S. § 470f., Native American Graves Repatriation Act (NAGPRA), 25 U.S.C. 3001 et seq. and the Archaeological Resources Protection Act, 16 U.S.C. 4700 *et seq.* Federal agencies are required to consult with federally recognized Indian tribes that may attach religious or cultural significance to the project area, even if the project area is not within its reservation under Section 106 of the NHPA. 36 C.F.R. 800.4(f)(2).The federal agency is further required to consult with a tribe's Tribal Historic Preservation Officer (THPO) if there is one, and a tribal representative if not.

The Oglala Sioux Tribe is a federally recognized tribe, entitled to all the rights under federal law that such tribes are entitled to, including consultation under Section 106 of NHPA, as well as the obligations owed to it from its assumed trustee, the federal government. Furthermore, the CBR area is within the 1851 Treaty and 1868 Treaty areas, which is recognized as the aboriginal land of the Tribe, and therefore the Tribe ascribes cultural and religious significance to many sites in that area. The Tribe asked that tribal representatives be involved in the surveys being conducted by CBR and being used by the NRC Staff but it was refused and instead it was offered a chance to conduct its own TCP surveys at its own expense. The NRC cannot make that determination without 'meaningful' consultation with the Tribe and certainly not over the objections of the Tribe (and in rejection of the Tribe's reasonable good faith request to be

involved in the CBR surveys) and yet it has done so in this case as reflected by the issuance of the Final EA in its current form.

This whole process of Section 106 "consultation" was fundamentally flawed, did not amount to a good faith consultation, and failed to satisfy NHPA let alone the requirements for an adequate consultation under NEPA. The Marsland Expansion consultation was conducted jointly with the NRC Staff's consultations on the CBR License Renewal application and with an application by Powertech for an *in situ* uranium mining license in the Black Hills of South Dakota. This joint consultation procedure and adequacy was litigated extensively in both collateral proceedings which produced decisions by separate NRC Boards. *See*, LR Decision, May 26, 2016; *In the Matter of Powertech USA, Inc. (Dewey-Burdock In Situ Uranium Recovery Facility*), 2015 WL 7444635 (ASLBP No. 10-898-02-MLA-BD01) (April 30, 2015) ("*Powertech*, Board Decision"). The *Powertech* decision was also affirmed by the Commission on appeal. *In the Matter of Powertech USA, Inc. (Dewey-Burdock In Situ Uranium Recovery Facility*), 84 N.R.C. 219, 2016 WL 9460000 (CLI-16-20) (December 23, 2016) ("*Powertech*, Commission Decision"). CBR, the NRC Staff, the Oglala Sioux Tribe, were all parties to the litigation over the renewal of the license for the CBR facility on a few miles from the MEA and the very same issues of the adequacy of the Section 106 surveys and consultation for the area of CBR's activities, including the adequacy of the Section 106 survey of the MEA, was litigated.

The 'consultation' process as one involving a single large collective meeting involving the NRC, several tribes and representatives of more than one uranium company (CBR and Powertech-Dewey Burdock) in June 2011. There was never a meeting with the Oglala Sioux Tribe solely devoted to the CBR Marsland expansion. Further, although the Tribe was invited to do its own TCP survey at its own cost, it was never involved in the surveys that were being conducted with

regard to CBR Marsland Expansion Area, nor the Section 106 surveys on which the Final EA relies. Further, as previously mentioned, the Cheyenne River Sioux Tribe (ML13123A089 / ML13157A297); Yankton Sioux Tribe (ML13126A309 / ML13157A221); and Standing Rock Sioux Tribe (ML13126A327 / ML13157A263), each objected to the findings dismissing the sites identified by the Crow Nation and the Santee Nation as having religious or cultural significance because they did not qualify for NRHP listing under the NHPA. The Standing Rock Sioux Tribe stated in the response at ML13126A327 that it disagreed with the interpretations in the Santee Sioux TCP Report as to the stone circles. There is no reply or responsive content to the letter from Standing Rock Sioux Tribe.

