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**FIELD DOCUMENTATION OF POTENTIAL
PLACES OF TRIBAL RELIGIOUS OR CULTURAL SIGNIFICANCE**

**CROW BUTTE RESOURCES, INC.,
CROW BUTTE LICENSE AREA AND
PROPOSED EXPANSION AREAS**

DAWES AND SIOUX COUNTIES, NEBRASKA

Prepared for

U.S. Nuclear Regulatory Commission

**Office of Federal and State Materials and Environmental Management Programs
Division of Waste Management and Environmental Protection**

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ABSTRACT

Crow Butte Resources, Inc. operates an existing In Situ Uranium Recovery facility, located southeast of Crawford, Dawes County, Nebraska. The company has currently submitted applications to the U.S. Nuclear Regulatory Commission (NRC) to both relicense its operations at the existing facility and to expand the license to include an additional three proposed expansion areas in the vicinity. These include the North Trend Expansion Area, the Three Crow Expansion Area, and the Marsland Expansion Area.

As required in Section 106 of the National Historic Preservation Act and implementing regulations, there is a need to identify any places of Tribal religious or cultural significance that may exist in the proposed license areas. In the fall of 2012, Crow Butte Resources offered to open each of the four project areas to any interested Tribes so that they could conduct on-the-ground inventories to identify any places of potential Tribal significance. Two of the consulting Tribes for the Crow Butte project areas, the Crow Nation and the Santee Sioux Nation, accepted the offer and contributed field crews to the effort.¹ The Tribal inventory, completed by the two Tribal crews working together, was conducted in late November and early December 2012 and identified 13 places of potential religious or cultural tribal significance. Twelve of these places are located at the proposed Marsland Expansion Area, with the remaining one at the proposed Three Crow Expansion Area. The Tribal representatives decided not to conduct field investigations at the existing License Area because of the widespread previous land disturbances. Access to the proposed North Trend Expansion Area could not be arranged at the time of the Tribal effort, and it was agreed that a programmatic agreement would be developed to include a provision for Tribal inventory of that project area as a later date.

In early 2013, the Tribal Historic Preservation Officer of the Santee Sioux Nation submitted a written report on behalf of both Tribes that summarized the findings from the Tribal field inventory, concluding that none of the 13 places identified was potentially eligible for listing on the National Register of Historic Places. The report also offered recommendations for a buffer zone around each of the 13 identified places to avoid impacts during future project activities, and for one or two Tribal monitors to be stationed at each identified site within the Marsland project area should any future impacts occur in close proximity. The Tribes have not developed a monitoring methodology at this time. The Tribal report included location data for each of the 13 identified places, along with a label designating potential function or cultural value. While National Register recommendations are offered in the report, supporting documentation for the evaluations was not included. To provide the necessary documentation of these sites identified during the tribal field visit, the NRC tasked SC&A to complete a field visit to the Crow Butte project areas, locate each of the 13 places identified by the Crow and Santee Nations, and complete standard cultural site documentation for each one. SC&A was present during the initial tribal survey with the Crown Nation and the Santee Sioux Nation and was able to easily relocate the 13 places identified by the tribes. SC&A completed the field visit in July 2013 and provided additional details to accompany the Tribes' interpretation of each identified site.

To facilitate the present documentation effort, the 13 places identified by the two Tribes are combined into eight Tribal sites; six of the places are co-located possible circular stone arrangements. Together, these features would probably represent a single habitation site of potential historic significance to the Tribes. All 13 places were easily located again. However, one site, although clearly seen in the first survey efforts with Tribal members present, was

¹ A third tribe, the Lower Brule Sioux, expressed an interested in surveying but could not participate during the fall dates.

densely covered with vegetation that severely limited observation of the ground surface, so it was not possible during this second visit to identify the possible cultural feature and acquire additional information.

SC&A's field visit has been documented to provide methodology in support of the findings in the Tribal report completed the consulting Tribes. None of the eight Tribal sites, as identified by the Tribal field crews, is considered to constitute a prehistoric or historic Euro-American or American Indian cultural resources site. Therefore, consideration of potential eligibility for the National Register is not warranted. Two of the Tribal Sites are considered as *potential* places of religious or cultural significance for the consulting Tribes, although no physical evidence exists at this time for an American Indian connection to either place. Two of the places identified by the two Tribes are clearly historic-period Euro-American in affiliation. One of these, an historic-period stone cairn marker, is associated with a previously recorded historic homestead, and the other is associated with Soil Conservation Service contouring and terracing activities dating to the 1960s. The remaining four Tribal sites are not believed to have any past Native American association.

