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OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
DIVISION OF RULEMAKING, ENVIRONMENTAL AND FINANCIAL SUPPORT

SUPPLEMENT TO THE ENVIRONMENTAL ASSESSMENT
FOR THE LICENSE RENEWAL OF U.S. NUCLEAR REGULATORY COMMISSION
LICENSE NUMBER SUA-1534 FOR THE CROW BUTTE RESOURCES, INC. IN-SITU
URANIUM RECOVERY FACILITY IN DAWES COUNTY, NEBRASKA

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Table of Contents

List of Tables.....	ii
Acronyms/Abbreviations	ii
1.0 INTRODUCTION.....	1
1.1 Background	1
1.2 Purpose of this Supplement.....	2
1.3 Proposed Action.....	2
2.0 IDENTIFICATION OF SITES OF SIGNIFICANCE TO THE OGLALA SIOUX TRIBE.....	3
2.1 Previous Identification Efforts.....	3
2.3 Summary of Tribal Cultural Survey Results	5
2.3.1 Archaeological Resources	5
2.3.2 Plant Species.....	8
2.3.4 Waterways.....	9
2.3.5 Bison Remains.....	10
2.3.6 Vision Quest Sites.....	10
3.0 NHPA ELIGIBILITY EVALUATIONS	11
3.1 Archaeological Resources	12
3.2 Plant Species.....	13
3.3 Fossil Resources	14
3.4 Waterways.....	14
3.5 Bison Remains.....	15
3.6 Vision Quest Sites	15
4.0 EVALUATION OF IMPACTS UNDER NHPA AND NEPA	16
4.1 Indirect Impacts Common to All Resources.....	16
4.2 Impacts on Sites Potentially Eligible for NRHP Listing	17
4.3 Impacts on Non-Eligible Resources Under NEPA.....	17
4.3.1 Archaeological Resources	17
4.3.2 Plant Species.....	17
4.3.3 Fossil Sites	18
4.3.4 Waterways.....	18
4.3.5 Bison Remains.....	19
4.3.6 Vision Quest Sites (<i>Hanbleciya</i>).....	20
4.4 Cumulative Impacts.....	20
4.5 The Oglala Sioux Tribe’s Recommended General Mitigation Measures.....	20

4.6	Summary	22
5.0	PERSONS AND AGENCIES CONSULTED	22
6.0	CONCLUSION.....	23
7.0	PREPARERS.....	23
8.0	REFERENCES	23
	APPENDIX A	26

List of Tables

Table 2.1	Isolated Finds Documented During Tribal Survey.....	5
Table 2.2	Archaeological Sites Recommended as Not Eligible for NRHP Listing.....	6
Table 2.3	Archaeological Sites Recommended as Eligible or Potentially Eligible for NRHP Listing.....	7
Table 2.4	Culturally Significant Plants Identified in the CBR License Area.....	8

Acronyms/Abbreviations

ACHP	Advisory Council on Historic Preservation
ADAMS	Agencywide Documents Access and Management System
ASLB	Atomic Safety and Licensing Board
APE	area of potential effect
CBR	Crow Butte Resources, Inc.
CEQ	Council on Environmental Quality
CFR	<i>Code of Federal Regulations</i>
EA	environmental assessment
ft	feet
FONSI	Finding of No Significant Impact
GIS	Geographic Information System
ISR	in-situ uranium recovery
km	kilometers
m	meters
mi	miles
NE	Nebraska
NEPA	National Environmental Policy Act of 1969, as amended
NE SHPO	Nebraska State Historic Preservation Office
NHPA	National Historic Preservation Act
NMSS	NRC Office of Nuclear Material Safety and Safeguards
NRC	U.S. Nuclear Regulatory Commission
NRHP	National Register of Historic Places
QSI	Quality Services Inc.
SC&A	Sanford Cohen & Associates
TCP	traditional cultural property

SUPPLEMENT TO THE ENVIRONMENTAL ASSESSMENT FOR THE LICENSE RENEWAL OF U.S. NUCLEAR REGULATORY COMMISSION LICENSE NUMBER SUA-1534 FOR THE CROW BUTTE RESOURCES, INC. IN SITU URANIUM RECOVERY FACILITY

1.0 INTRODUCTION

The staff of the U.S. Nuclear Regulatory Commission (NRC) has prepared this supplement to the Environmental Assessment (EA) for the renewal of source materials license number SUA-1534 for the Crow Butte Resources, Inc. (CBR) in situ uranium recovery (ISR) facility in Crawford (Dawes County), Nebraska. This EA supplement describes sites of historic, cultural, or religious significance to the Oglala Sioux Tribe (Tribe)¹ that were identified during a field survey of the CBR license area conducted in November 2021 and evaluates the potential environmental impacts of the license renewal on those sites.

1.1 Background

The CBR ISR facility is located approximately 6.0 kilometers (km) (4 miles [mi]) southeast of the city of Crawford, Nebraska in Dawes County. In 2007, CBR submitted an application to the NRC requesting a 10-year renewal of source materials license SUA-1534, which authorizes the operation of the CBR ISR facility (CBR 2007).

The NRC staff's safety evaluation for the license renewal was issued in August 2014 (NRC 2014a), followed by the EA and accompanying finding of no significant impact (FONSI) in October 2014 (NRC 2014b). The 2014 EA assessed the potential environmental impacts of the license renewal and of reasonable alternatives (no-action alternative) on the following environmental resources: land use; historic and cultural resources; visual and scenic resources; climatology, meteorology, and air quality; geology and soils; water resources; ecological resources; socioeconomics; environmental justice; noise; transportation; public and occupational health and safety; and waste management. On November 5, 2014, the NRC issued the renewed license authorizing continued ISR operations for an additional 10 years.

On August 24-28, 2015, an NRC Atomic Safety and Licensing Board (ASLB or Board) held an evidentiary hearing on nine contentions, one of which related to historic and cultural resources.² In a partial initial decision (LBP-16-7) on the contention related to historic and cultural resources, the Board found that the NRC staff met its consultation obligations under the National Historic Preservation Act (NHPA) but did not meet its identification obligations under the NHPA. The Board also found that the 2014 EA was deficient under the National Environmental Policy Act (NEPA) "for failing to take a hard look at potential TCPs [traditional

¹ The Oglala Sioux Tribe has expressed its preference for the word "nation" or "peoples" instead of the word "tribe" and has suggested that "tribe" should only be used when it has been incorporated in a Native nation's name (i.e., "Oglala Sioux Tribe"). The NRC staff acknowledges these preferences, but notes that "tribe" has been used throughout the course of this proceeding and is also used in relevant statutes and regulations (e.g., the National Historic Preservation Act and associated regulations). The staff will continue to use the word "tribe" when referring to official names but will otherwise attempt to minimize its use where practical.

² The other contentions related to excursion indicators, impacts on surface water, impacts on groundwater, geological nomenclature, consumptive groundwater use, groundwater restoration mitigation measures, tornadoes and land application of wastewater, and earthquakes. All of these contentions were ultimately resolved in favor of the NRC staff and CBR.

cultural properties] within the Crow Butte license area[.]” In October 2020, the Commission issued a decision (CLI-20-08) declining review of the Board’s decision.

In November 2020, the NRC staff resumed efforts to address the deficiencies identified in LBP-16-7. During the first half of 2021, the NRC staff held several meetings with representatives of the Oglala Sioux Tribe. These meetings culminated in the development of a methodology for conducting a tribal cultural survey to identify sites of historic, cultural, and religious significance to the Tribe within the CBR license area that could be affected by the continued operation of the CBR ISR facility under the renewed license. The tribal cultural survey was conducted in November-December 2021.

1.2 Purpose of this Supplement

This supplement describes the NRC staff’s actions to address the deficiencies identified by the Board in LBP-16-7. Specifically, this supplement describes the methodology, implementation, and results of the 2021 tribal cultural survey to identify sites of significance to the Oglala Sioux Tribe (section 2), the NRC staff’s evaluation of the identified sites according to the criteria for listing in the National Register of Historic Places (NRHP or National Register) (section 3), and the NRC staff’s assessment of potential impacts of the license renewal on the identified sites under the NHPA (for sites eligible for the NRHP) or NEPA (for other sites of significance to the Tribe) (section 4). Organizations and persons consulted during the preparation of this supplement are described in section 5, and the staff’s conclusions are summarized in section 6.

1.3 Proposed Action

The proposed action is the same as that stated in the 2014 EA: the renewal of source materials license number SUA-1534 for the CBR ISR facility. The CBR ISR facility consists of a central processing facility, 11 mine units (wellfields), deep disposal wells, and evaporation ponds. At this time, all mine units at the site have been developed and no further wellfield development is anticipated during the license renewal period.

The size of the CBR ISR license area is 1,149 hectares (ha) (2,840 acres [ac]) (CBR 2021). The construction and operation of the CBR ISR facility has disturbed an area of 485 ha (1,199 ac), which is referred to in this supplement as the “developed area.” Licensed activities that could result in land disturbance during the license renewal period are anticipated to only occur within this developed area. Other activities that could result in land disturbance outside of the developed area, such as agricultural (grazing or farming) activities, are not within the scope of the proposed action.

Licensed activities, as described in chapter 2 of the 2014 EA, include in situ uranium recovery, waste management and disposal, aquifer restoration, and wellfield decommissioning. Once aquifer restoration for a particular wellfield has been completed and accepted, the licensee can then proceed with other wellfield decommissioning activities, which include removal of infrastructure/piping and surface reclamation (e.g., removal and disposal of surface structures, regrading, and reseeded).³

³ Final sitewide decommissioning for purposes of license termination requires submittal and approval of a decommissioning plan and would generally not begin until aquifer restoration has been completed for all (or nearly all) wellfields.

All mine units at the site have been developed and no further development is anticipated during the current license renewal period. In February 2018, CBR announced plans to cease operations at the Crow Butte ISR facility, and on April 2, 2018, CBR provided information to the NRC about the steps being taken as a result of that decision (CBR 2018). None of the mine units at the site is currently in active production.

2.0 IDENTIFICATION OF SITES OF SIGNIFICANCE TO THE OGLALA SIOUX TRIBE

The affected environment for cultural resources was previously described in section 3.9 of the 2014 EA. Additional historical background and context is provided in a literature review prepared by the NRC staff's contractor, Jerry Spangler of SC&A, Inc. (Spangler 2022) and the Quality Services, Inc. (QSI) survey report (Lanno and Weston 2022). This section summarizes previous efforts to identify tribal cultural resources within the CBR license area, then describes the development, implementation, and results of a 2021 tribal cultural survey undertaken to identify sites of historic, cultural, and religious significance to the Oglala Sioux Tribe.

2.1 Previous Identification Efforts

Cultural resources surveys within the license area were conducted in 1982 and 1987. The results of these surveys are summarized in section 3.9.6 of the 2014 EA and in section 2.5.2 of the 2022 literature review (Spangler 2022). In brief, these surveys documented seven Native American⁴ archaeological sites and two isolated finds (potential sites) within the license area. Three of the sites (25Dw114, 25Dw194, and 25Dw198) were initially recommended as being potentially eligible for listing in the NRHP under Criterion D, but 25Dw198 was later re-evaluated and found to be not eligible. The Tribe did not revisit the two potentially eligible sites during the 2021 tribal cultural survey.

An **archaeological site** is a location that contains tangible remains of past human activities. To qualify as an archaeological site in Nebraska, there must be two or more artifacts at a single location. A site with only one artifact is considered an isolated find.

Thirteen archaeological sites within 8 km (5 mi) of the license area were identified in past cultural resource surveys (Spangler 2022: table 1). These sites were either unevaluated for NRHP eligibility or they were determined to be not eligible for listing in the NRHP. Another eight archaeological sites had historic Native American components that might be attributed to the historic Lakota use of the area (Spangler 2022: table 3), including 25Dw114 and 25Dw194 within the license area, which had both historic and prehistoric components (Bozell and Pepperl 1987: table 2.4-3).

In addition, the 1987 cultural resources survey stated that “an historic Native American burial was exposed and removed on a high ridge immediately north of [site 25DW194] in the 1950s” (Bozell and Pepperl 1987:47). Efforts during the 1987 archaeological survey to identify the burial location or additional burial materials were unsuccessful (Bozell and Pepperl 1987:49). An Oglala elder suggested the burial could be that of a Northern Cheyenne warrior killed in 1879 when the Cheyenne attempted to escape from Fort Robinson (Lanno and Weston 2022:15). However, the lead author of the 1987 archaeological report indicated that he never saw the

⁴ The Tribe has expressed its disapproval of the term “Native American” and has suggested that just “Native” would be a more appropriate designation. Recognizing the Tribe’s preference, the NRC staff only uses “Native American” in this EA Supplement when summarizing or quoting other documents in which the term is used.

burial, but was only told about it (Spangler 2021). The 1987 report states that “no evidence of burials was obtained” during the survey (Bozell and Pepperl 1987:47). In 2012, Paul Nickens, a contractor for the NRC staff at the time, contacted the individual who reported the burial to gather further information (SC&A 2012:21). Based on this follow-up investigation, Mr. Nickens concluded that it was “open to discussion” whether there was a human burial, whether it was removed, and whether it could be associated with the historic Native American period.

2.2 Survey Methodology

As part of its efforts to address the deficiencies identified by the Board, the NRC staff and its contractor developed a survey methodology (NRC 2021) based on input received from the Oglala Sioux Tribe. The purpose of the methodology was to (1) identify any previously unidentified sites of historic, cultural, and religious significance to the Tribe within the CBR license area, and (2) obtain sufficient information about the significance of any identified sites to allow the NRC staff to assess potential adverse effects or impacts of the license renewal on those resources.⁵ This effort included identification of sites of significance in the CBR license area that fall within the scope of the NHPA (historic properties and TCPs) as well as other sites within the CBR license area of traditional historic and cultural importance to the Tribe that are outside the scope of the NHPA but fall within the broader scope of NEPA.