Further, Dr. Redmond states that the number and identity of the tribes having an interest in the area are greater in number than is reflected in the Marsland TCP survey:

> [A]lthough it is true that the primary tribal use of this area was by the Sioux (sic) and Cheyenne, a number of tribes utilized the Nebraska Panhandle area. According to just the treaties from this area, a number of tribes are not noted for this cultural review. One of the most encompassing of these treaties is the 1851 Fort Laramie Treaty involving the Sioux or Dahcotah (sic), Cheyennes, Arrapahoes, Crows, Assinaboines, Gros-Ventre Mandans, and Arrickaras. The People listed as "Sioux or Dahcotah" are not easily defined, but include the Lakota Nations of the Sicangu, Brule, Oglala, Minnecoujou, Hunkpapa, Izipaco, Sihasapa, and Ooinunpa nations. Added to these are the Sans Arcs, Santee and Yanktons who are Dakota speakers. The Mandans and Arrickara noted in the said treaty would also include the Hidatsa peoples of the Three Affiliated Nations. As to the Cheyenne defined in the 1851 Treaty, this would indicate both the current Northern and Southern Cheyenne Nations since the division is an artificial artifact of the Government reservation system. In addition, although not listed in this treaty, the Pawnee would also have utilized this area, at least the northern Pawnee or Skidi.

Redmond Opinion Letter, January 28, 2013, Exhibit D hereto.

Thus, Dr. Redmond lists 21 Indian tribes[12] that should have been consulted which is far more than is described in the Final EA; which means that there are tribes that have not been properly consulted as part of the Section 106 process in violation of NEPA and NHPA. It is significant that the NRC Staff has had Dr. Redmond's Opinion Letter since 2013, for 5 years, and over that extended period has apparently heeded little if any of it during the preparation of the Final EA for the Marsland Expansion Area.

The NRC Staff has not carried out its agency responsibilities in a manner that recognizes and respects the government-to-government relationship. Merely sending letters to a main tribal address is not enough. The federal courts have addressed the strict mandates of the National Historic Preservation Act:

> Under the NHPA, a federal agency must make a reasonable and good faith effort to identify historic properties, 36 C.F.R. § 800.4(b); determine whether identified properties are eligible for listing on the National Register based on criteria in 36 C.F.R. § 60.4; assess the effects of the undertaking on any eligible historic properties found, 36 C.F.R. §§ 800.4(c), 800.5, 800.9(a); determine whether the effect will be adverse, 36 C.F.R. §§ 800.5(c), 800.9(b); and avoid or mitigate any adverse effects, 36 C.F.R. §§ 800.8[c], 800.9(c)**.** The [federal agency] must confer with the State Historic Preservation Officer ("SHPO") and seek the approval of the Advisory Council on Historic Preservation ("Council").

Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 805 (9th Cir. 1999). See also 36 CFR § 800.8(c)(1)(v)(agency must "[d]evelop in consultation with identified consulting parties alternatives and proposed measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the [NEPA document].")

[12] Sioux or Dahcotah (including the Lakȟóta Nations of the Sicangu, Brule, Oglala, Minnecoujou, Hunkpapa, Izipaco, Sihasapa, Ooinunpa, the Sans Arcs, Santee, Yanktons, the Mandans, the Arrickara, and the Hidatsa peoples of the Three Affiliated Nations); Cheyennes (including both the current Northern and Southern Cheyenne Nations), Arrapahoes, Crows, Assinaboines, Gros-Ventre Mandans, and the Pawnee (northern Pawnee or Skidi).

NRC Staff interpretations of these requirements are not entitled to deference. The Advisory Council on Historic Preservation ("ACHP"), the independent federal agency created by Congress to implement and enforce the NHPA, has exclusive authority to determine the methods for compliance with the NHPA's requirements. See *National Center for Preservation Law v. Landrieu*, 496 F. Supp. 716, 742 (D.S.C.), *aff'd per curiam*, 635 F.2d 324 (4th Cir. 1980). The ACHP's regulations "govern the implementation of Section 106," not only for the Council itself, but for all other federal agencies. Id. See *National Trust for Historic Preservation v. U.S. Army Corps of Eng'rs*, 552 F. Supp. 784, 790-91 (S.D. Ohio 1982).