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1 INTRODUCTION

This document is prepared to support U.S. Nuclear Regulatory Commission (NRC) licensing actions for various Crow Butte Resources, Inc. (CBR) applications to (1) renew NRC Source Materials License SUA-1534, covering the existing Crow Butte Operation license area, situated about 6.5 kilometers (km) southwest of Crawford, NE, and (2) develop additional uranium in situ recovery (ISR) mining resources at three proposed expansion areas. The proposed expansion areas include the North Trend Expansion Area (NTEA), the Marsland Expansion Area (MEA), and the Three Crow Expansion Area (TCEA). The four CBR project areas lie in Dawes and Sioux Counties, NE (Figure 1.1).

S. Cohen & Associates (SC&A) is contracted to provide cultural resources technical support to NRC to aid the Federal agency in completing Tribal consultations and compliance actions associated with the National Historic Preservation Act (NHPA), Section 106. In this instance, the NRC requested that SC&A provide field documentation, National Register of Historic Places (NRHP) evaluations, and management recommendations for 13 potential places of religious or cultural significance, as identified by field crews provided by two of the consulting American Indian Tribes, the Crow Nation and Santee Sioux Nation (SSN), in late November to early December 2012 (SSN, 2013).

This report discusses the results for SC&A follow-up documentation of sites that Tribal field crews identified at the MEA and TCEA project areas. SC&A staff completed a field visit in July 2013. Section 2 of this document provides background information about previous cultural resources investigations at the CBR project areas, along with a summary of the NRC's Tribal consultation efforts and the results of the 2012 Tribal field inventory. Section 3 offers a summary of the objectives and methods guiding the present investigation, and Section 4 includes the findings and conclusions resulting from the documentation effort. Management recommendations, including National Register considerations and site treatment options, are contained in Section 5.