National Register Bulletin 38, “Guidelines for Evaluating and Documenting Traditional Cultural Properties,” (Parker and King, 1998) defines a **traditional cultural property** (TCP) as a property that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (1) are rooted in that community’s history and (2) are important in maintaining the continuing cultural identity of the community. Bulletin 38 limits TCPs to resources with specific, physical locations (i.e., resources that have property referents).

The survey methodology was designed to cover the Area of Potential Effect (APE) of the proposed action, which is the 1,149-ha (2,840-ac) license area. The methodology consisted of three main elements: a field investigation, oral history interviews, and a final report summarizing the field observations and the Tribe’s perspectives on the significance of the sites. In brief, the methodology detailed the spatial scope of the survey, the timeframes for completing the survey, the participants, the information to be collected, and the types of data necessary for the NRC staff to complete its NHPA and NEPA evaluations. It also established a hierarchy of priorities that emphasized investigation of areas not previously disturbed (either by CBR’s licensed activities or by other activities such as agriculture) and previously recorded sites within the license area. Lowest priority was given to the developed area, which was severely disturbed from construction of the ISR wellfields, thus making it highly unlikely to find undisturbed sites. The purpose of the oral history interviews was to gather information about the significance of the identified sites within the license area from knowledgeable tribal elders. (NRC 2021:14-19).

In the methodology, the NRC staff recognized that the Tribe has the unique expertise to identify sites that are significant to it and to ascribe significance to such sites. Therefore, the methodology provided that the Tribe could conduct the survey with its own participants or hire a contractor of its choosing to conduct the survey on the Tribe’s behalf. The Oglala Sioux Tribe contracted with QSI to conduct the field investigation and oral history interviews and complete

⁵ In the methodology, the word “site” refers to a specific, physical location, i.e., one that has specific property referents. (NRC 2021:1).

the report for the identification efforts. The QSI survey crew consisted of a tribal liaison, five tribal cultural resource specialists, and a cultural anthropologist, all but one of whom are Lakota-speaking members of the Oglala Sioux Tribe or other Lakota tribes. The field investigation was conducted between November 2 and December 2, 2021, and oral history interviews of nine tribal elders took place between January 10 and February 4, 2022. During and after the field investigation tribal elders visited the site three times “to gain the elders’ interpretation of specific sites located during the survey and the surrounding areas and landmarks” (Lanno and Weston 2022:6). The QSI field investigation covered 459 ha (1,133 ac) of the license area, all outside of the developed area, using the methodology described above. Although the entire license area was accessible during the field investigation, the survey crew chose not to survey the area inside the monitor well ring because “the construction of the mine has left soils highly disturbed negating the possibility of finding in situ cultural resources” (Lanno and Weston 2022:6).

2.3 Summary of Tribal Cultural Survey Results

In April 2022, after approval by the Tribal Council, the Tribe provided QSI’s report about the results of the survey to the NRC staff. The survey crew identified 28 locations with archaeological resources (artifacts or features), and 31 sites of historic, cultural, or religious significance to the Tribe, which the survey report refers to as TCPs (Lanno and Weston 2022:28).

2.3.1 Archaeological Resources

The survey crew identified a total of 28 locations with archaeological resources.⁶ Each of these locations is described below.

The survey crew identified 11 locations with a single artifact, either a waste flake, a single stone tool, or a fragment of ground stone, all found in secondary contexts and most commonly in cultivated fields and pastures. Nebraska State Historic Preservation Office (NE SHPO) guidance indicates that single artifacts in secondary context are not to be given site status but should be described as isolated finds (NE SHPO 2006:22). Isolated finds identified during the survey are summarized in table 2.1. The report recommended these 11 artifacts as not being eligible for NRHP listing. The staff’s evaluation of their eligibility is discussed in section 3.1.

Table 2.1 Isolated Finds Documented During Tribal Survey

Site No.	Description	Impacts	Survey Report’s NHPA Eligibility Recommendation
IW11	Granite mano or hammerstone	Agriculture	Not Eligible
KL53	Utilized chert flake	Agriculture	Not Eligible
LW26	Quartzite secondary flake	Agriculture	Not Eligible
LW27	Ground stone fragment	Agriculture	Not Eligible
LW28	Exhausted chert core	Agriculture	Not Eligible
LW29	Chert tertiary flake	Agriculture	Not Eligible

⁶ According to tribal elder Angie Taylor’s grandmother, a camp of Oglala warrior Crazy Horse was located within the license area (Lanno and Weston 2022:12). No archaeological evidence of this camp was identified.

LW30	Chalcedony tested cobble	Agriculture	Not Eligible
LW31	Chert primary flake	Agriculture	Not Eligible
RW09	Secondary chert flake	Agriculture	Not Eligible
RW10	Ground stone tool	Agriculture	Not Eligible
RW21	Quartzite scraper	Erosion	Not Eligible

The survey crew identified 11 other locations that meet the NE SHPO definition of an archaeological site, in that they have two or more spatially related artifacts indicative of former human behavior (NE SHPO 2006:22). These include lithic scatters, charcoal staining, a concentration of fire-altered rock, and bone fragments. All of these artifacts were found in secondary contexts, either disturbed by erosion, rodents, and/or agricultural activities. In addition, two previously recorded lithic scatters, 25Dw196 and 25Dw197, were re-documented and their site boundaries expanded.

These 13 sites are summarized in table 2.2. The report recommended these 13 sites as not being eligible for NRHP listing. The NRC staff's evaluation of their eligibility is discussed in section 3.1.

Table 2.2 Archaeological Sites Recommended as Being Not Eligible for NRHP Listing

Site No.	Description	Impacts	Survey Report's Recommendations	
			NHPA Eligibility	Site Integrity
25Dw196	7 chert secondary and tertiary stage flakes	Rodents, Agriculture	Not Eligible	None
25Dw197	13 chert secondary and tertiary stage flakes	Rodents, Agriculture	Not Eligible	None
IW10	1 chert core, one chert flake	Agriculture	Not Eligible	None
IW12	24 lithic artifacts, including a biface, two cores, and flakes of chert porcelanite, flint, and quartzite	Agriculture	Not Eligible	None
IW17	1 chert flake and 1 burned bone	Agriculture	Not Eligible	None
KL10	13 flakes of chert, quartzite, and chalcedony	Construction, Agriculture	Not Eligible	None
KL44	1 ground stone fragment and mineralized bone	Erosion	Not Eligible	None
KL49	Concentration of fire altered stones	Agriculture	Not Eligible	None
KL51	1 chert biface and 1 obsidian flake	Road, Agriculture	Not Eligible	None
LW03	Charcoal staining 1.7m long by 5.8cm thick	Gravel Mining	Not Eligible	None
LW06	1 tertiary flake and 1 secondary flake	Rodents	Not Eligible	None
LW17	1 chert uniface, 1 unknown tool, and 8 flakes of chert and chalcedony	Erosion	Not Eligible	None
RW03	1 chert flake and 4 bone fragments	Agriculture	Not Eligible	None

Finally, the survey crew identified two archaeological locations that were recommended as being eligible for NRHP listing and two others that were recommended to be considered unevaluated.⁷ These resources are described below.

⁷ As discussed in section 3.1, the NE SHPO treats unevaluated sites as eligible pending further analysis.

Site KL46 is an expansive scatter of 27 lithic flakes in all stages of reduction and small mineralized bones located along a ridge line between two waterways. But most of the artifacts were identified in rodent burrows, suggesting the artifacts had been displaced from intact subsurface contexts and that subsurface testing would be necessary to establish NHPA eligibility. The report indicated that this site is located outside the developed area and “will not be disturbed by surface reclamation activity” (Lanno and Weston 2022:54).⁸

RW02 is an isolated Pelican Lake Corner-notched point attributed to the Late Archaic period. The report recommended this isolated find as being eligible under Criterion C in that the Pelican Lake point embodies characteristics of type, period, and method of construction. The point was also identified in a rodent burrow, suggesting it had been displaced from subsurface contexts and that site testing could demonstrate its eligibility under Criterion D. The report indicated that this site is located outside the developed area and “is far enough from any potential disturbance by surface reclamation activity” that there will be no effect (Lanno and Weston 2022:80).

IW02 was identified as an alignment of four sandstone cobbles in a north-south alignment 3.34 meters (m) (11 feet [ft]) long. The alignment has a clear view of both Crow Butte and Lovers Leap, and “given the location it might have religious or ceremonial purposes” (Lanno and Weston 2022:36). No artifacts were observed. The site was recommended as being eligible for listing in the NRHP under Criterion D. The report indicated that this site is located outside the developed area and “will not be disturbed by surface reclamation activity” (Lanno and Weston 2022:36).

RW11 was identified as a stone circle 2.4 by 1.28 m (4 ft) defined by 10 sandstone cobbles embedded in prairie sod. The stone circle (or alignment) has a clear view of Crow Butte and Lovers Leap and probably represents a ritual practice most often associated with vision quests, sweat lodges, and other individual rituals, or as a short-term camp for a small group (Lanno and Weston 2022:90). The site was recommended as being eligible under Criterion D. The report indicated that this site is located outside the developed area and “far enough from potential reclamation activity” that there will be no effect (Lanno and Weston 2022:90).

Table 2.3 Archaeological Sites Recommended as Eligible or Potentially Eligible for NRHP Listing

Site No.	Site Description	Cultural Affiliation	Impacts	Survey Report’s NHPA Eligibility Recommendation
IW02	Stone alignment of four sandstone cobbles 3.34m long	Not Specified	Agriculture	Eligible (Criterion D)
KL46	27 lithic artifacts, including a core and chalcedony, quartzite, and igneous flakes; mineralized bone	Not Specified	Rodents	Unevaluated
RW02	1 Pelican Lake Corner-notched point	Late Archaic	Rodents	Unevaluated
RW11	Stone circle 2.4m by 1.28m	Not Specified	Grazing, Fence	Eligible (Criterion D)

⁸ The survey report provides an assessment of whether “reclamation” would affect identified resources. This EA Supplement assesses the potential impacts from all licensed activities authorized under the license renewal, including reclamation.

2.3.2 Plant Species

The survey crew identified 21 plant species as being culturally significant (see table 2.4). Twelve species were identified in 78 specific locations within the license area, seven additional species were labeled as being common throughout the license area, and two species were identified as “occasional.”

A summary of the identified plants and their traditional uses and significance is provided in table 2.4. Some information on about the significance of these plants, provided by survey crew members and in the oral history interviews, is reflected in the table. For example, an Oglala medicine man identified echinacea, sage, mullein, and red cedar as significant plants (although red cedar was not identified in the survey). And an Oglala elder identified cottonwood for treating snow blindness and echinacea as being connected to beings important in Lakota religious views.

Table 2.4 Culturally Significant Plants Identified in the CBR License Area

Lakota Plant Name	Common Name	Latin Name	Traditional Uses	Identified Localities	Species Distribution
Icah'pi hu	Purple Cone Flower	Echinacea purpurea	Anti-bacterial and local anesthetic, treatment for colds and flu	18	Eastern and Central United States
Peji hota	Sage	Artemisia sp.	Stomach ailments, ceremonial purposes, and smudging	19	Worldwide
Ta'oniyá pejuta	Mullein	Verbascum thapsus	Diabetes treatment; as a poultice for muscle and blood ailments; respiratory issues	13	Worldwide
Canpa hu	Chokecherry	Prunus virginiana	Berries a food source; shoots used as arrow shafts; bark for stomach ailments	3	North America
Khanta	Wild Plum	Prunus americanus	Fruits a food source; pits for tanning and in ceremonial rattles	7	North America
Nawizi hu cikala	Wild Licorice	Glycyrrhiza lepidota	Adrenal, thyroid, and stomach issues; liver and kidney cleanser	5	North America
Cansasa	Red Osier Dogwood/ Red Willow	Cornus sericea	Smoking material in ceremonies; also arrow shafts, organ cleansers, and to treat digestive issues	1	North America
Timpsila	Breadroot Scurfpea	Psoralea esculenta	Primary vegetal food source	4	Central North American Prairies
Wahpe Wastemina	Wild Bergamot	Monarda fistulosa	Stomach and muscle ailments, anti-coagulants, female perfume, and to mask human scent	3	North America
Tokala ta pejuta huwinyala	Yellow Coneflower	Ratibida pinnata	Digestive and kidney issues	2	Central and Eastern North America
Tat'e cannuga	Gayfeather	Liatris punctata	Treatment for kidney stones	2	Central North American Prairies
Cankpe owaste	Burhead	Echinodorus rostratus	Treatment for liver ailments	1	North America
Psetin'can	Ash	Fraxinus pennsylvanica	Wood for bows and pipes; inner bark was eaten	Common	Central and Eastern North America

Unzinzintka	Wild Rose	Rosa arkansana	Kidney and bladder ailments; portions are a food source	Occasional	Central North America
Pe'can	Elm	Ulmus americana	Anti-bacterial	Common	Central and Eastern North America
Wihuta'hu	Cattail	Typha latifolia	Roots a food source; seed heads as insulation; other medicinal uses	Common	Worldwide
Psaozu	Bullrush	Scirpus sp.	Stalks woven into mats; roots brewed into teas to treat cancer, edema, and blood issues	Occasional	Worldwide (except Africa)
Wanyeca swula	Horsetail	Equisetum arvense	Kidney, bladder, and urinary ailments	Common	North America
Unkcela blaska	Prickly Pear	Opuntia polyacantha	A food source, in dating rituals, and to clear murky water	Common	North America
Wasican	Ponderosa Pine	Pinus ponderosa	Needles used as an antibiotic	Common	Western United States and Nebraska
Canyahu	Cottonwood	Populus deltoides	Food for horses, a poultice for snow blindness, and in Sun Dance ceremonies	Common	Central United States

2.3.3 Fossils

The survey crew identified two fossil locations as being significant. Both locations are on private lands. The report did not address the NRHP eligibility of these two sites.