NHPA § 106 ("Section 106") requires federal agencies, prior to approving any "undertaking," such as this project, to "take into account the effect of the undertaking on any district, site, building, structure or object that is included in or eligible for inclusion in the National Register." 16 U.S.C. § 470(f). Section 106 applies to properties already listed in the National Register, as well as those properties that may be eligible for listing. See *Pueblo of Sandia v. United States*, 50 F.3d 856, 859 (10th Cir. 1995). Section 106 provides a mechanism by which governmental agencies may play an important role in "preserving, restoring, and maintaining the historic and cultural foundations of the nation." 16 U.S.C. § 470.

If an undertaking is the type that "may affect" an eligible site, the agency must make a reasonable and good faith effort to seek information from consulting parties, other members of the public, and Native American tribes to identify historic properties in the area of potential effect. *See* 36 CFR § 800.4(d)(2). *See also, Pueblo of Sandia*, 50 F.3d at 859-863 (agency failed to make reasonable and good faith effort to identify historic properties).

The NHPA also requires that federal agencies consult with any "Indian tribe ... that attaches religious and cultural significance" to the sites. 16 U.S.C. § 470(a)(d)(6)(B). **Consultation must**

provide the tribe "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(2)(ii). (emphasis added) As discussed above, under the UN DRIP, consultation further requires the free, informed consent of the Tribe to activities that may impact such historic, religious, and cultural properties.

Apart from requiring that an affected tribe be involved in the identification and evaluation of historic properties, the NHPA requires that "[t]he agency official **shall ensure that the section 106 process is initiated early in the undertaking's planning**, so that a broad range of alternatives may be considered during the planning process for the undertaking." 36 CFR § 800.1(c) (emphasis added). The ACHP has published guidance specifically on this point, reiterating in multiple places that consultation must begin at the earliest possible time in an agency's consideration of an undertaking, even framing such early engagement with the Tribe as an issue of respect for tribal sovereignty. ACHP, Consultation with Indian Tribes in the Section 106 Review Process: A Handbook (November 2008), at 3, 7, 12, and 29.

Regarding respect for tribal sovereignty, the NHPA requires that consultation with Indian tribes "recognize the government-to-government relationship between the Federal Government and Indian tribes." 36 CFR § 800.2(c)(2)(ii)(C). *See also,* Presidential Executive Memorandum entitled "Government-to-Government Relations with Native American Tribal Governments" (April 29, 1994), 59 Fed. Reg. 22951, and Presidential Executive Order 13007, "Indian Sacred Sites" (May 24, 1996), 61 Fed. Reg. 26771. As discussed below, this "government-to-government," sovereign to sovereign, relationship is the foundation for the UN DRIP's and the

ILO's free, informed consent requirement in state consultations with indigenous peoples and is contrary to an exercise of plenary power by the state over indigenous peoples.

Here, the Final EA was released and the FONSI made even though no competent cultural survey of the site has yet been conducted with any participation of the Tribe, or any members of the Tribe.

To exclude the Tribe from the NEPA/NHPA process in this way contravenes the requirements of the NHPA and NEPA, and NRC and NHPA regulations, and harms the Tribe's ability to participate in the initial identification of historic/cultural properties, squelches its voice to articulate its views, and hampers its ability to effectively participate at the later stage when the specific impacts from a particular project are analyzed. *See*, e.g., 36 CFR §§ 800.4 ("Identification of historic properties") and 800.5 ("Assessment of adverse effects"). Given these requirement of the NHPA, NEPA, and applicable regulations, the harms to the Tribe, and members of the Tribe, began accruing immediately upon NRC consideration of the Marsland License Expansion Application in a manner that segregated the Tribe's interdisciplinary, culturally-based consultation on the project from what NRC Staff considers technical and environmental concerns. These harms are exacerbated by the NRC Staff's decision to issue the Final EA despite the lack of any meaningful involvement in any survey of the affected areas.