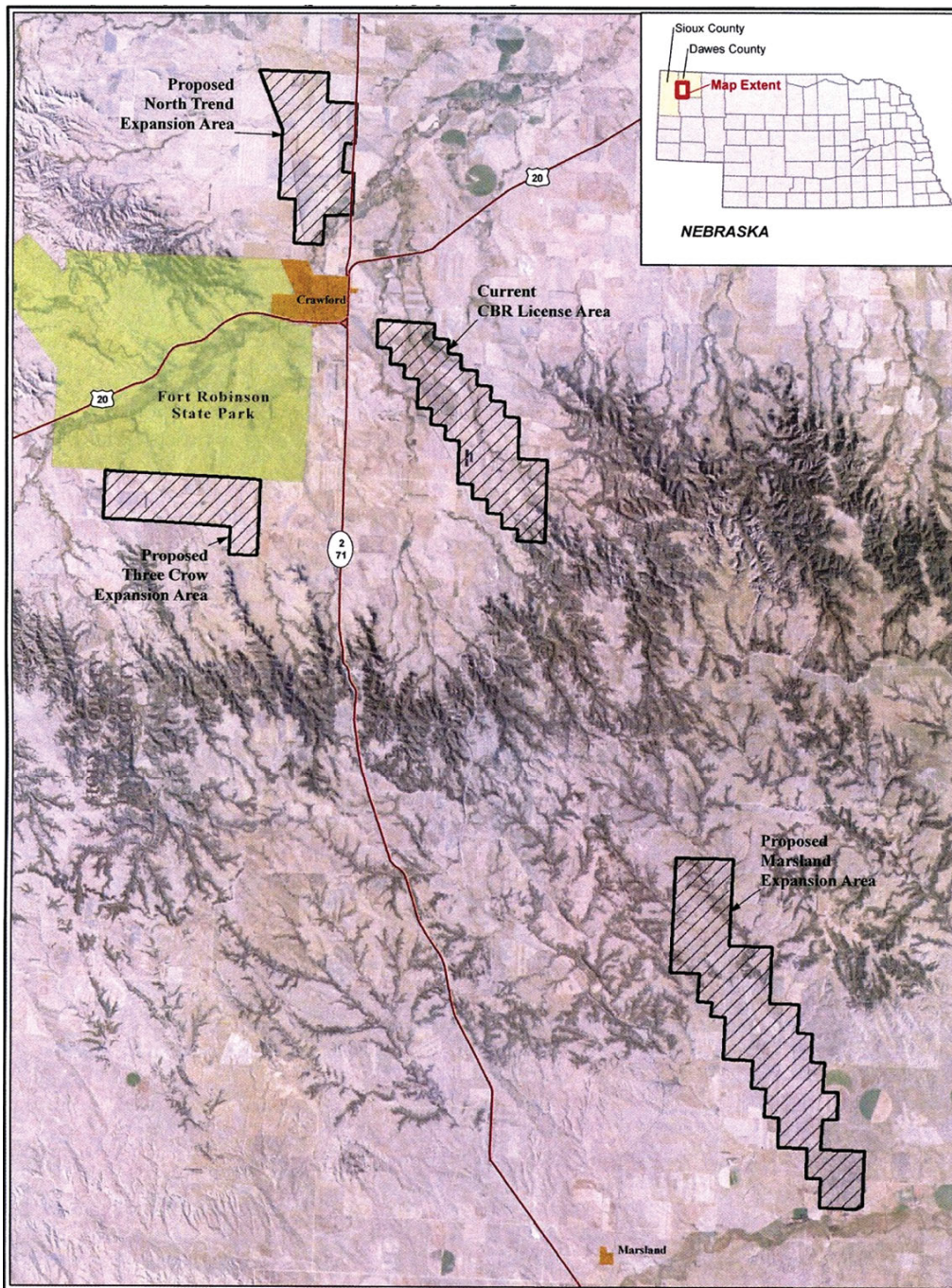


Figure 1.1 Northwestern Nebraska CBR project areas (Source: CBR)

2 BACKGROUND

2.1 Previous Cultural Resources Investigations

This section briefly outlines the previous CBR cultural resources investigations that were completed for the four project areas prior to the Tribal field survey. Although previous investigations recorded prehistoric archaeological sites and isolated finds in each instance, they did not focus on places of potential Tribal religious or cultural significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. For the purposes of the Marsland Expansion Area, consultation began after the NRC received the applicant's environmental and technical reports. In accordance with 36 CFR Part 800, the NRC initiated the MEA consultation process by letter dated September 5, 2012 to identify places or resources of potential Tribal significance.

Table 2.1 summarizes the collective results of the previous cultural resources investigations at each of the four CBR project areas. Past cultural resources efforts by individual project area are briefly summarized in the following sections.

Table 2.1 Comparative Summary of Previous Crow Butte Resources Historic and Cultural Resources Information

Data Category	Crow Butte ISR Facility	NTEA	TCEA	MEA	Totals
Total License Area (acres)	3,300	2,680	1,643	4,621	12,244
Cultural Resource Inventory (acres)	1,100 ^a (1.72 sq. mi.)	1,190 (1.86 sq. mi.)	2,100 (3.28 sq. mi.)	4,660 (7.28 sq. mi.)	9,050 (14.14 sq. mi.)
Number of Resource Sites and Isolated Finds Recorded	21 ^b	6	14	23	64
Historic Resource Sites	12	3	11	17	42
Prehistoric Resource Sites	8	0	0	0	8
Historic Isolated Finds	0	1	1	6	9
Prehistoric Isolated Finds	0	2	2	0	4
Site Density (per sq. mi.)	12.21	1.61	3.05	2.06	3.61
Isolated Find Density (per sq. mi.)	0	1.61	1.22	0.69	1.57
Total Cultural Resources Density (per sq. mi.)	12.21	3.23	4.27	2.75	4.53

^a This acreage is estimated based on the surface area developed as stated in the CBR license renewal application (CBR, 2007).

^b One of the recorded cultural sites at the ISR facility area is of unknown age and cultural affiliation.

Sources: Bozell and Pepperl (1987); Späth (2007a); Späth (2007b); Graves et al. (2011); Graves et al. (2012).

2.1.1 CBR ISR License Area

Cultural resources investigations began at the Crow Butte Uranium Project in the 1980s with inventories of exploratory drill sites (Tucker, 1985), followed by an intensive field inventory of the entire proposed lease area of some 3,300 acres (Bozell and Pepperl, 1987). These investigations resulted in the recording of 21 cultural resource sites, including 12 historic-period sites and 8 prehistoric archaeological sites. One of the cultural sites at the CBR License Area was of undetermined cultural affiliation. Of the total sites, six sites, including three Native American and three historic-period Euro-American locales, were determined to be potentially eligible for the NRHP, requiring further field assessment for a full evaluation of their eligibility. This further assessment has not been conducted to date for five of these potentially eligible sites because they have been totally avoided over the years of plant operation. As a result, they remain in the “potentially eligible” status.