CB21 is an exposed outcrop of the Chadron Formation on the northwestern periphery of the license area containing tortoise shell fragments, likely *Styemys nebrascensis*, and a left mandible of a fossilized rabbit, probably *Palaeolagus temnodon*. Other fossilized bone fragments were found but were too small to be identified.

CB22 is an outcrop of the Gering Formation, a late Oligocene deposition representing an aggrading braided stream channel. It is located in the bluffs on the southern periphery of the license area. Embedded in this deposit was the right mandible of a *Diceratherium*, or prehistoric rhinoceros. Possible fossilized footprints of a large ungulate were present at the base of the outcrop and traces of fossilized insect burrows were evident in the outcrop. Other fossil material consisted mainly of unidentifiable bone fragments.

2.3.4 Waterways

The survey report identified three small creeks in the license area as TCPs because they represent the types of waterways that were important in providing food, medicine, and raw materials. These creeks are, from west to east, White Clay Creek, English Creek, and First Woman Creek.⁹ The report states that “waterways within the project area impact most of the

⁹ Because the official name of one of the three creeks (Sq**w Creek) is considered derogatory to Native peoples, it was referred to during the survey as “Native Creek.” The QSI survey report and the draft EA supplement use “Native Creek” as well. On September 8, 2022, the U.S. Board on Geographic Names approved the name “First Woman Creek” to replace “Sq**w Creek.” See <https://edits.nationalmap.gov/apps/gaz-domestic/public/all-official-sq-names> (last visited October 6, 2022). The renaming was the result of Secretary’s Order (SO) 3404, issued by the Secretary of the Interior on November 19, 2021. The decision to change the name is binding on federal departments and agencies.

other tribal interests in the area, whether they be historic camping areas or contemporary locations of culturally significant plants.” (Lanno and Weston 2022:128).

The identified waterways are mostly on private lands, except for the farthest upstream portion of First Woman Creek within the license area, which is on Nebraska State lands. Within the license area, First Woman Creek, which trends south-to-north toward the White River, is narrow enough in some places that it can be stepped across. English Creek, which has intermittent water (it was dry in November 2021), also trends south-to-north through the center of the license area. And a small portion of White Clay Creek, also a small perennial waterway, cuts through the northwest corner of the project area. Archaeological remains were frequently located on the terraces above these waterways.

According to the elders who were interviewed, the Lakota would frequent creeks and rivers where medicinal plants grow in quantity. Elders also indicated that spring water was always used in the preparation of medicinal plants, which would have made the small creeks such as those found in the license area viable water sources for this purpose. Additionally, camp sites were typically situated on the hills above spring water, close enough for easy access but far enough to avoid dampness and chill along the waterway itself (Lanno and Weston 12-13, 15).

One elder recalled her grandmother saying that horses were corralled at the bottom of the First Woman Creek and that Crazy Horse was camped just east of the creek (Lanno and Weston 2022:12). The survey report states that White Clay Creek was an important camping area during the period of the Red Cloud Agency (Lanno and Weston 2022:128-129). But the exact locations of such camps are not known, and no tangible artifacts or other materials indicating the presence of such camps were identified during the survey.

2.3.5 Bison Remains

The survey crew identified two locations in the license area containing the skeletal remains of bison. One was found eroding out of a creek bank and the other was located in a fallow farm field where it was exposed by agricultural disturbances. As discussed by tribal elders, all bison are considered sacred “because the bison was the lynchpin of the Lakota way of life,” and Lakota social structure is patterned after bison social structure (Lanno and Weston 2022:126). The survey did not establish whether these locations represent kill and butchering sites or the animals died of natural causes.

2.3.6 Vision Quest Sites

Three sites were identified as *hanbleciya*, or vision quest, sites. As described in the survey report (Lanno and Weston 2022:127):

Hanbleciya is one of the seven sacred ceremonies of the Lakota. They are private ceremonies that generally would take place on a ridge or hilltop away from the camp or people. An individual would garner the help from a Lakota medicine man who would help the individual with the setting of the altar.

All three sites are located on relatively level areas near the tops of buttes, with clear views of Crow Butte and Lovers Leap. (Lanno and Weston 2022:127). Sites CB16 and CB17 are located on the periphery of the developed area, and site CB18 is well outside the developed area. All three vision quest sites are on private property.

3.0 NHPA ELIGIBILITY EVALUATIONS

Section 106 of the NHPA requires that Federal agencies take into account the effect of an undertaking on historic properties, which are defined in Title 36 of the *Code of Federal Regulations* (36 CFR) 800.16 as any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP. The staff evaluated all of the identified resources for eligibility for listing as historic properties in the NRHP, taking into consideration the recommendations provided in the report.

The criteria for evaluating eligibility for inclusion in the NRHP (36 CFR 60.4) are defined as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- (A) that are associated with events that have made a significant contribution to broad patterns of U.S. history, or
- (B) that are associated with the lives of significant persons in our Nation's past, or
- (C) that embody distinctive characteristics of type, period, or method of construction, or represents the work of a master, or represents high artistic values, or that represent significant and distinguishable entity whose individual components may lack individual distinction, or
- (D) that have yielded or may be likely to yield information important in history or prehistory.

Thus, "significance" for purposes of NRHP eligibility is present in properties that (1) possess integrity, and (2) meet one of the four conditions (A)-(D) listed above. In addition, certain properties, such as those that have achieved significance within the past 50 years, are ordinarily not eligible for listing in the NRHP (36 CFR 60.4(d)).

The survey report identified a number of resources as TCPs. Bulletin 38 defines a TCP as a property "that is eligible for inclusion in the [NRHP] because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1998:1).

Bulletin 38 contains a step-by-step process for determining the eligibility of identified TCPs: (1) ensure that the entity is a property, (2) assess the property's integrity, and (3) evaluate the property against the NRHP criteria and criteria considerations in 36 CFR 60.4. For TCPs, integrity includes *integrity of relationship* (i.e., is the property regarded as important in the retention or transmittal of a belief or to the performance of a practice), and *integrity of condition* (i.e., does the property retain characteristics of location, setting, design, or materials such that traditional cultural significance is retained?) (Parker and King 1998:11-12).

The staff's eligibility evaluations are discussed in the following sections.

3.1 Archaeological Resources

As described in section 2.3.1, the survey report identified four sites as being potentially eligible for NRHP listing. Specifically, two of the sites were recommended as eligible for the NRHP and two others were recommended as “unevaluated” in that additional testing might demonstrate subsurface cultural deposits that could make the sites eligible under Criterion D (table 2.3). No subsurface testing was conducted during the field investigation. Standard NE SHPO policy directs that potentially eligible and unevaluated sites are considered “eligible” pending further determination of their eligibility status (NE SHPO 2022).

The report indicated that KL46, a large lithic and bone scatter, could be eligible under Criterion D in that subsurface testing might yield further archaeological information. However, because no subsurface tests were conducted, the report recommended site KL46 as “unevaluated” for purposes of NRHP eligibility. The NRC staff concurs with this assessment in that most artifacts were found in badger and mole burrows, and artifacts in such contexts are assumed to have been displaced from subsurface contexts. Cultural deposits in subsurface contexts have a greater potential to be undisturbed, and therefore have a greater potential to contribute information important to our Nation’s past (Criterion D).

RW02, a single broken projectile point, was identified in a rodent burrow, suggesting it was displaced from subsurface contexts. The report recommended that it be considered eligible under Criterion C in that it embodies the distinctive characteristics of the Late Archaic Pelican Lake Complex. The report also stated that, due to its proximity to other lithic sites, this site could yield additional information with further testing, making it eligible under Criterion D. Ultimately, the report recommended the site as being “unevaluated” for purposes of NRHP eligibility. Although this single artifact does not meet the NE SHPO definition of an archaeological site, the NRC staff concurs with the report’s recommendation that the proximity of the artifact to other lithic sites suggests a potential for the artifact to be part of a much larger complex of habitational activities in the immediate area and that testing could identify subsurface cultural deposits that might contribute information important to our Nation’s past (Criterion D).

The report recommended IW02, a stone alignment, as being eligible for listing in the NRHP under Criterion D because of its potential to yield additional archaeological data. This alignment is deeply embedded in undisturbed prairie sod and appears to have considerable antiquity, although the absence of Native artifacts in direct association with the feature makes it questionable that the alignment is of human manufacture. The NRC staff concurs with the report’s recommendation in that testing could demonstrate that the feature is indeed cultural in origin and that it has the potential to contribute information important to our Nation’s past (Criterion D).

Finally, the report recommended RW11, a stone circle, as eligible for listing in the NRHP under Criterion D because of its potential to yield additional archaeological data. This stone circle (or alignment) is at the edge of a pasture and at the edge of an escarpment trending down slope to a permanent waterway. Both the pasture and the escarpment are devoid of similar stones, making the stone circle noticeably out of place and likely the result of human activities. The absence of Native artifacts, however, makes it questionable that the feature is the result of Native practices (it might also have been the result of farmers clearing the pasture in preparation for seeding). Testing could demonstrate that the feature is indeed Native in origin and the NRC staff concurs with the report’s recommendation that it has the potential to contribute information important to our Nation’s past (Criterion D).

In summary, the staff agrees that these four sites are potentially eligible for listing in the NRHP. Therefore, they are analyzed for potential effects under NHPA in section 4.2.

The survey report determined that none of the remaining 24 sites (described above in section 2.3.1) met any criteria for eligibility. In addition, most of the sites were disturbed by rodents and/or agricultural activities. The NRC staff concurs with the report's assessment that these archaeological sites are found in highly disturbed contexts (secondary deposits representing displacement due to erosion and agriculture) and they do not possess elements of integrity (location, design, setting, workmanship, materials, feeling, and association) necessary for listing in the NRHP. Therefore, the staff agrees with the report's recommendation and concludes that these 24 sites are not eligible for listing in the NRHP. Because these 24 sites are not eligible, they will be analyzed for potential impacts under NEPA in section 4.3.1.

3.2 Plant Species

As discussed in section 2.3.2, the report identified 21 plant species within the license area as TCPs. The identification of plant *species* (emphasis added) as TCPs is inconsistent with the NHPA and its implementing regulations (36 CFR 800), as well as Federal guidance in Bulletin 38. TCPs are limited to tangible properties (Parker and King 1998:11), and a plant species is not tangible. Furthermore, a plant species is not eligible for NRHP listing because a species does not retain site integrity (plant locations change over time and in response to changing climates and human manipulation), and most plant species have lifespans of fewer than 50 years (current locations may have no relevance to historical plant locations).

However, plant resources might qualify as TCPs if they are associated with a specific place of significance, tradition, or use. Bulletin 38 cites the example of the Pomo Indians of the Russian River Valley in California, who collected high quality sedge roots from specific locations to construct their world-famous basketry. Not all sedge fields are Pomo TCPs; rather, only the ones specific to maintaining the Pomo basketry tradition are considered TCPs (Parker and King 1998:14).

This example is relevant to the specific instances of the 21 plant species identified as TCPs within the CBR license area. The survey report did not indicate that the Lakota used these specific plants in these specific locations in the past, or that these plant locations have been or continue to be utilized in the present by a living community. The report also did not indicate that these specific plants, in these specific locations, are necessary for the Tribe to maintain its cultural identity; or that these specific plants within the license area possess individual qualities that distinguish them from the same plants that are ubiquitous throughout the Central Plains.

In short, because the plants identified during the survey are indistinguishable from identical plants that are widespread across much of North America, they lack integrity of relationship. Their cultural significance lies not in a specific location where the species is found today, but in the cultural values assigned to those plant species by Lakota traditionalists.

For the reasons discussed above, the NRC staff concludes that the 21 plant species identified during the survey are not eligible for NRHP listing. Therefore, potential impacts to these plant species are analyzed under NEPA in section 4.3.2.

3.3 Fossil Resources

As discussed in section 2.3.3, the survey report identified two locations within the license area containing fossils. The report states, “Fossils are considered relatives by the Oglala Sioux Tribe (Oglala Sioux Tribal Ordinance No.10-13), therefore all of the paleontological sites in this tribal cultural survey are also TCPs” (Lanno and Weston 2022:130).¹⁰

Bulletin 38 states that TCPs can include locations “associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world” (Parker and King 1998:1). The survey report did not address the NRHP eligibility or explain the significance of these specific fossils, which are 34 million years old, to traditional cultural and religious practices and beliefs that maintain the Tribe’s cultural identity. Also, based on the information in the report, the two fossil sites appear to retain minimal integrity with only small, fossilized bone fragments, fossilized insect burrows, and possible fossilized ungulate footprints.

In summary, because the two fossil sites do not maintain integrity of relationship or integrity of condition, the NRC staff determines that they are not eligible for listing in the NRHP. Therefore, potential impacts on these fossil resources are analyzed under NEPA in section 4.3.3.

3.4 Waterways

Waterways may meet NRHP criteria in some circumstances. They are geographic locations that can be spatially defined, and they often have significance to Native groups.

However, the NRHP “discourages the nomination of natural features without sound documentation of their historical or cultural significance” (Parker & King 1998:11). Bulletin 38 gives an example of two groups living along the shores of a lake. Both groups use lake water to perform rituals marking the acceptance of individuals into the group. For one group, any body of water would suffice, and because the lake is available, it is used. For the other group, water from this particular lake is essential to the ritual. In this scenario, the lake is integral to the beliefs and practices of the second group, but not the first.