Binding, on Point Collateral Rulings in the CBR License Renewal Proceeding and the Powertech Proceeding

On April 30, 2015, the Board found upon the evidence from the *Powertech* hearing that the consultation *process* used by the NRC Staff there, which was the very same process used in the CBR Marsland Expansion Area application here, was inadequate and did not meet the NRC Staff's full legal obligation to consult:

The FSEIS has not adequately addressed the environmental effects of the Dewey-

> Burdock project on Native American cultural, religious and historic resources, and the required meaningful government-to-government consultation between the Oglala Sioux Tribe and the NRC Staff has not taken place. Because of these facts, procedures must be put in place to assure that the required NEPA hard look is taken, the NRC's Part 51 environmental regulations are satisfied, and an opportunity for meaningful consultation is provided.
>
> …We therefore conclude that additional consultation between the NRC Staff and the Oglala Sioux Tribe is necessary.
>
> …Finally, given our conclusion that the inadequate discussion of potential impacts to Sioux cultural, historical or religious sites in the FSEIS or Record of Decision is a significant deficiency in the NRC Staff's NEPA review, this Board could require the immediate suspension of the issued materials license.[13]

Then, on May 26, 2016, another NRC Board issued its own opinion and ruling on the adequacy of these same procedures and substance of consultation as to the collateral CBR License Renewal proceeding. The Board found that:

> the NRC Staff's literature reviews focused largely on Euro-American resources and Euro-American cultural artifacts …would not be expected to uncover sites of significance to Indian tribes – which for the most part are recorded orally. Furthermore, it is highly unlikely that literature searches would lead to the identification of specific TCPs within the license area, regardless of whether they could qualify as historic properties under the NHPA. Dr. Nickens for the NRC Staff testified that literature reviews and historical background checks "should be a corollary" to a TCP study or survey because a literature search cannot "'ascribe the cultural meaning" to a TCP Lakota people would"'

LR Decision, May 26, 2016, 83 N.R.C. at 389. These solely Euro-American literature sources were employed in regard to the MEA as well. See, Section 3.6.2. From the Final EA, no attempt was made to obtain the oral history of the Očhéthi Šakówiŋ or the Lakȟóta Oyate, or any of the indigenous nations or peoples having current and ancestral ties to the area. The Board remarked

[13] *Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Facility), LBP-15-16, Dkt. No. 40-9075, ASLB No. 10-898-02-MLA-BD11, 81 NRC ____ (ML15120A299), at 42-44.

that "the area around the Crow Butte mine is 'steeped in history.' This calls for *greater* scrutiny of the license area, not less." *Id.*, 83 N.R.C. at 390.

As to the conditions for an appropriate survey, the Board noted that the NRC Staff's own expert, Dr. Nickens, "actually acknowledged that a more structured process with the involvement of tribal elders is a better TCP survey approach. He further stated '[a]nd I agree with [Mr. Catches Enemy (the indigenous OST expert)] that a proper TCP survey, as I've stated previously involved elders and bringing the elders to the filed as possible and so forth." *Id*., 83 N.R.C. at 389. Mr. Catches Enemy testifying for the OST proposed a more structured approach consisting of spiritual advisors and elders staying on site on dates and times and under conditions of their direction over a significant amount of time necessary to determine the spiritual and cultural sites and character of the area. *Id*. Clearly, despite that decision having been issued by the Board to the NRC Staff almost 2 years ago, the NRC Staff has ignored the NRC Board's clear ruling and direction on this very issue.

The NRC Board went further in considering the adequacy of the very same November 2012 TCP survey by the Crow Nation and the Santee Sioux Nation heavily relied upon by the NRC Staff in the Final EA for the Marsland Expansion Area.