The sixth potentially eligible archaeological site from the 1987 evaluation, Site 25DW198, received additional evaluative field testing in 2003, when it was found to be in an area of CBR well-drilling activities (Späth and Walth, 2003). Before the fieldwork commenced, a site testing plan was prepared and sent to the Nebraska State Historic Preservation Officer (NE SHPO), who concurred with the approach. Site 25DW198 was again subjected to an intensive inventory of the previously mapped site surface and the adjacent areas, followed by excavation of four subsurface test units. Based on the findings of this field effort, a recommendation was made that the site lacked the potential to yield information important to the region’s prehistory and that it was not eligible for listing on the NRHP. The NE SHPO concurred with this recommendation (NSHS, 2003), and the archaeological site was removed from the CBR project list of potentially eligible archaeological sites.

2.1.2 North Trend Expansion Area

The proposed NTEA project area includes a total of 2,680 acres, although only 1,190 acres are included in the maximum development area over the life of the project. In 2004, ARCADIS U.S., Inc. (ARCADIS) conducted an intensive pedestrian cultural resources inventory of the 1,190-acre proposed maximum development area (Späth, 2007a).

The 2004 field inventory recorded three historic sites and three isolated artifacts. The historic sites include an abandoned farm complex, an occupied farm complex with a nearby schoolhouse foundation, and a small historic refuse disposal area. The isolated artifacts include an early historic-period metal trade point and two prehistoric-period chert artifacts (a core and a projectile point fragment). Based on the field survey findings, ARCADIS did not recommend any of the sites as being “potentially eligible” for listing on the NRHP, although it did recommend one historic property, 45DW297, for further archival work should the site actually be disturbed by future mining development.

2.1.3 Marsland Expansion Area

Between November 2010 and February 2011, ARCADIS conducted an intensive pedestrian cultural resources inventory of the 4,500-acre proposed license boundary area (Graves et al., 2011). ARCADIS conducted an additional intensive pedestrian cultural resources inventory of another contiguous tract of 160 acres, located along the eastern boundary in the northern part of the MEA (Graves et al., 2012).

The first field inventory recorded 15 newly discovered historic-period sites and six historic isolated finds, along with further documentation of two previously recorded historic homesteads. All of the sites and isolated finds encountered in the MEA can be associated with historic-period ranching and farming activities in the area, dating from the late 1800s to recent times. Resource types included abandoned homesteads, a wooden bridge, secondary debris scatters, isolated livestock features such as cisterns and corrals, and isolated farm machinery. The second field inventory did not result in the discovery of any historic or archaeological sites.

None of the 17 historic-period sites located in the MEA was evaluated by ARCADIS as possessing the necessary integrity or potential significance for listing on the NHRP. ARCADIS recommended that two of the historic homesteads (25DWW00242 and 25DWW00243) should be avoided by future CBR construction activities. If direct impacts would occur at either of these two properties, ARCADIS recommended that additional archival research and more intensive documentation be completed prior to any construction activities.

2.1.4 Three Crow Expansion Area

On behalf of CBR, ARCADIS completed an intensive historic and cultural resources field inventory of the 2,100-acre TCEA tract in January 2006 and reported the results in December 2007 (Späth 2007b). The field inventory of the TCEA recorded 11 historic-period sites, along with two isolated prehistoric-period artifacts and one historic-period artifact. The 11 historic sites included three artifact scatters, two farm complexes, two rural residences, two collapsed buildings, a windmill and water tank, and an isolated piece of farm machinery. The isolated artifacts included an historic fraternal medallion and two prehistoric chert flakes. None of the historic and cultural resources recorded within the TCEA project area were evaluated as being potentially eligible for listing on the NRHP.

2.2 Tribal Consultation Efforts

The Federal Government and the State of Nebraska recognize the sovereignty of federally recognized American Indian Tribes. Under NHPA Section 106, Federal agencies are required to consult and coordinate with each Tribal government that may have an interest in a proposed Federal undertaking. Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments," issued November 2000, excludes from the requirements of the order, "independent regulatory agencies, as defined in 44 U.S.C. §3502(5)." However, according to Section 8 of the order, "Independent regulatory agencies are encouraged to comply with the provisions of this order." Although the NRC is explicitly exempt from the order, the Commission remains committed to its spirit. The agency has demonstrated a commitment to achieving the order's objectives by implementing a case-by-case approach to interactions with American Indian Tribes. The NRC's case-by-case approach allows both the NRC and the Tribes to initiate outreach and communication with one another.