The three creeks identified during the survey provide habitat for culturally significant plant species. The Lakota preferred spring water and also required it for the preparation of many medicines (Lanno and Weston 2022: 128-29). However, the survey report does not indicate that these three creeks were unique to a particular belief or practice that occurred only along these particular creeks. Tribal elders indicated that small, spring-fed creeks such as those found in the license area *would have been* important resources to the Lakota, but they did not identify these *specific* creeks as important. As in the example cited above, these resources were used because they happened to be available. The opportunistic use of these three creeks at an unknown point in the past does not establish the necessary integrity of relationship for NHPA eligibility purposes.

¹⁰ Oglala Sioux Tribal Ordinance No. 10-13 (May 25, 2010) adopted the “Preservation of Paleontological, Archeological, Cultural and Historic Resources Code” (PACHR Code) (Oglala Sioux Tribe 2010:1-2). According to the PACHR Code, “The Oglala Lakota people consider what are commonly referred to as fossils and artifacts as relatives” (Oglala Sioux Tribe 2010:§ 49.1.101). The PACHR Code pertains to the regulation of preservation and collection of paleontological and other resources within the boundaries of the Pine Ridge Indian Reservation (Oglala Sioux Tribe 2010: § 49.2.102).

In addition, the three waterways are not relevant to the survival of tribal cultural practices given that the Tribe has not had access to these waterways within the license area since the original licensing of the CBR ISR facility (and likely since Euroamerican settlement of the area in the 1880s). Cultural and religious practices involving water and waterways continue to be performed at other locations.

For the reasons discussed above, the NRC staff concludes that the three creeks identified during the survey are not eligible for NRHP listing. Therefore, potential impacts to these creeks are analyzed under NEPA in section 4.3.4.

3.5 Bison Remains

Both sites that the report identified as bison (*Bison bison*) remains are tangible and can be spatially defined. The report stated that bison are culturally significant because, in the Lakota world view, “the bison was the lynchpin of the Lakota way of life” (Lanno and Weston 2022: 126). Tribal elders also stated that the buffalo nation demonstrated a compassionate and sacred way of life and that the *tiospaye* social organization of the buffalo was the origin of Lakota social structure (Lanno and Weston 2022:13-14). The report did not offer perspectives on the eligibility of these two locations for listing in the NRHP.

Because the bison skeletons identified during the survey are indistinguishable from other bison remains that may be present throughout the area, they lack integrity of relationship. Their cultural significance lies not in a specific location where the remains are found today, but in the cultural values assigned to bison by the Lakota.

Additionally, the suspected bison remains identified in the field were not subjected to laboratory analysis to verify species, age, or association with human activities (e.g., butchering marks). In the case of CB19, the animal remains found in a fallow field are completely disarticulated, probably due to farming activities. At CB12, the animal remains were exposed in a creek cutbank. Although mostly disarticulated, the vertebrae are still intact. In light of the fact that cattle ranching has occurred in this area for more than a century, and in the absence of laboratory analysis to establish species identification, the possibility remains that the animal bones are the decomposing remains of domestic cattle discarded by local ranchers.

In the absence of definitive evidence that these specific animal remains are associated with cultural practices or beliefs of a living community, and because there is no integrity of condition (due to disarticulation of the remains) or integrity of relationship, the NRC staff concludes that the two bison skeletons identified during the survey are not eligible for NRHP listing. Therefore, potential impacts to these resources are analyzed under NEPA in section 4.3.5.

3.6 Vision Quest Sites

The three sites identified in the survey report as vision quest sites are tangible locations that can be spatially defined and are associated with a recognized traditional cultural practice of the Oglala Sioux Tribe. Vision quests, or *hanbleciya* ceremonies, constitute one of seven sacred ceremonies of the Lakota and are important to maintaining the cultural identity of the Tribe. Therefore, sites where these ceremonies occurred have religious and cultural significance to the Tribe. Vision quest ceremonies generally take place “on a ridge or hilltop away from the camp or people” and sites for such ceremonies can be recognized by “relatively level areas near the tops

of buttes with a clear viewshed” (Lanno and Weston 2022:127). In other words, the ceremonies can be conducted at any location with elevated terrain and adequate viewshed.

The report did not address the eligibility for NRHP listing of the three sites. The report did not provide information suggesting that these specific sites or these specific buttes are important in maintaining the continued cultural identity of the Tribe, or that these buttes were unique to a specific ceremony that occurred exclusively at these three locations. The three sites identified during the survey are not individually distinctive, nor are they distinct from other buttes or ridgetops in the area. As discussed above for waterways and plants, opportunistic use is not sufficient to establish integrity of relationship.

The three sites are located on elevated landforms that are outside the developed area, and as such they retain integrity of location, setting, feeling, and association. But there is no evidence that these locations (which are on private land) are being used today for vision quest ceremonies. Such use was likely discontinued upon Euroamerican settlement of the area in the 1880s. The three sites, therefore, are not relevant to the survival of relevant relationships given that vision quest ceremonies of cultural and religious significance to the Tribe continue to be performed at other locations deemed appropriate by the Tribe.

For the reasons discussed above, the NRC staff concludes that the three vision quest sites identified by the Tribe are not eligible for NRHP listing. Therefore, potential impacts to these sites are analyzed under NEPA in section 4.3.6.

4.0 EVALUATION OF IMPACTS UNDER NHPA AND NEPA

Under the NHPA, the NRC staff evaluates whether historic properties that are eligible for listing in the NRHP will be affected by a Federal undertaking (in this case, the renewal of CBR’s license). An “effect” under Section 106, as defined in 36 CFR 800.16(i), means an alteration of the characteristics of an historic property qualifying it for inclusion in or eligibility for listing in the NRHP. If the staff determines that there will be no effects on historic properties, the staff will propose a finding of no historic properties affected. If the staff does identify effects on historic properties within the APE, it will apply the criteria in 36 CFR 800.5(a)(1) to determine whether effects would be adverse.

Under NEPA, the NRC staff must take a “hard look” at potential impacts on historic and cultural resources. In this EA supplement, cultural resources identified in the 2021 tribal cultural survey (see section 2) that are not eligible for listing in the NRHP are analyzed under NEPA to determine whether impacts of the proposed action (i.e., the renewal of CBR’s license) will be significant. The assessment of significance of impacts under NEPA requires consideration of context and intensity. Impacts are analyzed in several contexts such as society as a whole, the affected region, the affected interests, and the locality. Intensity refers to the severity of effect, which includes factors such as the magnitude, geographic extent, duration, and frequency of the effect (CEQ/ACHP 2013).

4.1 Indirect Impacts Common to All Resources

This section discusses certain indirect impacts that are common to all sites, regardless of NRHP eligibility. These include visual, atmospheric, and auditory impacts.

There is currently no additional construction planned for the CBR ISR facility, and the site is not engaged in active ISR operations. Wellfield decommissioning cannot occur until groundwater

restoration activities have been completed in a wellfield, and CBR does not expect to perform reclamation activities in any wellfield during the current license renewal period (CBR 2022).

During wellfield and site decommissioning, there would be occasional visual impacts because of the presence of heavy equipment and decommissioning activities; occasional noise from heavy equipment; and occasional brief periods of blowing dust prior to revegetation. Ultimately, the objective of wellfield and site decommissioning is to restore the license area to its original pre-development condition. The NRC staff finds that the four newly identified archaeological sites that are recommended as being eligible for listing in the NRHP are located far enough away from the developed area that they would not be affected by these impacts. In addition, for the newly identified cultural resources that are not eligible for listing, the staff finds that these indirect visual, auditory, and atmospheric impacts would not be significant because they would be temporary in duration and effect.

4.2 Impacts on Sites Potentially Eligible for NRHP Listing

The survey report identified four archaeological sites that are potentially eligible for listing in the NRHP: site KL46, an expansive scatter of 27 lithic flakes and mineralized bone; RW02, an isolated Pelican Lake Corner-notched point attributed to the Late Archaic period; IW02, an alignment of four sandstone cobbles; and RW11, a stone circle (2.4 by 1.28 m [8 by 4 ft]). The report concluded that these four sites would not be affected by licensed activities because they are located outside the developed area (Lanno and Weston 2022:36, 54, 80, 90). Because none of the identified archaeological sites is located in areas that would be subjected to future ground disturbances by the licensee, the NRC staff agrees with this assessment. Therefore, the staff concludes that there will be no historic properties affected by the license renewal.

4.3 Impacts on Non-Eligible Resources Under NEPA

In the following sections, the staff analyzes potential impacts under NEPA on newly identified sites that were not eligible for listing in the NRHP. These sites include 24 archaeological resources (sites or isolated finds), as well as plant species, fossils, waterways, bison remains, and vision quest sites that the Tribe identified as culturally significant. The analysis below addresses whether there will be significant impacts on these resources from the renewal of CBR's license.

4.3.1 Archaeological Resources

The survey report identified 24 archaeological sites and isolated finds that it recommended as being not eligible for listing in the NRHP. Furthermore, the report concluded that there would be no effects on those resources from licensed activities. All of these sites are located outside the developed area, and therefore will not be affected by licensed activities. The NRC staff agrees with the report's assessment and concludes that these resources would not be directly affected by licensed activities. Therefore, the staff determines that there will be no significant impacts on these 24 archaeological resources.

4.3.2 Plant Species

The gathering of certain plants for medicinal, dietary, utilitarian, and ceremonial purposes is a recognized traditional cultural practice of the Tribe. As evidenced by oral histories of tribal elders, this practice is deeply rooted in the Tribe's past and it continues to the present, and the

gathering and use of plants has religious significance within the Lakota world view (Lanno and Weston 2022:11-16).

The survey report did not suggest that there would be any potential impacts on the plant species or individual plant locations identified during the survey. Most of the plant locations identified during the survey are outside the developed area, and the remainder are on the periphery. These would not be significantly affected by licensed activities, including reclamation activities during wellfield decommissioning. Furthermore, because most of these locations are on private lands, they have not been accessible to the Tribe for traditional gathering and would continue to not be accessible in the future. Any plants within the 16 ha (40 ac) of State-owned land within the license area are along First Woman Creek upstream of the wellfields and well outside the developed area. Finally, these plants are ubiquitous on the Central Plains (and beyond) and are not unique to the CBR license area. Therefore, any impacts on the particular instances of identified plant species would not affect the Tribe's ability to gather and use these same plant species found elsewhere for their cultural practices. For these reasons, the NRC staff concludes that there will be no significant impact on these culturally significant plants.

4.3.3 Fossil Sites

The survey report identified fossils as significant cultural resources inasmuch as fossilized animals are considered relatives of the Tribe. CB22, located on the southern periphery of the license area, is sufficiently outside the developed area that the staff concludes that there will be no significant impacts on this site from licensed activities, including reclamation.

CB21 is located outside of but adjacent to the developed area, approximately 29 m (95 ft) from the nearest monitoring well and about 12 m (40 ft) from the nearest access road. The site is on the opposite side of a livestock fence from the road and the nearest monitoring well. Both the monitoring well and the access road will be reclaimed during decommissioning. CBR does not anticipate doing any reclamation outside the developed area and plans to only use soil from within the developed area for backfilling and regrading during reclamation (CBR 2022). The reclamation activities near CB21 would involve plugging the monitoring well and restoring the access road to its natural state. Given the distance from CB21 to the nearest site where reclamation would occur (approximately 12 m [40 ft]), the livestock fence between that area and CB21, and the apparent minimal amount earthwork activities needed to restore the area, the staff concludes that there would be no significant impacts on this site from licensed activities, including reclamation.

The report recommended that “[d]ue to the cultural significance of fossils . . . and the proximity to the well ring, a 50-foot buffer is recommended during reclamation activities.” (Lanno and Weston 2022:132). However, given the 40-foot distance to the nearest point that will be affected by reclamation, the minimal earthwork activities that appear to be required, and the short duration of such activities, the staff concludes that there is no need for an additional buffer.

4.3.4 Waterways

As discussed in section 2.3.4, the survey report identified three creeks that pass through the site as being culturally significant. All three waterways are located within a historically significant cultural landscape (the period of the Red Cloud Agency), and all three are directly associated with archaeological localities indicative of thousands of years of camping along the stream terraces. Lakota use of this area began in the early 1800s and continued through the 1870s with

the establishment of the Red Cloud Agency and Camp Robinson on the White River near modern-day Crawford. Major historical events included negotiations between the U.S. Government and Native peoples for the purchase of the Black Hills, which brought thousands of Lakota, Northern Cheyenne, and Arapaho to the White River valley. The historical record has multiple references to White Clay Creek where these negotiations were conducted, although these events occurred far north of the license area.

The following discussion of impacts was included in the survey report:

Mining in the area has impacted access to the waterways within the project area, with English and [First Woman] Creeks running through active mine units, thus disrupting access to both the creeks themselves, the history around them, and the plants growing in their waters and floodplains. Oglala Lakota community members expressed at multiple times throughout the project, concerns over possible contamination of these creeks by mining activities (Lanno and Weston 2022:128).

The impacts of the license renewal, including decommissioning activities, on surface water quality were addressed in the 2014 EA and resolved in the 2015 license renewal hearing. Therefore, impacts on surface water quality are outside the scope of this analysis.¹¹ Impacts on plants, including plants growing along the creeks, are addressed in section 4.3.2. With regard to potential impacts on cultural uses of water from the creeks, only the far upstream portion of First Woman Creek (upstream of the developed area), which is on State-owned land, is potentially accessible to the Tribe for cultural use. Otherwise, the creeks within the license area are on private land and have not been accessible to the Tribe at least since the original licensing of the facility, and likely not since Euroamerican settlement of the area in the 1880s.