> Even setting aside all of these considerations, however, the November 2012 TCP Survey still cannot satisfy the NRC Staff's Identification Obligations under NHPA because the TCP surveyors were not appropriate for the task. As discussed above, neither the Crow Nation nor the Santee Sioux Nation, the two groups participating in the November 2012 TCP Survey, are Lakota tribes and neither has a sufficient relationship to the license area. In fact, the Crow Nation had previously advised Crow Butte's contract of its lack of connection to the license area, a fact that was passed on to the NRC Staff.
>
> We do not dispute that Mr. Goodman and others on the NRC Staff genuinely believed that the Santee Sioux and the Crow Nation could identify the TCPs of tribes other "than just the Santee Sioux Nation and the Crow Nation." But the evidence does not support any such belief. Indian tribes are distinct nations -- a concept recognized in the NRC Staff's own NUREG-2173, which notes that each

> Indian tribe has a unique history and experience "with its own customs, culture, concerns, interests and needs."
>
> Significantly here, the Crow Nation is not a Sioux nation, and therefore it is neither Lakota nor Dakota. Moreover, the Crow Nation reservation is located in southern Montana. Dr. Nickens, the NRC Staff's own expert, acknowledged that, unlike the Oglala Sioux Tribe, which considers the area in and around the Black Hills its ancestral homeland, the Crow Nation had little involvement in Nebraska.
>
> Similarly, although the Santee Sioux Nation is a Sioux nation, and a Dakota tribe, it is not a Lakota tribe. Moreover, the Santee Sioux reservation area is located on the opposite end of Nebraska, 300 miles from the license area, and as Dr. Nickens explained, the Santee Sioux originated in Minnesota. Although it moved westward from Minnesota, it did not move into Nebraska until it was settled on a reservation in the far eastern part of the state.

Id., 83 N.R.C. at 499-400. The Board found "by a preponderance of the evidence that the NRC Staff's TCP survey of the Crow Butte License area did not meet its Identification Obligations under NHPA." *Id.*, 83 N.R.C. at 402. It is that very same insufficient showing by the NRC Staff, that very same evidence, that underlies the Final EA for the Marsland Expansion.

Then, the Board examined whether the NRC Staff satisfied its "hard look" obligations under NEPA. As mentioned previously, the Board remarked that NEPA required the agency to go further.

> The NHPA and NEPA both impose procedural steps to improve agency decisionmaking, and many of the NHPA's requirements overlap with those of NEPA. Of particular importance here, NEPA requires each federal agency to undertake a "hard look" at the environmental impacts of each major federal action -- which would include impacts of license renewal on TCPs. Satisfying NEPA means satisfying, at a minimum, the NHPA's Identification Obligations, **and even going further in certain cases. For example, NEPA requires a look at intangible, not just tangible, properties, and it is not limited to a focus on historic properties in the same way as the NHPA.**

Id., 83 N.R.C. at 402 (emphasis provided) (citations omitted). For this reason, the NRC Staff's summary dismissal of even the intangible spiritual and cultural sites and character identified by the Crow Nation and the Santee Sioux Nation in their 2012 TCP survey because they were not

eligible for the National Register was a violation of NEPA under this rule. The Board found that "by a preponderance of the evidence that the EA is deficient for failing to take a hard look at potential TCPs within the Crow Butte license area, including the EA's failure to analyze the objections raised by the tribes with respect to the inadequacy of the open site TCP survey." *Id*., 83 N.R.C. at 404.

On December 23, 2016, the Commission affirmed the Board's ruling in *Powertech* that the NRC Staff had failed to satisfy NEPA's "hard look" requirement, that NEPA requires more than mere satisfaction of the NHPA consultation requirement.