As part of its obligations under Section 106 of the NHPA and the regulations at Title 36 of the *Code of Federal Regulations* (36 CFR) 800.2(c)(2)(ii)(A), the NRC must provide an American Indian Tribe that attaches significance to affected properties "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects."

For the current CBR applications, the NRC formally initiated the Section 106 consultation process by contacting 21 Tribal governments by separate letter for each of the four project areas. These letters invited the Tribes to participate as consulting parties in the NHPA Section 106 process. These letters requested any known information of any areas on the project site that the Tribes believe have cultural significance. A map of the current Crow Butte license area boundary and each proposed boundary was enclosed. Following dispatch of these letters, all 21 Tribes were formally conferred consulting party status under NHPA Section 106.

In addition to the consultation letters, NRC held a Tribal information-gathering meeting for the proposed CBR project license renewal and expansion area developments at the Prairie Winds Hotel and Casino, Oglala Sioux Reservation, SD, on June 7–9, 2011 (NRC 2011a; NRC 2011b; and SC&A 2011). The meeting was attended by representatives of the Oglala Sioux, Standing Rock Sioux, Cheyenne River Sioux, Flandreau Santee Sioux, and Rosebud Sioux Tribes.

The NRC continues consultation on historic properties for the CBR projects with the Tribes listed below:

- Oglala Sioux Tribe
- Standing Rock Sioux Tribe
- Yankton Sioux Tribe
- Rosebud Sioux Tribe
- Cheyenne River Sioux Tribe
- Crow Creek Sioux Tribe
- Lower Brule Sioux Tribe
- Northern Cheyenne Tribe
- Northern Arapaho Tribe
- Eastern Shoshone Tribe
- Santee Sioux Nation
- Ponca Tribe of Nebraska
- Crow Nation
- Three Affiliated Tribes (Mandan, Hidatsa, and Arikara)
- Pawnee Nation of Oklahoma
- Assiniboine Sioux, Fort Peck Tribes
- Cheyenne and Arapaho Tribes of Oklahoma
- Kiowa Tribe of Oklahoma
- Apache Tribe of Oklahoma
- Comanche Nation
- Sisseton-Wahpeton

2.3 Tribal Field Inventory

As part of the NRC's ongoing efforts to identify historic properties of religious and cultural significance to Native American Tribes that could be affected by the CBR projects, the NRC staff sent a letter, dated October 31, 2012, offering each consulting Tribe an opportunity to participate in a field survey to identify potential places of religious and cultural significance at the proposed project sites (NRC, 2012). As part of this opportunity, Cameco Resources, the parent company of CBR, offered to open each of the four project areas for field inspection during the period November 14–December 7, 2012. To provide logistical and agency support, as needed,

a Cameco representative accompanied the Tribal crews in the field, along with either NRC or SC&A technical staff.

Some of the consulting Tribes responded that they did not have an interest in accepting the fieldwork opportunity, primarily because of distance or a lack of specific interest in the CBR project areas. Three consulting Tribes, the Standing Rock Sioux, Cheyenne River Sioux, and Yankton Sioux Tribes, objected to the NRC's offer to open the project areas for the field inventory. The objecting Tribes expressed various concerns, including a universal sentiment that the consulting Tribes had not been effectively involved in developing the scope of work for the field effort and a general feeling that the proposed level of effort, as outlined by the NRC and the applicant, would not fulfill the agency's obligations to the consulting Tribes under Section 106 of the NHPA. Other Tribes did not respond either way.

Two of the consulting Tribes, the Crow and Santee Sioux Nations, accepted the applicant's offer to visit the Crow Butte project areas during the November–December 2012 timeframe. Tribal field crews successfully completed survey of the three of the four CBR project areas for zones where they considered there was a potential for locating places of potential religious and cultural significance.²

In February 2013, the Santee Sioux Nation Tribal Historic Preservation Office (SSN THPO) provided the NRC with a written report summarizing the efforts of both the SSN and Crow Nation field survey (SSN, 2013). Table 2.2 summarizes the results of the Tribal field inventory, including management recommendations that each identified place be avoided during project operations by a radius of either 100 or 200 feet. The Tribal report recommended that none of the places identified at the CBR project areas was potentially eligible for listing on the NRHP. The sections below summarize the Tribal field efforts at each of the CBR project areas, as extracted from the Tribal report (SSN, 2013).