For these reasons, the staff concludes that there will be no significant impacts from the license renewal on these three creeks.

4.3.5 Bison Remains

The survey report identified two locations where suspected bison remains were found. Both sites are culturally significant resources because of the importance of bison (*Tatanka*) within the Lakota world view, social structure, and way of life (Lanno and Weston 2022:126).

Both sites are on private lands and outside of the developed area: one is partially buried within the banks of a creek, and one is in a fallow agricultural field. The report did not indicate that there would be any potential impacts on these sites.

Because they are both located outside of the developed area, neither site would be impacted by licensed activities. For these reasons, the staff concludes that there will be no significant impacts from the license renewal on these two locations containing bison remains.

¹¹ In section 4.6.1 of the 2014 EA, the staff concluded that potential impacts to surface water from plant operations and decommissioning would be small, where “small” was defined as “environmental effects that are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource” (NRC 2014b: 69-73).

4.3.6 Vision Quest Sites (*Hanbleciya*)

The report identified three vision quest sites (*hanbleciya*) on and around high bluffs on the southern periphery of the license area with views of Crow Butte and Lovers Leap.¹² All three sites can be considered to be culturally significant resources because they are related to the Tribe's religious values and their cultural traditions. These ceremonies are deeply rooted in the Lakota's history, and they continue to the present day as a traditional part of Lakota social structure.

One of these locations, CB18, is well outside the developed area (about 558 m [1,830 ft] from the nearest monitoring well). Based on the distance of this site from the nearest point where reclamation activities would occur, the staff concludes there will be no significant impacts on CB18.

The other two sites, CB16 and CB17, are adjacent to each other along a ridgetop on the periphery of the developed area. In the Geographic Information System (GIS) shape file these two sites were combined into one site encompassing the entire ridgetop plus about 15 m (50 ft) in all directions. The closest monitoring well is about 8 m (25 ft) from the site boundary depicted in the GIS shape file, at the bottom of a steep slope that descends from the top of the ridge (CBR 2022). CBR has indicated that the earthwork associated with reclamation could extend to near the site boundary but would occur at the bottom of the slope with no potential to affect the ridgetop. Reclamation activities would involve plugging the monitoring well and restoring the access road to its natural state. Given the topography, the actual distance from the ridgetop itself (approximately 23 m [75 ft]), and the apparent minimal amount of earthwork and short period of time needed to restore the area, the staff concludes that there would be no significant impacts on these sites from licensed activities, including reclamation.

The report recommended "a 50-foot buffer around the ridgetop be implemented during the reclamation process to avoid disturbing any *hanbleciya* sites" (Lanno and Weston 2022:127). However, as noted above the sites appear to have been defined to include 15 m (50 ft) on all sides of the actual ridgetops. Therefore, there is no need for any additional buffer.

4.4 Cumulative Impacts

The 2014 EA (section 4.13.8) discussed cumulative impacts on historic and cultural resources considering the impacts of the renewal of CBR's license in conjunction with the impacts of the development of the Marsland Expansion Area, North Trend Expansion Area, and Three Crow Expansion Area. The identification of additional sites of significance to the Tribe during the 2021 tribal cultural survey does not alter the basis for the staff's conclusion in the 2014 EA that cumulative impacts on historic and cultural resources would not be significant.

4.5 The Oglala Sioux Tribe's Recommended General Mitigation Measures

The survey report stated that the Tribe's role as caretaker of its traditional territory has been disrupted by the operation of the CBR facility and restricted access to the area and it

¹² The survey report identified three vision quest sites: CB16, CB17, CB18 (Lanno and Weston 2022:127). Based on the Geographic Information System (GIS) shape files provided by QSI, it appears that sites CB16 and CB17 in the report are combined into one shape file labeled CB16, and site CB18 in the report is in a shape file labeled CB17. In this EA supplement the staff refers to three sites as denoted in the report.

recommended “mitigative measures . . . to ensure the regeneration of, and access to traditional cultural properties, spiritual sites, and historical knowledge in the future.” (Lanno and Weston 2022:138). The “primary” measure proposed in the survey report is tribal participation and consultation, with compensation, in the reclamation process (e.g., selection of plant species for reseeding) and in future surface water and groundwater quality monitoring. The report also recommended that after the reclamation process is complete, tribal members be granted physical access to the reclaimed area to conduct traditional activities. These general mitigation measures proposed by the Tribe are not specific to any historic or cultural resource within the CBR license area. Also, these general measures would not reduce or avoid impacts of licensed activities on any of those specific resources.

As stated in section 1.2, the purpose of this EA supplement is to describe the NRC staff’s actions to address the deficiencies identified by the Board in LBP-16-7: (1) the staff’s failure to meet its identification obligations under the NHPA, and (2) the staff’s failure to take a “hard look at potential TCPs within the Crow Butte license area,” as required under NEPA. The analysis in the EA supplement is therefore limited to these topics.

Under Section 106 of the NHPA, Federal agencies must identify historic properties (properties that are eligible for listing in the NRHP) that could be affected by a Federal undertaking; assess the effects of the undertaking; and seek ways to avoid, minimize, or mitigate any adverse effects. In this case, the Federal undertaking is the renewal of CBR’s license. In this EA supplement, the NRC staff has described the development and implementation of a tribal cultural survey to identify sites of significance to the Oglala Sioux Tribe within the CBR license area. The survey identified four new archaeological sites that are recommended as being eligible or potentially eligible for listing in the NRHP. As discussed in section 4.1 above, the survey report concluded, and the NRC staff agreed, that these historic properties will not be affected by CBR’s licensed activities under the renewed license. Because there are no effects on these properties (and thus, no adverse effects), there is no need to consider ways to avoid, minimize, or mitigate adverse effects.

Under NEPA, Federal agencies must take a “hard look” at potential impacts of a proposed action on environmental resources, including historic and cultural resources. In this case, the proposed action is the renewal of CBR’s license. The tribal cultural survey identified 24 archaeological resources (sites and isolated finds), as well as plant species, fossils, waterways, bison remains, and vision quest sites that the report identified as TCPs. As discussed in section 3, the staff concluded that these resources, while culturally significant to the Oglala Sioux Tribe, were not eligible for listing in the NRHP. Therefore, the staff evaluated the potential impacts of the proposed action on these resources under NEPA. As discussed in section 4.3 above, the NRC staff concluded that there would be no significant impacts to these resources from the renewal of CBR’s license. Because there are no significant impacts expected, there is no need to adopt any mitigation measures to reach a FONSI.

The staff acknowledges the historic and cultural significance of the Crow Butte region to the Tribe. However, based on the staff’s findings that the renewal of CBR’s license would result in no effects on historic properties and no significant impacts on other cultural resources, there is no need to adopt any mitigation measures for the staff to meet its obligations under the NHPA and NEPA.

4.6 Summary

The tribal cultural survey identified 24 archaeological sites or isolated finds that were recommended as not being eligible for listing, and four archaeological sites or isolated finds that were recommended as being eligible or unevaluated (and thus potentially eligible). The staff evaluated these sites for eligibility and concurs with the recommendations in the survey report. In addition, the tribal cultural survey identified as TCPs various other resources that are significant to the Tribe, including plant species, fossils, waterways, bison remains, and vision quest sites. The staff evaluated these resources for eligibility and concluded that none were eligible for listing in the NRHP.

For NRHP-eligible sites, the staff evaluated potential effects and concluded that no historic properties would be affected. For non-eligible sites and resources, the staff evaluated potential impacts under NEPA and concluded that there would be no significant impacts on any of the resources.

5.0 PERSONS AND AGENCIES CONSULTED

Starting in November 2020, the NRC staff began discussions with the Oglala Sioux Tribe, including the Tribal Historic Preservation Office and Director of the Tribe's Natural Resources Regulatory Agency. Over the course of the next 18 months, the NRC and representatives of the Oglala Sioux Tribe held multiple conference calls and visited the CBR facility to assist the staff in developing the survey methodology described in section 2.2 of this supplement. After the methodology was agreed upon, the staff, CBR, and the Tribe held additional meetings to address survey logistics, culminating in execution of the tribal cultural survey beginning in November 2021.

From June 2021 through November 2021, the NRC staff's contractor had multiple communications with the NE SHPO and the State Archaeologist to discuss NE policies and NRHP guidance, and to request copies of cultural reports not already available to the NRC.

The staff made two requests to CBR for clarifying information. In 2021, the staff requested clarifications related to the size of the license area, land ownership, and the extent of land disturbance during construction of the wellfield as part of developing the methodology (CBR 2021). In 2022, after receiving the QSI survey report, the staff requested clarifications related to locations of certain sites with respect to CBR's current operations (CBR 2022).

On June 29, 2022, the NRC staff provided the Oglala Sioux Tribe a preliminary draft version of the EA supplement for their review and comment. On July 29, 2022, the NRC staff received comments from the Oglala Sioux Tribe on the preliminary draft of the EA supplement.

By letter dated August 19, 2022, the NRC notified the licensee, the Oglala Sioux Tribe, 23 additional federally recognized tribes who consulted during the development of the 2014 EA, and the NE SHPO of the availability of the public draft EA supplement for review and comment. On August 24, 2022, the NRC staff emailed electronic copies of the letter and the public draft of the EA supplement to each of the addressees. Additionally on August 24, 2022, the NRC staff emailed electronic copies of the public draft EA supplement to the Environmental Protection Agency (Region 7), the Advisory Council on Historic Preservation (ACHP), and the Consolidated Intervenor with a request for review and comment. The NRC staff also updated the publicly available Crow Butte Project website with a link to the draft EA supplement. On August 26, 2022, the NRC Staff published a Notice of Availability of the public draft EA

supplement and draft FONSI in the *Federal Register* (87 FR 52597). The 30-day public comment period ended on September 26, 2022.

The NRC staff received six additional comment submissions during the public comment period. For further details on the comments and the NRC staff's responses, see Appendix A of this EA supplement.

6.0 CONCLUSION

As discussed in section 1.2, the NRC staff has prepared this supplement to the 2014 EA in order to address certain deficiencies in the staff's original analysis of cultural resources identified by the Board in LBP-16-7. This EA supplement describes sites of historic, cultural, or religious significance to the Oglala Sioux Tribe that were identified in a 2021 tribal cultural survey of the CBR license area and evaluates potential impacts on those resources. Based on the 2014 EA and this EA supplement, the NRC has preliminarily concluded that the proposed action (renewal of the CBR license) will have no significant environmental impacts on identified sites of significance to the Oglala Sioux Tribe or on any other cultural resources. Therefore, pursuant to 10 CFR 51.31, preparation of an environmental impact statement is not required for the proposed action, and pursuant to 10 CFR 51.32, a FONSI remains appropriate.

7.0 PREPARERS

Jean Trefethen, NMSS/REFS, Environmental Project Manager
Jerry Spangler, M.A., RPA, SC&A Inc.

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APPENDIX A

**PUBLIC COMMENTS ON THE DRAFT SUPPLEMENT TO THE
ENVIRONMENTAL ASSESSMENT**

**FOR THE PROPOSED RENEWAL OF
U.S. NUCLEAR REGULATORY COMMISSION
LICENSE NO. SUA-1534**

**CROW BUTTE RESOURCES INC., *IN-SITU* URANIUM RECOVERY
FACILITY, AND NRC RESPONSES**

Table of Contents

APPENDIX A	26
List of Tables	27
Acronyms/Abbreviations	27
A.1 Background	28
A.2 Comment Identification and Review Methodology	29
A.3 Comment Summaries and NRC Responses	30
A.3.1 Qualifications of NRC Staff Contractor	31
A.3.2 Development and Implementation of Methodology	33
A.3.3 Board’s Decision and NRC Staff’s NEPA Obligations	34
A.3.4 Treaty Rights	35
A.3.5 NRC Staff’s Failure to Follow Up and Obtain Sufficient Information	36
A.3.6 Mitigation	37
A.3.7 Reclamation	39
A.3.8 Discussion of Oral History and Historical Background	40
A.3.9 Significance of Area	40
A.3.10 Editorial Clarifications and Terminology	40
A.3.11 General Comments	41

List of Tables

Table A-1 Recipients of Draft EA Supplement Notification.....	28
Table A–2. Comment Document Number Description.....	30

Acronyms/Abbreviations

ADAMS	Agencywide Documents Access and Management System
ASLB	Atomic Safety and Licensing Board
CBR	Crow Butte Resources, Inc.
CFR	<i>Code of Federal Regulations</i>
EA	environmental assessment
FONSI	Finding of No Significant Impact
ISR	in-situ uranium recovery
NEPA	National Environmental Policy Act of 1969, as amended
NE SHPO	Nebraska State Historic Preservation Office
NHPA	National Historic Preservation Act
NMSS	NRC Office of Nuclear Material Safety and Safeguards
NRC	U.S. Nuclear Regulatory Commission
NRHP	National Register of Historic Places
QSI	Quality Services Inc.
TCP	traditional cultural property

A.1 Background

This appendix summarizes the comments received on the NRC staff's draft environmental assessment (EA) supplement and updated finding of no significant impact (FONSI) regarding the renewal of source materials license number SUA-1534 for the Crow Butte Resources, Inc., (CBR) in-situ uranium recovery (ISR) facility and provides the NRC staff's response to those comments.

On June 29, 2022, the NRC staff provided a preliminary draft of the EA supplement to the Oglala Sioux Tribe for a 30-day review period. The Tribe's comments on the preliminary draft are addressed in this appendix, and changes were made before issuing the draft EA supplement for public review and comment are noted.