> The NHPA imposes several obligations on federal agencies, which proceed in a step-by-step manner. The consultation requirement continues throughout the steps. The first step is identifying any historic properties that might be affected by the federal undertaking (here licensing), and in doing so, making a reasonable and good faith effort to seek information from consulting parties, including Native American Tribes, to aid in that identification. …
>
> But, as discussed by the Board, the identification of historic properties is not the end of the NHPA consultation process. After it identifies eligible sites that might be affected by the project, an agency must assess and resolve potential adverse effects in consultation with tribes that attach religious and cultural significance to those sites. In its ruling on Contention 1B, the Board found that the Staff had not adequately consulted with the Tribe on the second and third steps; that is, despite its good faith effort to consult in order to identify historic properties, the Staff had not demonstrated that it provided the Tribe with the opportunity to identify concerns about those properties and participate in the resolution of any adverse effects. The Board, after a merits hearing, reasonably concluded that the Staff's consultation with the Tribe was insufficient to meet these requirements.

Powertech, Commission Decision, 84 N.R.C. at 249. That same analysis of the NHPA/NEPA process and substance employed by CBR and the NRC Staff to the MEA applies equally here.

The Oglala Sioux Tribe is a federally recognized tribe, entitled to all the rights under federal law that such tribes are entitled to, including consultation under NEPA, Section 106 of NHPA, as well as the obligations owed to it from its assumed trustee, the federal government. Furthermore, the Crow Butte Marsland Expansion area is within the 1851 Treaty and 1868

Treaty areas, which is recognized as the aboriginal land of the Tribe, and therefore the Tribe ascribes cultural and religious significance to many sites in that area. The Tribe asked that tribal representatives be involved in the surveys being conducted by CBR and being used by the NRC Staff but it was refused and instead it was offered a chance to conduct its own TCP surveys at its own expense. The NRC cannot make that determination without 'meaningful' consultation with the Tribe and certainly not over the objections of the Tribe (and in rejection of the Tribe's reasonable good faith request to be involved in the CBR surveys) and yet it has done so in this case as reflected by the issuance of the Final EA in its current form.

The Final Environmental Assessment fails to demonstrate a sufficient engagement and participation of the Tribe or the free consent of the Tribe to the issuance of a license by the NRC for Crow Butte's activities in Marsland Expansion Area.

Accordingly, as of now the OST has not been involved in a TCP field survey of the Crow Butte Marsland Expansion Area to the prejudice of the Tribe and its members.

OST EA CONTENTION N: Failure to Take the Requisite "Hard Look" at Environmental Justice Impacts

The EA fails to take the requisite "hard look" at whether relicensing the Crow Butte facility would cause disproportionate and adverse impacts on minority and low-income populations within the 50-mile environmental impact area around the facility when compared to the impacts on the non-Environmental Justice ("EJ") population.

Basis and Discussion:

Although not expressly bound by the Executive Order on Environmental Justice, EO 12,898 (1994), the NRC has committed to undertake environmental justice reviews. *Dominion Nuclear North Anna, LLC,* CLI-07-27, 66 NRC 215, 237-38 (2007).

> As part of that commitment, the Commission issued a Policy Statement in 2004, setting out its position on the treatment of environmental justice issues in the agency's licensing and regulatory activities. The Policy Statement re-stated and expanded upon the "environmental justice" doctrines then emerging from a handful of the NRC's adjudicatory decisions and also from two Staff guidance documents. Although the Policy Statement charged the Staff with diligently investigating potential adverse environmental impacts on minorities and low-income populations, it directed the Staff to conduct an even more detailed examination in situations where the Staff finds that "the percentage in the impacted area exceeds that of the State or the County percentage for either the minority or low-income population." Under those circumstances, the Commission charged the Staff to consider environmental justice "in greater detail." As explained below, the Board has suggested that we clarify the meaning of the quoted phrase and determine whether the Staff's FEIS satisfied our "greater detail" standard in this proceeding.

Id., at 238 (citations omitted).

"Environmental justice, as applied at the NRC, …means that the agency will make an effort under NEPA to become aware of the demographic and economic circumstances of local communities where nuclear facilities are to be sited, and take care to mitigate or avoid special impacts attributable to the special character of the community." *Private Fuel Storage, LLC*, CLI-02-20, 56 NRC 147, 156 (2002). "'Disparate impact' analysis is our principal tool for advancing environmental justice under NEPA. The NRC's goal is to identify and adequately weigh, or mitigate, effects on low-income and minority communities that become apparent only by considering factors peculiar to those communities." *La. Energy Servs.*, L.P., CLI-98-3, 47 NRC 77, 100 (1998).