Table 2.2 Places of Potential Tribal Religious or Cultural Significance at the CBR Project Areas Recorded by the Crow and Santee Sioux Nations, November–December 2012

Project Area	Latitude	Longitude	Elevation (Meters)	Site Number	Name	Recommended Buffer Zone (Radius in Feet)
Marsland	██████	██████	1331.52	1	Cairn/Direction Site	100'
Marsland	██████	██████	1321.35	2	Sacred/Sundance Site	200'
Marsland	██████	██████	1331.11	3	Stone Circle/Campsite	200'
Marsland	██████	██████	1329.84	4	Stone Circle/Campsite	200'

² Access to the proposed North Trend Expansion Area was not possible at the time of the Tribal field survey. Such access would be accommodated in the future by Cameco in the event that the consulting Tribes desire to inspect the North Trend project area once the access issue is resolved.

Project Area	Latitude	Longitude	Elevation (Meters)	Site Number	Name	Recommended Buffer Zone (Radius in Feet)
Marsland	██████	██████	1331.97	5	Stone Circle/Campsite	200'
Marsland	██████	██████	1333.11	6	Stone Circle/Campsite	200'
Marsland	██████	██████	1332.38	7	Stone Circle/Campsite	200'
Marsland	██████	██████	1331.77	8	Stone Circle/Campsite	200'
Marsland	██████	██████	1328.35	9	Hearth Site	100'
Marsland	██████	██████	1336.39	10	Stone Figure/Lone Tipi Site	100'
Marsland	██████	██████	1303.73	11.	Gravesite	100'
Marsland	██████	██████	1325.22	12	Cultural/Buffalo Jump site	100'
Three Crow ^a	██████	██████	1211.16	13	Mound Site	100

^a This site was not included in the original table. GPS readings acquired during the documentation effort on July 23, 2013.

Source: SSN (2013). Modified and revised from the original table.

2.3.1 CBR License Area

Reconnaissance of the existing CBR license area by the Crow Nation field crew determined that the project area is heavily impacted by past Euro-American settlement and farming practices, CBR project mining and other activities, over the past 25 years to the extent that little or no undisturbed areas exist. By agreement between the Tribal field crews, it was determined that additional field inspection of the existing license area for potential places of religious or cultural places was not practical.

2.3.2 North Trend Expansion Area

The NTEA is situated north of the White River and north of the Town of Crawford (Figure 1.1). Due to then-existing access limitations resulting from ongoing CBR and landowner negotiations, it was not possible to conduct a field inventory at this project area during the time of the Tribal field effort. CBR and the NRC agreed to pursue a programmatic agreement that would permit Tribal access to undisturbed parts of the NTEA in the future.

2.3.3 Marsland Expansion Area

The major effort by the Tribal field crews focused on the MEA, where past industrial and agricultural disturbance impacts are much less than for the other CBR project areas. In general, this area is characterized by small early homesteads, with rangeland being dominant over farming. Because of the minimal past impacts, the Tribal crews conducted pedestrian coverage of the entire 4,621-acre tract. The Crow Nation field crew arrived at the project area initially and covered the southern part of the project area. After being joined in the field by the Santee Sioux crew, the two Tribal field crews inventoried the northern sector of the MEA together.

Of the 13 potential sites of Tribal significance identified by the Tribal field crews, 12 of them occur in the northern part of the MEA (Figure 2.1); the remaining one is at the TCEA. The MEA sites include six co-located stone circle arrangements, a stone cairn, a possible Sundance locale, a gravesite, a buffalo jump, a hearth, and a stone arrangement that could represent a single former tipi circle. Other than identifying and mapping them with a Global Positioning System (GPS) unit, the SSN THPO written report provides little additional documentation for any of these places.

2.3.4 Three Crow Expansion Area

Following departure of the Crow Nation field crew, the Santee Sioux crew spent a day inventorying select portions of the TCEA where past farming disturbances are minimal. A single location of potential Tribal significance was identified at the TCEA (Figure 2.2), an earthen mound of unknown function.