On August 26, 2022, the NRC staff published a Notice of Availability of the draft EA supplement and draft FONSI in the *Federal Register* (87 FR 52597). In the notice, the NRC provided information on how to submit comments and request a copy of the draft EA supplement. On August 24, 2022, electronic copies of the draft EA supplement were provided by email to various stakeholders, including federal, tribal, and state government officials. The recipients and their affiliations are provided in Table A-1. An electronic version of the draft EA supplement was made available through the NRC's external Web site <https://publish.nrc.gov/info-finder/materials/uranium/licensed-facilities/crow-butte.html> and through the NRC's Agencywide Documents Access and Management System (ADAMS) at accession number ML22223A161. ADAMS is accessible from the NRC website at <http://www.nrc.gov/readingrm/adams.html>.

Table A-1 Recipients of Draft EA Supplement Notification

Addressee Name	Affiliation	Accession number
Douglas Pavlick, cc: Tate Hagman	General Manager, Crow Butte Resources, Inc. Restoration Manager, Crow Butte Resources, Inc.	ML22229A111
Kevin Killer cc: Thomas Brings, Harold Salway & Andrew Reid	President, Oglala Sioux Tribe THPO, Oglala Sioux Tribe Director, Natural Resources Regulatory Agency Counsel for the Oglala Sioux Tribe	ML22229A129
Trevor Jones	Nebraska State Historic Preservation Officer	ML22229A132
Joe Summerlin & Amber Tilley	Environmental Protection Agency Region 7	ML22266A124
John Eddins	Advisory Council on Historic Preservation	ML22266A113
Tom Ballanco & David Frankel	Counsel for Consolidated Intervenors	ML22266A127
Bobby Komardley	Chairman, Apache Tribe of Oklahoma,	ML22224A066
Garrie Kills a Hundred	THPO, Flandreau Santee Sioux Tribe	ML22230A234
Steve Vance	THPO, Cheyenne River Sioux Tribe	ML22230A382
Merle Marks	THPO, Crow Creek Sioux Tribe	ML22230A393
Aaron Brien	THPO, Crow Tribe of Montana	ML22230A224
Misty Frazier	THPO, Santee Sioux Tribe	ML22230A395
Ben Ridgley	THPO, Northern Arapaho Tribe	ML22230A226
Max Bear	THPO, Cheyenne and Arapaho Tribes	ML22230A392

Dyan Youpee	THPO, Fort Peck Assiniboine Sioux	ML22230A232
Dianne Desrosiers	THPO, Sisseton-Wahpeton Oyate	ML22230A229
Jon Eagle	THPO, Standing Rock Sioux	ML22230A235
Cheyenne St. John	THPO, Lower Sioux Indian Community	ML22230A227
Martina Minthorn	THPO, Comanche Nation	ML22230A390
Kip Spotted Eagle	THPO, Yankton Sioux Tribe	ML22230A387
Lawrence Spottedbird	Chairman, Kiowa Indian Tribe of Oklahoma	ML22230A388
Allan Demaray	THPO, Three Affiliated Tribes Mandan, Hidatsa and Arikara Nation	ML22230A225
Kenneth Graywater	THPO, Spirit Lake Tribe of Fort Totten	ML22230A385
Stacy Laravie	THPO, Ponca Tribe of Nebraska	ML22230A381
Joseph Reed	THPO, Pawnee Nation of Oklahoma	ML22230A236
Ione Quigley	THPO, Rosebud Sioux Tribe of Indians	ML22230A238
Joshua Mann	THPO, Eastern Shoshone Tribe	ML22230A237
Teanna Limpy	THPO, Northern Cheyenne	ML22230A383
Clyde Estes	Chairman, Lower Brule Sioux Tribe	ML22230A228

In the notice of availability for the draft EA supplement and draft FONSI published in the *Federal Register* on August 26, 2022 (87 FR 52597), NRC stated that public comments on the draft EA supplement and draft FONSI should be submitted by September 26, 2022. Members of the public were invited and encouraged to submit related comments through various media, including electronic submittals to the federal rulemaking Web site or written comments by mail or email. The notice of availability for the draft EA supplement and draft FONSI also stated that comments received after September 26, 2022, would be considered if practical to do so, but NRC would assure consideration only for comments received on or before September 26, 2022. No comments were submitted after September 26, 2022.

A.2 Comment Identification and Review Methodology

In total, seven written comment submissions were received: one from the Oglala Sioux Tribe on the preliminary draft EA supplement and six (including two from the Oglala Sioux Tribe) on the public draft EA supplement. The NRC staff reviewed each comment submission and prepared summaries of the comments provided. The summaries and the staff's responses, organized by topic, are provided in Section A.4. Where applicable, the responses note where changes were made to the EA supplement as a result of a comment.

Table A-2 contains a list of the comment submissions received identifying the individuals who provided written comments, their affiliations (if provided), and ADAMS accession numbers that can be used to locate the correspondence. Table A-2 also indicates the number of comments in each submission as summarized by the NRC staff. Each comment is identified by two numbers separated by a hyphen, with the number to the left of the hyphen identifying the comment submission number from Table A-2 and the number to the right of the hyphen identifying the comment number.

Based on the similarity of comments related to a specific topic, as appropriate, the NRC staff grouped the same or similar comments within each topic. This approach allowed similar comments to be addressed with a single response to avoid duplication of effort and enhance readability of this report. A response has been provided for each comment or group of comments.

Table A–2. Comment Document Number Description

Comment Document Number	Name of Commenter	Affiliation	Accession Number	Number of Comments
1	Andrew Reid*	Native Justice, LLC - representing the Oglala Sioux Tribe	ML22243A181	11
2	Douglas Pavlick	Cameco Resources Inc.	ML22259A068	1
3	Dyan Youpee	Fort Peck Assiniboine & Sioux Tribes	ML22266A282	1
4	Joe Summerlin	U.S. Environmental Protection Agency Region 7	ML22266A283	1
5	Andrew Reid*	Native Justice, LLC - representing the Oglala Sioux Tribe	ML22269A565	9
6	Thomas Brings**	Oglala Sioux Tribe	ML22270A197	7
7	Julie Santella	<i>None provided</i>	ML22270A260	1
<p>* Because comment submissions 1 and 5 were provided by the same person, the comment summaries and responses in Section A.3 refer to that individual as one commenter. ** Although Mr. Brings' letter is dated July 29, 2022, the NRC staff did not receive it until September 26, 2022. Therefore, although his comments were intended to apply to the preliminary draft, the staff reviewed them during its review of public comments.</p>				

A.3 Comment Summaries and NRC Responses

Comments received addressed items both within and outside the scope of the EA supplement. Topics raised included:

1. Qualifications of NRC Staff Contractor
2. Development and Implementation of Methodology
3. Staff's National Environmental Policy Act (NEPA) Obligations
4. Treaty Rights
5. Sufficiency of Information
6. Mitigation
7. Reclamation
8. Editorial/Terminology

Comment summaries and responses are provided in this section, organized by topic areas. Within each topic-specific subsection, the applicable comment submission numbers, comment summaries, and the NRC staff responses are provided. At the end of each comment summary is a reference to the page(s) in the relevant comment submission(s) on which the summary is based. For example, the reference “(1:1,2; 5:8-9)” indicates that the summary is based on information from comment submission 1 at pages 1 and 2 and comment submission 5 at pages 8 through 9.

A.3.1 Qualifications of NRC Staff Contractor

Comments 1.1, 5.2

The commenter states that Mr. Spangler, the NRC staff’s contractor, is not a member of the Lakota nation, is not fluent in Lakota, and is not an expert on Lakota culture, traditions, history, or spirituality. The commenter also states that Mr. Spangler is not a cultural anthropologist or historian; that he and the NRC staff did not employ anyone with knowledge of Lakota culture, traditions, history, or spirituality in preparing the EA supplement; and that he did not conduct his own field survey of the CBR license area. The commenter also states that the Board and parties have recognized that the Lakota people and the Tribe are uniquely qualified to identify their own interests that may be impacted by licensed activities, and that the description of the survey methodology should recognize that the Oglala Sioux Tribe and Lakota peoples are uniquely qualified to identify the interests potentially impacted by the license renewal. (1:1,3,8; 5:8)

***Response:** The EA supplement was prepared by Mr. Spangler and Ms. Jean Trefethen, an NRC Environmental Project Manager with significant experience in NEPA reviews, including reviews of potential impacts on tribal cultural resources. Mr. Spangler’s qualifications meet or exceed the standards established by the National Park Service for minimum professional qualifications and for archaeology and historic preservation.*

The NRC staff and Mr. Spangler also developed the methodology for a tribal cultural survey of the CBR license area. The methodology was developed based on input received from the Oglala Sioux Tribe, including through meetings, a site visit, and sharing of draft documents. As discussed in Section 2.2 of the draft EA supplement, the methodology was designed to achieve two purposes: (1) to identify previously unidentified sites of significance to the Tribe, and (2) to obtain sufficient information about the significance of those sites to allow the NRC staff to assess potential adverse effects or impacts of the license renewal on those resources.

As stated in Section 2.2. of the draft EA supplement, the survey methodology recognized that the Tribe has “unique expertise to identify sites of significance to it and to ascribe significance to such sites.” For that reason, the methodology specified that the survey would be conducted by the Tribe or a contractor of the Tribe’s choosing, with Mr. Spangler serving in a facilitator role. In similar circumstances, a licensing board in another NRC proceeding (Powertech) found that Mr. Spangler was well-qualified to perform these tasks. Powertech (USA), Inc. (Dewey Burdock In Situ Uranium Recovery Facility), LBP-19-10, 90 N.R.C. 287, 320-21 (2019).

The Tribe selected Quality Services, Inc. (QSI), to perform the survey on its behalf. For the field investigation portion of the survey, QSI employed a crew that consisted of a tribal liaison and five tribal cultural resources specialists who were members of the Oglala Sioux Tribe or other Lakota tribes, along with a cultural anthropologist. At the survey crew’s invitation, Mr. Spangler participated in the crew’s identification efforts for the duration of the field investigation.

In addition, the methodology provided for oral interviews of knowledgeable tribal elders to obtain information on the cultural, historical, or spiritual significance of sites identified during the field investigation. The methodology adopted the Tribe's recommendations that the interviews be led and conducted by the Tribe, or individuals authorized by the Tribe, and that they be conducted in the Lakota language. The NRC staff's participation in the interviews was limited to providing sample questions reflecting the information the staff sought to obtain from the interviews. During the field investigation, tribal elders visited the CBR license area three times to view identified sites. Subsequently, QSI conducted interviews of nine tribal elders and provided summaries of the interviews in its survey report, which was reviewed and approved by the Oglala Sioux Tribe's Tribal Council before it was submitted to the NRC. No changes were made to the EA supplement in response to these comments.

Comments 1.2, 5.3

The commenter suggests that Mr. Spangler's primary experience is limited to "NHPA [National Historic Preservation Act] field surveys," not NEPA evaluations, and this "creates a perhaps subliminal bias towards the NHPA surveys and against the NEPA hard look." The commenter suggests that the draft EA supplement reflects this bias and fails to "adequately and fully address all of the non-Register eligible TCPs and the tangible and *intangible* interests of the Lakota peoples and OST [Oglala Sioux Tribe]" (emphasis in original). (1:4; 5:10)

Response: As stated in Section 7.0 of the draft EA supplement, the document was prepared by Mr. Spangler and Ms. Jean Trefethen, an NRC Environmental Project Manager who has substantial experience in NEPA cultural resources reviews. Section 2.2 of the draft EA supplement explains that the tribal cultural survey was designed to identify any sites of historic, cultural, and religious significance to the Oglala Sioux Tribe—including sites eligible for listing on the National Register of Historic Places (NRHP or National Register) as well as other sites not eligible for listing, which fall within the broader scope of NEPA. Thus, the survey was designed and implemented to identify all cultural resources of significance to the Tribe within the license area, irrespective of whether those resources were later determined to be "historic properties" or TCPs in the context of the NHPA. The survey methodology recognized that NEPA requires consideration of potential impacts to sites that are not eligible for listing on the National Register, such as those with no remaining site integrity or where there are no tangible remains of past activities.

Section 3 of the draft EA supplement contains the NRC staff's evaluation of all resources identified during the survey to assess their eligibility for the NRHP. For sites recommended as potentially eligible for listing, Section 4.2 of the draft EA supplement presents the staff's evaluation of potential adverse effects from the renewal of CBR's license within the NHPA framework. For sites determined to be ineligible for listing, Section 4.3 of the draft EA supplement presents the staff's evaluation of potential impacts from the renewal of CBR's license within the NEPA framework.

The survey methodology recognized that the value or importance of a site may be based on intangible practices or beliefs that are not known or observable to non-tribal individuals, and that "only tribal members steeped in cultural traditions and practices" are capable of describing the intangible value of a site. For this reason, as discussed in Section 2 of the draft EA supplement, the survey methodology called for the survey to be conducted by the Oglala Sioux Tribe or a contractor chosen by the Tribe. The survey crew employed by QSI (the Tribe's contractor) consisted of a tribal liaison and five tribal cultural resources specialists who were members of the Oglala Sioux Tribe or other Lakota tribes, along with a cultural anthropologist. The survey

methodology also included oral history interviews whose purpose was to gather information about the cultural, historical, or religious significance of sites identified during the field investigation. Tribal elders visited the site several times during the field investigation, and QSI conducted oral interviews of nine tribal elders as part of the survey. The NRC staff incorporated relevant information from those interviews into the description of identified sites in Section 2 of the draft EA supplement, the evaluation of NHPA eligibility in Section 3, and the evaluation of potential adverse effects or impacts in Section 4. No changes were made to the EA supplement in response to these comments.