This detailed environmental justice examination is mandated by NEPA to fulfill its purposes. "NEPA has twin aims. First, it places upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action. Second, it ensures that the agency will inform the public that it has indeed considered environmental concerns in its decision-making process. … Congress did not enact NEPA, of course, so that an agency would contemplate the environmental impact of an action as an abstract exercise. Rather, Congress intended that the

'hard look' be incorporated as part of the agency's process of deciding whether to pursue a particular federal action." *Baltimore Gas and Elec. Co. v. N.R.D.C., Inc.*, 462 U.S. 87, 97,100 (1983) (citations omitted). "NEPA promotes its sweeping commitment to prevent or eliminate damage to the environment and biosphere by focusing Government and public attention on the environmental effects of proposed agency action. By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct." *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 371 (1989).

NEPA also requires that the environmental impact statement include as a component of the "hard look," among other information, a "detailed" statement of "any adverse environmental effects which cannot be avoided should the proposal be implemented." 42 U.S.C. §4332(2)(C)(ii). The Supreme Court in *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989), construed this provision to require "**a detailed discussion of possible mitigation measures.**" "[O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences. …[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the 'action-forcing' function of NEPA." *Robertson*, 490 U.S. at 351-52; *see also, South Fork Band Council of Western Shoshone of Nev. V. U.S. Dept. of Int.*, 588 F.3d 718, 727 (9th Cir. 2009); *Limerick Ecology Action, Inc. v. U.S. N.R.C.*, 869 F.2d 719 (3rd Cir. 1989); *Calvert Cliffs 3 Nuclear Project, LLC*, LBP-09-4, 69 NRC 170, 228-29 (2009).

The implementing NRC regulation listing the information that must be included in the ER, 10 C.F.R. § 51.45(b)(2), restates this NEPA mandate. NRC regulation 10 C.F.R. §51.103(a)(4) also requires the Commission to state in the record of decision whether it "has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative

selected, and if not, to explain why those measures were not adopted. Summarize any license conditions and monitoring programs adopted in connection with mitigation measures."

As the Supreme Court emphasized in *Robertson*, a detailed discussion of mitigation measures cannot be had without the gathering of the information necessary for that discussion. As the NRC itself has noted, "the population distribution in the vicinity of the site affects the magnitude and location of potential consequences from radiation releases." 48 Fed.Reg. at 16,020. In regards to mitigating environmental justice issues here, that requires a full examination of all of the impacted EJ communities and institutions within the 50-mile radius of CBR facility.

Because the EJ information, discussion, and analysis contained in the Final EA for the Marsland Expansion are all incomplete. The Final EA acknowledges that the Oglala Lakȟóta Oyate, the Oglala Lakota people, are found within a 50-mile radius of the Marsland Expansion Area. Final EA, Section 3.7.1, Table 3-12. Yet, in the Final EA's superficial environmental justice discussion, Section 3.7.4, there is no mention at all let alone any discussion of the Oglala Lakota people just identified in a previous section.

Furthermore, the Final EA in Sections 3.6.2, 3.6.3, 3.6.4, and 3.6.5, admits the historic, cultural, and spiritual interests of the Oglala Lakota people in the area containing the MEA that may be impacted by the mining activities that are proposed for the MEA. Those interests are particular and special to the Oglala Lakota people and the Očhéthi Šakówiŋ and to a lesser extent other indigenous peoples with ancestral ties to the area, but not to the non-indigenous population of the area. As such, the Oglala Lakȟóta Oyate and the Očhéthi Šakówiŋ would suffer adverse impacts disproportionate in both kind and amount from that of the general population of the area from the MEA activities. The Final EA is entirely void of any discussion of those disproportionate impacts or of any mitigation measures that could be taken.