2.4 Consulting Tribes Responses to Tribal Field Inventory

In April 2013, the NRC distributed the written report of the SSN THPO to each of the consulting Tribes for the four CBR project areas. Three of the consulting Tribes provided comments on the report to the effect that the field effort and reporting by the Crow and Santee Sioux Nations was not sufficient in detail or substance to identify and evaluate potential places of religious or cultural significance to satisfy their Tribes' interests. The responding Tribes include (1) the Cheyenne River Sioux Tribe (Cheyenne River Sioux Tribe, 2013), (2) the Standing Rock Sioux Tribe (Standing Sioux Tribe, 2013), and (3) the Yankton Sioux Tribe (Yankton Sioux Tribe, 2013).

Figure 2.1, Locations of Tribal places of potential religious or cultural significance in the northern part of the MEA, contains information related to the locations of historic resources and has been redacted pursuant to 10 C.F.R. § 2.390(a)(3), the National Historic Preservation Act, Section 304 (16 U.S.C. § 470w-3(a)), and Nebraska Revised Statutes § 84-712.05(13).

Figure 2.2, Locations of Tribal places of potential religious or cultural significance in the TCEA, contains information related to the locations of historic resources and has been redacted pursuant to 10 C.F.R. § 2.390(a)(3), the National Historic Preservation Act, Section 304 (16 U.S.C. § 470w-3(a)), and Nebraska Revised Statutes § 84-712.05(13).

3 METHODOLOGY

3.1 Objectives

As noted in Section 2, the Tribal field crews identified 13 places and ascribed a designator to each that identifies a possible site function or type. All but one of these sites are located at the MEA; the remaining one is at the TCEA. The Tribal report also stated that none of the identified places was potentially eligible for the NRHP, although the normally required elements for determining eligibility were lacking in the document, such as proper identification, documentation, and a statement of contextual evaluation pertaining to potential NRHP eligibility for each site. In July 2013, the NRC asked SC&A to revisit the CBR project areas to locate and document the places identified by the two consulting Tribes. The SC&A cultural resources staff person conducting the field visit had previously participated in part of the 2012 Tribal field effort, and had further coordinated with the Tribes during preparation of their report.

Prior to entering the field, SC&A outlined the following objectives to guide the effort:

- Relocate each Tribally identified site on the ground and conduct a thorough reconnaissance of the site and immediate environs to identify possible cultural features or associated artifacts.
- Document each cultural site by completing a Nebraska State Historical Society (NSHS) Archaeological Site Survey Form (Nebraska State Historic Preservation Office, 2006), including a written description of the site and its characteristics, a scaled sketch map with boundaries noted, and photographic documentation. Should cultural artifacts be encountered in the field, they shall be recorded in situ and not collected.
- Evaluate each cultural site within the regional context, e.g. how an individual site conforms with or differs from other known or suspected sites of similar age, appearance, and function.
- Prepare a written report for the NRC that appropriately documents the overall effort and findings, to include (1) a discussion of the background and objectives of the effort, (2) a description of each site and a statement of its potential eligibility for listing on the NRHP, (3) conclusions, (4) references, and (5) appendices, as necessary, for site forms and other primary documentation.

3.2 Field Approach

Prior to the field effort, SC&A plotted the 13 places identified by the Tribal field crews using geographic information system (GIS) software on both aerial imagery and U.S. Geological Survey 7.5' topographic maps, using the GPS data recorded by the Tribal field crews (SSN, 2013). This step facilitated locating and accessing each of the 13 places. Appendices A–H include an aerial image and topographic map for each of the Tribally identified places.

The SC&A field visit occurred on July 23–25, 2013. Cameco Resources and the local CBR Operations offices provided logistical and GPS support in the field. Each place was located using a Trimble GeoExplorer 6000 series GeoXH GPS unit and temporarily marked with a pin flag. In each case, the places/features identified by the Tribal field crews were easily located

and readily identified on the landscape. Only in one instance, Tribal Site No. 6 (gravesite) (see Section 4.1.6 for discussion), was the actual place located but corresponding evidence of the possible cultural features could not be corroborated.

Following temporary marking of each place, they were, in turn, inspected by close-order transects looking for evidence of cultural artifacts or features, accompanied by a description of the place in written notes and photographic documentation, as required. The marking pin flags were removed prior to the survey team's departure from each locale.

4 FIELD DOCUMENTATION RESULTS

This section presents the findings from the July 2013 field investigation that was designed to enhance documentation of the 13 potential religious or culturally significant places identified by the Tribal field crews in the fall of 2012. Appendices A–H include location data for each of these places. For the present discussion, the 13 previously identified places are combined into eight “Tribal sites,” with Tribal Site Nos. 1–7 being located at the MEA and No. 8 at the TCEA (Table 4.1).