A.3.2 Development and Implementation of Methodology

Comment 5.6

The commenter stated that the NRC Staff developed its survey methodology in consultation with the Oglala Sioux Tribe; that Quality Services, Inc. (QSI) conducted the survey of the CBR license area under contract with and in consultation with the Tribe, employing individuals fluent in Lakota language, history, culture, and traditions; and that QSI prepared a survey report which the Tribe submitted to the NRC Staff for use in preparing the EA supplement. (5:10)

Response: The comment is consistent with the description of the development and implementation of the methodology in Section 2.2. of the draft EA supplement. No changes were made based on this comment.

Comment 6.3

The commenter states that Section 2.2 of the draft EA supplement “[d]oes not state how areas contaminated could not be addressed” and that those areas could contain additional culturally significant items or sites. (6:1)

Response: Section 2.2 of the EA supplement summarizes the survey methodology used in the tribal cultural survey of the CBR license area. The NRC staff and its contractor, Mr. Spangler, developed the methodology based on input received from the Oglala Sioux Tribe. The survey methodology assigned priorities to different portions of the license area based on the likelihood of finding intact sites of significance to the Tribe. The approach, in order of priority, was (1) investigation of undisturbed areas, (2) reexamination of previously documented archaeological sites, and (3) investigation of previously disturbed areas. Previously disturbed areas included both the developed area (defined in the methodology as the area subject to disturbance by licensed activities) and areas outside of the developed area that had been disturbed by other activities such as agriculture. The lowest priority was assigned to the developed area because it had been severely disturbed during construction of the ISR wellfield infrastructure, making it highly unlikely that undisturbed sites would be encountered in that area. Although the entire license area was accessible during the survey, the survey crew chose not to survey the area inside the monitor well ring because, as stated on page 6 of the QSI survey report, “the construction of the mine has left soils highly disturbed negating the possibility of finding in situ cultural resources.” In response to this comment, Section 2.2 of the EA supplement was revised to further explain the prioritization and decisions regarding the areas surveyed.

A.3.3 Board’s Decision and NRC Staff’s NEPA Obligations

Comments 1.3, 5.4

The commenter suggests that the Board’s references in LBP-16-7 to “intangible” properties (specifically, that “NEPA requires a look at intangible, not just tangible properties” and that “short shrift was given to a review of tangible and intangible TCPs [traditional cultural properties]”) are referring to “intangible” interests of the Lakota peoples and the Oglala Sioux Tribe, “including its political, historical, cultural, and spiritual interests” that could be impacted by renewal of CBR’s license. The commenter also asserts that the Board’s decision “has broken new ground in what was traditionally an exclusive agency task generally limited to NHPA compliance and the identification of tangible TCPs eligible for [National] Register listing.” The commenter suggests that this “new approach” requires retraining of archaeologists and agency staff in order to fully comply with the NHPA and NEPA “as applied and interpreted by the Board in its decision.” According to the commenter, the EA supplement must include “a sufficient NHPA Section 106 field survey of the license area to identify TCPs eligible for listing in the National Register” and a “hard look” at potential environmental impacts of the renewal of CBR’s license on eligible or ineligible properties identified in a field survey as well as “any other interests” of the Oglala Sioux Tribe, including “intangible political (i.e., treaty), historical, cultural, and spiritual interests.” (1:3-4; 5:9-10)

Response: The NRC staff’s legal obligations under NEPA have not expanded as a result of the Board’s decision: the staff has always had to evaluate historic and cultural resources consistent with both the NHPA and NEPA. As explained in the response to Comments 1.2 and 5.3, the tribal cultural survey was designed to identify any sites of historic, cultural, and religious significance to the Oglala Sioux Tribe—including sites eligible for listing on the NRHP as well as other sites not eligible for listing, which fall within the broader scope of NEPA. The staff accordingly evaluated all identified sites for NRHP eligibility and then evaluated them for either potential adverse effects under NHPA (for sites recommended as potentially eligible for the NRHP) or impacts under NEPA (for all other sites).

As explained in Section 1.2 of the draft EA supplement, the purpose of the supplement is to address deficiencies identified by the Board in LBP-16-7, which relate to the NRC staff’s identification obligations under the NHPA and the staff’s evaluation of potential impacts to historic and cultural resources under NEPA. The broader political issues the commenter raises regarding the Tribe’s treaty rights, tribal sovereignty, and similar topics are outside the scope of the EA supplement. The response to Comments 1.2 and 5.3 explains how the staff addressed the “intangible” value of identified sites in the survey methodology and the draft EA supplement. No changes were made to the EA supplement in response to these comments.

Comments 1.4, 5.5

The commenter states that Section 1.1 of the draft EA supplement misstates the Board’s decision when read with certain statements in Sections 2.1, 2.3.4, and 3.2. The commenter states that the Board found the EA insufficient under NEPA because the EA failed to take a hard look at the environmental impacts on “all of the interests of the Lakota peoples and OST [the Oglala Sioux Tribe] – not just the ‘tangible’ TCPs eligible for Register listing.” Referring to the Board’s statements about “intangible” properties in LBP-16-7, the commenter states that the draft EA supplement does not use the word “intangible” and does not identify or describe the Tribe’s intangible interests or impacts of the license renewal on them. The commenter also asserts that the draft EA supplement “improperly conflates the NHPA field survey process and National Register Eligibility analysis with what should be a separate NEPA environmental analysis.” (1:56; 5:12-13)

Response: LBP-16-7 describes the Board's findings concerning Contention 1, which asserted that the NRC staff's efforts to identify cultural resources at the CBR facility and the staff's consultation efforts with tribes were inadequate. The statements in Section 1.1 of the draft EA supplement summarizing the Board's findings are based on the "Summary Findings of Fact" section of the Board's decision (LBP-16-7, 83 NRC 340, 411 (2016)).

As noted by the commenter, the Board used the term "intangible" twice in LBP-16-7, stating that "NEPA requires a look at intangible, not just tangible properties, and is not limited to a focus on historic properties. . ." and that "short shrift was given to a review of tangible and intangible TCPs [traditional cultural properties] that do not rise to the level of historic properties. . ." (83 NRC 340, 402-03 (2016)). The Board uses the word "intangible" in these instances to describe properties, which are by definition tangible. In context, the Board's phrases "not limited to a focus on historic properties" and "do not rise to the level of historic properties" suggest that the Board was drawing a distinction between properties that are eligible for listing in the NRHP and cultural resources that fall within the broader scope of NEPA.

The analysis in the EA supplement reflects that distinction. Although the EA supplement does not use the word "intangible," the response to Comments 1.2 and 5.3 explains that the survey methodology recognized that the significance of a site may be based on intangible practices or beliefs, and that significance might only be recognized by tribal members familiar with cultural practices or traditions. For this reason, the survey methodology called for the survey to be conducted either by the Oglala Sioux Tribe or a contractor chosen by the Tribe. The methodology also included oral history interviews with knowledgeable tribal elders to obtain information on the historic, cultural, or religious significance of identified sites—including the intangible aspects of significance. Relevant information from those interviews was incorporated into the NRC staff's description of identified sites in Section 2 of the draft EA supplement, its evaluation of NHPA eligibility in Section 3, and its evaluations of potential adverse effects or impacts in Section 4.

Generally speaking, the field investigation portion of a cultural resources survey is an effort to identify and gather information about all cultural resources that are present. Determinations of NHPA eligibility, and subsequent evaluation of adverse effects under the NHPA or impacts under NEPA, are performed after the field investigation is completed. In this case, the NRC staff used the information gathered from the field investigation and oral history interviews to determine NRHP eligibility and to evaluate potential adverse effects under the NHPA framework (for sites determined to be potentially eligible for NRHP listing) or potential impacts under the NEPA framework (for sites that were not eligible for listing). No changes were made to the EA supplement in response to these comments.

A.3.4 Treaty Rights

Comments 1.5, 5.7

The commenter asserts that NEPA requires the NRC to take a hard look at "every significant aspect of the environmental impact" of renewal of CBR's license. The commenter states that the draft EA supplement ignores and fails to take a hard look at the interests of the Tribe "elaborated . . . on pages 2 and 3 of the QSI Report." The commenter asserts the importance of the Oglala Sioux Tribe's "historical, cultural, and spiritual attachment and Treaty rights to their ancestral lands," reiterates the Tribe's assertions of treaty rights to the area where the CBR ISR facility is located, and asserts that this licensing action negatively impacts the Tribe's

sovereignty and its obligation to care for ancestors and the Earth. The commenter also claims that the United States is in violation of Lakota law, the 1851 and 1868 Fort Laramie Treaties, and international law; that the United States and federal agencies must obtain the “free, prior, and informed consent” of the Tribe in order to renew CBR’s license; and that the Tribe has refused to give such consent. The commenter claims that the draft EA supplement is deficient under NEPA because it fails to address these interests or discuss whether the proposed action complies with all laws. Finally, the commenter asserts that the NRC’s licensing action is a violation of the Tribe’s sovereignty, integrity, and fundamental rights; that it is demeaning to the Tribe; and that the NRC has ignored and dismissed the Tribe’s continuing objections related to issues of treaty rights and sovereignty. (1:4-5; 5:11-12)

Response: Pages 2-3 of QSI’s survey report discuss various legal claims related to treaty rights that the Tribe has previously raised during this license renewal proceeding. Those claims are outside the scope of the EA supplement. The purpose of the EA supplement (as explained in Section 1 of the document) is to describe the NRC staff’s efforts to identify sites of significance to the Tribe within the CBR license area and to evaluate potential impacts on those sites under the NHPA and NEPA. No changes were made to the EA supplement in response to these comments.

Comment 5.1

The commenter makes various legal arguments based on treaties, federal court cases, and international law asserting that the land where the CBR ISR facility is located belongs to the Oglala Sioux Tribe and that the United States and the NRC lack lawful authority and jurisdiction over that land. The commenter asserts that the draft EA supplement violates NEPA because it fails to describe or demonstrate the NRC’s jurisdiction and authority to issue a license to Crow Butte Resources, Inc., for its ISR facility without prior consent of the Oglala Sioux Tribe. (5:2-8)

Response: Treaty rights, tribal sovereignty, and land ownership disputes are not within the scope of Contention 1 or the EA supplement. No changes were made to the EA supplement in response to this comment.

A.3.5 NRC Staff’s Failure to Follow Up and Obtain Sufficient Information

Comments 1.7, 5.8

The commenter takes issue with a statement in Section 3.4 of the draft EA supplement regarding the significance of creeks in the license area. The commenter asserts that the NRC staff stated that there was insufficient information from elder interviews to make determinations as to significance, and that the NRC had an obligation to ensure it made a good faith effort to obtain sufficient information to make the NHPA determinations but did not do so. The commenter notes that the staff contacted CBR for additional information and that it would not have been difficult to arrange for follow-up interviews with tribal elders to obtain additional information. The commenter cites similar statements and makes similar assertions of staff failures to follow up in Section 3.5 (regarding bison) and Section 3.6 (regarding vision quest sites). The commenter asserts that because of these failures to follow up the staff has not satisfied its NHPA obligations or made a “genuine, reasonable effort” to comply with the NHPA.

The commenter raises similar issues with respect to the Staff’s NEPA analysis of plants in section 4.3.2 and creeks in section 4.3.4, claiming that the NRC staff failed to follow up when it lacked information. The commenter asserts that the staff could have “easily obtained” information from the Oglala Sioux Tribe and that failure to do so does not meet the staff’s NEPA

obligations. The commenter claims that the staff failed to comply with 40 CFR 1502.21(b), stating that in the sections of the draft EA supplement cited above, the Staff “made clear that it lacked such information which it stated was essential to draw its impact conclusions, but failed to describe any effort at all by the agency” to obtain the necessary information. The commenter reiterates that the Tribe offered to assist the staff in obtaining information, but the staff did not avail itself of that offer. (1:8-9; 5:14-15)

***Response:** Sections 3.4, 3.5, and 3.6 of the draft EA supplement contain the NRC staff’s NHPA eligibility evaluation for waterways, bison remains, and vision quest sites that were identified by the Tribe as potential TCPs. In each of these sections, the staff acknowledged and described the significance of water, bison, and vision quest sites to the Tribe, based on information provided in the survey report. The staff did not state in any of these sections that it needed additional information to make eligibility determinations. In each section, the staff explained its basis for concluding that the waterways, bison remains, and vision quest sites were not eligible for NRHP listing. The staff considered the potential impacts to these resources under NEPA, as discussed in Sections 4.3.4, 4.3.5, and 4.3.6 of the draft EA supplement.*

Sections 4.3.2 and 4.3.4 of the draft EA supplement contain the NRC staff’s assessment of potential impacts, under NEPA, on identified plant species and waterways, respectively. In both of these sections, the staff acknowledged the cultural significance of these resources to the Tribe, based on information provided in the survey report. The staff did not state in either of these sections that it needed additional information to assess the potential impacts to these resources. In each section, the staff explained its basis for concluding there would be no significant impacts to these resources from licensed activities.

The survey methodology provided for oral interviews of knowledgeable tribal elders in Lakota and without NRC staff participation to encourage participants to speak freely. At the Tribe’s request, the staff provided sample questions to be used as guidance for the interviews, but the Tribe’s contractor ultimately decided how to conduct the interviews and what information to provide in the survey report. The staff used the information provided in the report as described above.

As noted above, the NRC staff did not state in the draft EA supplement that it needed additional information to evaluate NRHP eligibility or to assess impacts under NEPA. The Oglala Sioux Tribe had opportunities to provide additional information when it reviewed the preliminary draft of the EA supplement and the public draft EA supplement. Each of the sections of the draft EA supplement cited by the commenter contained explanations of the staff’s bases for its NHPA eligibility determinations (Sections 3.4, 3.5, and 3.6) and NEPA impact determinations (Sections 4.3.2 and 4.3.4). If the Tribe disagreed with any of the staff’s explanations or had additional information relevant to those determinations, the Tribe or its contractor could have provided specific, substantive comments explaining the reasons for the Tribe’s disagreement or providing the relevant information. In response to this comment, Section 4.3.4 of the EA supplement was revised to clarify the basis for the staff’s NEPA determination.