The systemic omission of Tribal and indigenous interests from the body of the Environmental Justice section of the Final EA and the dismissive tone and manner of the references to the Tribe and its interests by the NRC Staff in much of the EA is highly insensitive. Outside of the discussion of the history of the indigenous use of the CBR area and the historic and cultural interests, the sovereign treaty-secured territory of the Tribe is persistently referred to as a "County" in South Dakota, as if the Tribe was not a sovereign indigenous nation. Final EA, Section 3.7.1, Table 3-12.

The Final EA fails to mention the Tribe's interest in the lands including their claims of title to the Unceded Lands which were discussed in Contention J above. The Final EA's description of the "Affected Environment" mentions the non-Indian agricultural uses of the area but fails to mention the treaty, historic, cultural, and spiritual interests of the Tribe and its people in the area that are also part of the environment affected by CBR's activities. Section 3.1. The "Land Use" table, Table 3-1 includes virtually all uses of the lands including recreational, *but* the historic, cultural, and spiritual uses of the area by the Tribe and its people and other indigenous people. Final EA, Section 3.1.1. Likewise, the discussion of the uses of the area includes recreational, agricultural, residential, commercial, industrial and mining, and even "habitat" for fish and wildlife, but again wholly omits any mention of the use of the land by the Tribe and its people and other indigenous peoples. Final EA, Section 3.1. The discussion in the Final EA of the use of surface and groundwater resources once again wholly omits the treaty interests of the Tribe and its people to the waters on and under the lands in question and wholly omits the uses of those waters by the Tribe and its people as downstream from the CBR facility. Final EA, Section 3.3. Even its cursory Environmental Justice discussion, at Section 3.7.4, there is no mention of the Tribe and its people. It's as if the Tribe does not exist.

This means that the NRC Staff would have completed a more in-depth analysis of the environmental justice impacts if it had included the 96% minority population living at Pine Ridge Indian Reservation as being affected. But because it only looked at the 15-mile area near the MEA, which is only 4% Native and 10% minority, it found no need to conduct the more detailed environmental justice analysis.

The OST included these deficiencies in its comments to the NRC Staff on the Draft EA but it apparently fell on deaf ears. *See, e.g.*, FEA, pp. A-39 and A-40 ("The NRC did not make any changes to the EA based on this [environmental justice] comment."). This failure of the NRC Staff to conduct the more detailed environmental justice analysis, to take a "hard look," is a violation of NEPA.

Article 2 of the UN DRIP executed by the United States provides that "Indigenous peoples …are free and equal to all other peoples …and have the [collective] right to be free from any kind of discrimination, in the exercise of their rights, in particular that based on their indigenous origin or identity." Article 26, Section 3 of the UN DRIP further provides: "States *shall* give legal recognition and protection to these lands, territories and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned." (emphasis supplied) As held by the IACHR in the *Dann* case, by the UN CERD in the *Western Shoshone* petition, systemic, institutionalized, racial and ethnic collective discrimination of indigenous peoples by the state as a legacy of colonialism, racism, and genocide, is a violation of international laws, including those signed and ratified by the United States such as the ICERD, and is a violation of their collective human rights to their spirituality, culture, health, property, and self-determination. For these reasons as well, the Final EA fails to meet its legal requirements.

III. CONCLUSION

For all the foregoing reasons, the Board should find that these renewed and new contentions are admissible.

Dated this 30th day of May, 2018.

FOR THE OGLALA SIOUX TRIBE:
Signed (electronically) by Andrew B. Reid

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CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305 (as revised), I certify that, on this date, copies of the OGLALA SIOUX TRIBE'S RENEWED AND NEW CONTENTIONS MARSLAND EXPANSION FINAL ENVIRONMENTAL ASSESSMENT CONTENTIONS were served upon the Electronic Information Exchange (the NRC's E-Filing System), in the above-captioned proceeding.

Dated: May 30, 2018.

Signed (electronically) by Andrew B. Reid

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