Table 4.1 Site Numbering Designations for Tribal Sites at the CBP Project Areas

New Tribal Site Designation as Discussed in this Report	Previous Tribal Designation (see Table 2.2)	Notes
Tribal Site 1	Stone Circles/Campsite #1–6 (Sites Nos. 3–8)	These possible features are co-located near each other on a small hilltop. If these features are cultural, they would probably represent a single past occupation of this locale.
Tribal Site 2	Direction/Cairn Site (Site No. 1)	
Tribal Site 3	Sacred/Sundance Site (Site No. 2)	
Tribal Site 4	Stone Figure/Lone Tipi Site (Site No. 10)	
Tribal Site 5	Hearth Site (Site No. 9)	
Tribal Site 6	Gravesite (Site No. 11)	
Tribal Site 7	Cultural/Buffalo Site (Site No. 12)	
Tribal Site 8	Mound Site (Site No. 13)	

4.1 Marsland Expansion Area

4.1.1 Tribal Site No. 1

Tribal Site No. 1 (Site Nos. 3–8 in the SSN THPO report (SSN 2013)) includes six somewhat undefined stone clusters scattered across a small hilltop in the [REDACTED], Township 30N, Range 51W (Figure 4.1; Appendix A). This hilltop is similar to others in the area, formed from more resistant parts of the local Arikaree Sandstone Formation that, over time, has been exposed, weathered, and disintegrated into residual soils. Sandstone cobbles of varying sizes cover all of these hilltops, the sizes depending on the amount of breakdown and decomposition.



Figure 4.1 Tribal Site No. 1. Top: Overview of area, looking south, with the pin flags representing possible feature Nos. 1–5 (No. 1 in the foreground); Bottom: Close-up of feature No. 6, looking east

Tribal Interpretation: The Tribal field crews designated six possible “stone circles” as being scattered about the hilltop. Five of these are located close together on the north-facing slope, situated about 5 meters (m) apart (Figure 4.1 - Top); the sixth feature is located about 40 m to the southwest of the cluster of five (Figure 4.1 - Bottom). The Tribal crews interpreted these to be possible stone circles, or tipi rings, indicative of a past American Indian campsite.

Additional Information: The six locales identified by the Tribal crews were located using a GPS instrument. SC&A staff confirmed the presence of identifiable scattered clusters of sandstone cobbles but found difficulty in defining any circular patterning at any of the six locales (see Figure 4.1 - Bottom). In fact, one can discern additional places on this hilltop where similar clustering of sandstone cobbles occurs. Other hilltops in the immediate vicinity were inspected and found to contain similar clusters of cobbles. These clusters appear to be a function of larger pieces of the Arikaree Sandstone weathering and disintegrating in a localized spot, thereby leaving a grouping of cobbles. From present appearances, this immediate area appears to have always been used as rangeland. Thus, there is some potential for cattle trampling to affect the distribution of cobbles.

Aside from the difficulty of precisely defining circular patterning in any of the cobble clusters, there is no corroborating cultural evidence that this particular hilltop was ever occupied by earlier American Indians. Although the area has been independently and intensively inspected three times, including the 2010–2011 ARCADIS cultural resources inventory, the 2012 Tribal inventory, and during this 2013 field visit, no cultural artifacts has been identified at this place.³

Based on these findings, SC&A interprets the possible stone cobble features comprising Tribal Site No. 1 as resulting from a natural eroding and disintegration of more resistant parts of the Arikaree Sandstone Formation, which forms the geomorphic basis for hilltop and soil formation throughout this area.

4.1.2 Tribal Site No. 2

Tribal Site No. 2 (Site No. 1 in SSN 2013) is a small (about 1.4 m in diameter), localized cluster of Arikaree sandstone cobbles situated in the [REDACTED], Township 29N, Range 51W (Figures 4.1 and 4.2; Appendix B). The stone feature is located about 220 m east from an abandoned historic homestead that was recorded as Site 25DW366 by the 2010–2011 ARCADIS inventory (Graves et al., 2011).

³ It should be mentioned at this point that previous intensive (100-percent pedestrian coverage) by both the 2010–2011 ARCADIS field crews and the 2012 Tribal field crews of the entire 4,621-acre MEA failed to locate a single prehistoric or historic American Indian artifact (e.g. stone tools or flakes). The field investigation discussed in this report only revisited the 13 specific places identified by the Tribal field crews in 2012, but intensive inspection of the ground surface at these places only confirmed the previous negative results.