A.3.6 Mitigation

Comment 1.8

The commenter takes issue with the NRC staff’s statement in Section 4.5 that because there are no significant impacts expected, there is no need to consider potential mitigation measures to reach a FONSI. The commenter states that the draft EA supplement lacks any discussion of

impacts on the Oglala Sioux Tribe's interest in participating in the reclamation of the license area, which is part of the Tribe's cultural and spiritual obligations as "caretaker of its traditional territory." The commenter states that this is a very small demand given the impacts the CBR facility has had on the Tribe's ancestral treaty lands. (1:9-10)

Response: The purpose of the NRC staff's efforts described in the draft EA supplement was to identify sites of significance to the Tribe within the CBR license area and to evaluate potential impacts to those sites from the renewal of CBR's license. As described in section 4.5 of the draft EA supplement, after completing these efforts, the staff concluded that there would be no adverse effects on historic properties and no significant impacts to other identified cultural resources from the renewal of CBR's license. Therefore, under the respective analytical frameworks for NHPA and NEPA, there was no need to adopt mitigation measures. In response to this comment, section 4.5 of the EA supplement was revised to clarify that the NRC staff concluded it was not necessary to adopt mitigation measures to reach a FONSI.

Comment 5.9

The commenter asserts that supplementing the EA to address Contention 1 "implies fulfillment of NEPA's requirement to include mitigative measures in the discussion and conclusions to minimize and repair the impacts." The commenter cites statements in 32 CFR 651.15 related to mitigation, the definition of "mitigation" in 40 CFR 1508.1(s), and Council on Environmental Quality (CEQ) guidance to federal agencies regarding mitigation (76 Fed. Reg. 3843 (Jan. 21, 2011)). The commenter then claims that the NRC "does not deny that there are environmental impacts" from CBR's licensed activities, citing the use of groundwater for the ISR process and "widespread" surface disturbance, and states that the Lakota people and the Oglala Sioux Tribe have "intangible and environmental interests, specific to them, in how their ancestral and Treaty lands are repaired" which are within the scope of NEPA and the Board's initial decision. (5:16-17)

Response: As explained in Section 1 of the draft EA supplement, the purpose of the document is to address deficiencies related to NRC staff's identification of historic and cultural resources within the CBR license area. Sections 4.1 and 4.3 of the draft EA supplement discuss the staff's evaluation of impacts under NEPA for sites that were not recommended as eligible for listing in the National Register, and Section 4.4. discusses cumulative impacts. In each of these sections, the staff concluded that there would be no significant impacts on the identified sites and explained the bases for those conclusions.

In Sections 4.3.3 and 4.3.6 of the draft EA supplement, the NRC staff considered the QSI survey report's recommendations for buffers around two specific sites. However, the general mitigation measures recommended on pages 138-139 of the QSI survey report are not specific to any particular historic or cultural resource identified within the CBR license area. Also, those general measures would not reduce or avoid impacts to any of those resources from licensed activities.

Finally, the regulations and CEQ guidance that the commenter cites either do not apply to the NRC or do not require the NRC staff to impose mitigation measures.

In response to this comment, language was added to Section 4.5 of the EA supplement to explain that the general mitigation measures proposed in the QSI survey report would not reduce or avoid impacts from licensed activities on any specifically identified historic or cultural resources within the CBR license area.

A.3.7 Reclamation

Comment 6.2

The commenter states that the description of the proposed action in Section 1.3 of the EA supplement does not describe how the uranium contaminated areas will be cleaned up. (6:1)

Response: Section 1.3 of the draft EA supplement provides a high-level description of licensed activities, including activities associated with decommissioning. Restoration, reclamation, and decommissioning, are described more fully in Sections 2.3 to 2.6 of the 2014 EA. Those activities are outside the scope of this EA supplement, whose purpose is to address deficiencies in the NRC staff's identification obligations under the NHPA and the staff's evaluation of potential impacts to historic and cultural resources under NEPA. No changes were made to the EA supplement in response to this comment.

Comment 6.4

Citing section 4.3.4 of the draft EA supplement, the commenter acknowledges that surface waterways are outside the scope of this analysis, but states that surface waterways are the most impacted by operation of the CBR ISR facility. The commenter further states that uranium has been found in the White River which runs through the Pine Ridge Indian Reservation. (6:1)

Response: As the commenter acknowledges, impacts on surface water quality are outside the scope of this EA supplement. The impacts of the license renewal on surface water quality were addressed in the 2014 EA, and a contention related to surface water quality, including potential contamination of the White River, was resolved in the NRC staff's favor at the 2015 license renewal hearing. No changes were made to the EA supplement in response to this comment.

Comment 6.5

The commenter states that the Oglala Sioux Tribe has requested to be involved in the reclamation process through participation and consultation. (6:1)

Response: The NRC acknowledges the Tribe's request, which was proposed on page 138 of the QSI survey report as a mitigation measure. However, because the NRC staff concluded that there would be no significant impacts to any historic or cultural resources identified during the survey of the CBR license area, there was no need to adopt mitigation measures. In addition, the participation of the Tribe in the "reclamation process," as described on page 138 of the QSI survey report, would not reduce or avoid any impacts to specific historic or cultural resources identified during the survey. No changes to the EA supplement were made in response to this comment.

Comment 6.6

The commenter asserts that the renewal of the license will increase contamination and questions whether access to areas of worship and ceremony will be restricted and whether the areas will diminish. (6:1)

Response: Potential contamination of water and other environmental resources were addressed in the 2014 EA and are outside the scope of this EA supplement. Section 4.3.6 of the draft EA supplement addresses potential impacts on vision quest sites identified during the tribal cultural survey and explains the basis for the NRC staff's conclusion that there will be no significant impacts to those sites. The CBR license area is located on privately-owned land; therefore, access to the area is controlled by the landowners as well as restrictions due to licensed activities. No changes were made to the EA supplement in response to this comment.

A.3.8 Discussion of Oral History and Historical Background

Comment 1.9

The commenter states that although the QSI survey report contains significant oral history and historical background demonstrating the significance of the license area to the Oglala Sioux Tribe, there is little discussion of these sections in the draft EA supplement. The commenter asserts that these omissions undermine the NHPA and NEPA discussions of the significance of TCPs and the potential impacts on interests of the Oglala Sioux Tribe and Lakota peoples. (1:10)

Response: Pages 11-16 of the QSI survey report contains summaries of oral history interviews with nine tribal elders. The NRC staff described and presented relevant information from the oral history interviews throughout the draft EA supplement. Such information was incorporated into the descriptions of the identified sites of significance in Section 2, the evaluations of NHPA eligibility in Section 3, and the evaluation of potential adverse effects or impacts in Section 4.

Because this EA supplement focused on addressing the deficiencies identified by the Board, it was not necessary to include a discussion of the historic background of the area. The historic background and relationship of the Oglala Sioux Tribe and other Native peoples to the area around the CBR facility is described in Section 3.9 of the NRC staff's 2014 EA, and in Mr. Spangler's 2022 literature review that was cited in Section 2.0 of the draft EA supplement. Pages 16-24 of the QSI survey report also provide historical background information and context; therefore, in response to this comment, the staff has added a reference to the QSI survey report in Section 2.0 of the EA supplement.

A.3.9 Significance of Area

Comment 6.7

The commenter suggested that the whole area could be considered “a Tribal Cultural Property and A World Heritage Site,” and that the area has always been a spiritually significant place for the Oglala Lakota and will continue as one. (6:2)

Response: It is not clear what the commenter is referring to by “the whole area.” The NRC staff acknowledges the significance to the Oglala Sioux Tribe of the region in which the CBR ISR facility is located. This region is not currently designated a World Heritage Site, and the NRC does not have a role in making such designations. It is also outside the scope of this EA supplement to evaluate the region surrounding the CBR facility. Rather, the purpose of the EA supplement is limited to addressing deficiencies in identification and evaluation of sites within the CBR license area. No changes were made to the EA supplement in response to this comment.

A.3.10 Editorial Clarifications and Terminology

Comment 1.6

The commenter stated that the draft EA supplement should state that the tribal cultural survey was “undertaken under contract with OST [the Oglala Sioux Tribe] by Quality Services, Inc. (QSI) to identify sites of historic, cultural, and spiritual significance to the Oglala Sioux Tribe and the Lakota peoples” and that the Tribe did not conduct the survey or prepare the report. Accordingly, the commenter cited numerous references to use of the term “the Tribe” in

Sections 2 and 3 of the draft EA supplement that, in the commenter's view, should be changed to refer to QSI or the QSI survey report. (1:6-8)

Response: The commenter is correct that the Oglala Sioux Tribe itself did not conduct the survey. Rather, the survey was conducted by QSI on behalf of the Tribe, using a survey crew that consisted predominantly of members of the Oglala Sioux Tribe and other Lakota tribes.

This comment was provided by the Tribe during a preliminary review of the draft EA supplement. In the draft EA supplement for public review, and in the final EA supplement, the NRC staff made appropriate changes in Sections 2.3, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.2, 4.3, 4.5, 4.6 to reflect this distinction.

Comment 1.10

The commenter disapproves of the NRC staff's use of the terms "Native American" and "American Indian tribes" in the draft EA supplement. The commenter suggests that "Native" would be more appropriate, and that "nation" or "peoples" are the preferred terms unless "tribe" has been incorporated into a specific name, such as the "Oglala Sioux Tribe." (1:10)

Response: In response to this comment from the Oglala Sioux Tribe on the preliminary draft of the EA supplement, the NRC staff revised the document to remove the term "American Indian" and to only use "Native American" when summarizing or quoting other documents in which the term is used. The staff also acknowledges the commenter's preferences regarding the use of "tribe," but notes that the term has been used in this proceeding since 2008. The term is also commonly used in the NHPA and NEPA contexts—for example, in ACHP regulations and guidance documents. In response to this comment, in the public draft EA supplement and the final EA supplement, the staff has avoided the use of "tribe" in most instances where it is not used in the context of a specific name.

Comment 1.11

The commenter stated that some references had not been provided to the Oglala Sioux Tribe and requested that they be provided. (1:11)

Response: This comment was provided during the Oglala Sioux Tribe's review of the preliminary draft EA supplement. Some references in Section 8.0 of the preliminary draft sent to the Tribe did not have ADAMS accession numbers listed. In response to this comment, the NRC staff provided the accession numbers for all of the references to the commenter by email and included them in Section 8.0 of the public draft EA supplement and in the final EA supplement.

A.3.11 General Comments

Comment 2.1

The commenter expressed agreement with the conclusions in the draft EA supplement and the scope and thoroughness of the NRC staff's review. (2:1)

Response: The NRC acknowledges the commenter's agreement with the conclusions of the draft EA supplement. While comments expressing general agreement are useful for the NRC to understand public opinion about the licensing action, this comment provided no new information regarding the EA supplement. No changes were made to the EA supplement in response to this comment.

Comment 3.1

The commenter defers to the comments and determinations provided by the Omaha Tribe of Nebraska, the Ponca Tribe of Nebraska, the Santee Sioux Tribe, and the Winnebago Tribe of Nebraska, and asked to be notified if no comments were received from those tribes. (3:1)

Response: The NRC acknowledges the commenter's request to defer to the comments of others. The NRC staff informed the commenter that no comments were received from the four tribes. The comment provided no new information regarding the EA supplement. No changes were made to the EA supplement in response to this comment.

Comment 4.1

The commenter summarizes the purpose of the EA supplement and the status of operations at the CBR facility and recommends that the NRC continue to correspond and communicate with the Tribes and the state SHPO during aquifer restoration and wellfield decommissioning to ensure that the communities' needs are met. (4:1)

Response: The NRC staff acknowledges the commenter's recommendation and will continue to follow its guidance and regulatory process for this license renewal proceeding. The comment provided no new information regarding the EA supplement. No changes were made to the EA supplement in response to this comment.

Comment 6.1

The commenter states that the Oglala Sioux Tribe's Cultural Affairs and Historic Preservation office opposes the renewal of CBR's NRC source materials license. (6:1)

Response: The NRC acknowledges the commenter's opposition to the renewal of the CBR's license. While comments expressing general opposition are useful for the NRC to understand public opinion about the licensing action, this comment provided no new information regarding the EA supplement. No changes were made to the EA supplement in response to this comment.

Comment 7.1

The commenter objects to the NRC staff's FONSI for the CBR license renewal, asserting that "the mine has had a significant impact" and will continue to do so. The commenter asserts that the CBR facility has had "numerous spills, leaks and excursions," and that "water has been contaminated down-river." For these reasons, the commenter asserts "it can't be possible" that there would be no significant impact to cultural resources. The commenter also notes that the facility is located on ancestral and treaty land of the Oceti Sakowin and other peoples. (7:1)

Response: Issues related to contamination of surface and groundwater were addressed in the 2014 EA, which concluded there would be no significant impact to those resources. Contentions related to impacts of the CBR license renewal on surface water and groundwater were resolved in the NRC staff's favor during the 2015 hearing. Those issues are outside the scope of this EA supplement. Sections 4.1 to 4.4 of the draft EA supplement describe the staff's assessment of impacts to sites identified during the 2021 tribal cultural survey and provide the reasons for the staff's conclusion that there will be no adverse effects or significant impacts to those sites from licensed activities. The relationship of the Oglala Sioux Tribe and other Native peoples to the area around the CBR facility is described in the 2014 EA. No changes were made to the EA supplement in response to these comments.