

APPENDIX A5.1

CULTURAL RESOURCE SURVEY

LONE MOUNTAIN ARCHAEOLOGICAL SERVICES, INC.





RECEIVED MAR 2 5 2005

JOE SHIRLEY, JR. PRESIDENT

NAVAJO NATION

PERMIT NUMBER B05230

DATE: 03-23-05

CULTURAL RESOURCES INVENTORY PERMIT (S)

Pursuant to the authority of the Navajo Nation Cultural Resources Protection Act (CMY-19-88) Section 302, permission is hereby granted to LONE MOUNTAIN ARCHAEOLOGICAL SERVICES, INC., 2625 PENNSYLVANIA NE, SUITE 2000, ALBUQUERQUE, NEW MEXICO 87110

PURPOSE OF PERMIT: To conduct a non-collection cultural resource inventory for 125 acre parcel in parts of Section 34,35, and 3 for the Church Rock Uranium Mine, Chruch Rock, McKinley County, New Mexico

Personnel Authorized to Conduct Field Work Under the Authority of the Permit:

PERSON IN GÉNERAL CHARGE: Douglas Boggess PERSON IN DIRECT CHARGE: Douglas Boggess PROJECT MEMBERS: Douglas Boggess, Lily McCabe, Rena Martin

Permission is Granted for a Period of : March 23, 2005 thru June 22, 2005

Standard Stipulations: This permit is granted subject to the Permittee adhering to the following stipulations. Failure to conform strictly to these canditions may result in suspension or revocation of this Permit and affect the Permittee's ability to obtain similar Permits from the Navajo Nation in the future.

- A. A copy of this Permit must be in the possession of field workers at all times when they are conducting fieldwork under the authority of this Permit.
- B. The Permittee will exclusively employ Navajos for all positions, to the extent that qualified Navajos are available.
- C. This Permit is not a grant of authority.
 - (1) Prior to initiating fieldwork, the Permittee must notify chapter officials (President, Vice President, Secretary, or Chapter Project Coordinator) to familiarize them with the proposed fieldwork and the provisions of the Permit.
 - (2) The Permittee must inform any potential interviewee that he/she is not required to consent to interviews or to otherwise cooperate with the Permittee.

PERMILGRANTED, ton S. Downer

Historic Preservation Officer Navajo Nation Historic Preservation Department

HISTORIC PRESERVATION DEPARTMENT P.O. BOX 4950 WINDOW ROCK, ARIZONA 86515 928.871.6437 (v) 928.871.7886 (fax)

FRANK J. DAYISH, JI VICE-PRESIDENT .

CULTURAL RESOURCES COMPLIANCE FORM HISTORIC PRESERVATION DEPARTMENT PO BOX 4950 WINDOW ROCK, ARIZONA 86515

ROUTING: COPIES TO <u>NM</u> SHPO <u>XX</u> REAL PROPERTY MGT/330 <u>XX</u> LM NNHPD NO. <u>HPD-05-855</u> OTHER PROJECT NO.

LM 825

PROJECT TITLE: A Cultural Resources Survey of 125 Acres for the Proposed Closeout of the Northeast Church Rock Mine, McKinley County, New Mexico.

LEAD AGENCY: NRC

SPONSOR: Jed Thompson, MWH Global, PO Box 774018, Steamboat Springs, Colorado 80487

PROJECT DESCRIPTION: The proposed undertaking consists of the closeout and reclamation of the Northeast Church Rock Mine (uranium) and will include the placement of erosion control devises, regrading of the two working pads associated with two mineshafts, as well as regrading pond 2, the possible regrading of pond 3, the reclamation of roads, and the removal of structures and foundations within the project area. Erosion control will initially consist of the installation of straw hales and silt fences, follnwed by placement of rip-rap-lined diversion channels. Ground disturbance, both surface and subsurface, with heavy equipment will be extensive and intensive.

LAND STATUS: Tribal Trust

CHAPTER: Church Rock

LOCATION: NMPM d, McKinley County, New Mexico

PROJECT ARCHAEOLOGIST: Douglas H. M. Boggess and Richard Begay

NAVAJO ANTIQUITIES PERMIT NO.: B05230

DATE INSPECTED: 3/23 thru 28 & 4/29 thru 5/20/05

DATE OF REPORT: 7/11/05

TOTAL ACREAGE INSPECTED: 125.0

METHOD OF INVESTIGATION: Class III pedestrian inventory with transects spaced 15 m apart.

No

No XX

LIST OF CULTURAL RESOURCES FOUND: LIST OF ELIGIBLE PROPERTIES: LIST OF NON-ELIGIBLE PROPERTIES: LIST OF ARCHAEOLOGICAL RESOURCES:

(3) Isolated occurrences None(3) Isolated occurrences None

EFFECT/CONDITIONS OF COMPLIANCE: No historic properties affected.

Yes XX

In the event of a discovery ["discovery" means any previously unidentified or incorrectly identified cultural resources including but not limited to archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices], all operations in the immediate vicinity of the discovery must cease, and the Navajo Nation Historic Preservation Department must be notified at (520) 871-7132.

ACTING

FORM PREPARED BY: Charles Murphy FINALIZED: August 25, 2005

Notification to Proceed Recommended: Conditions:

an S. Downer

Navajo Region Approval:

Navajo Nation Historic Preservation Officer

ecto

A CULTURAL RESOURCES SURVEY OF 125 ACRES FOR THE PROPOSED CLOSE OUT OF THE NORTHEAST CHURCH ROCK MINE, MCKINLEY COUNTY, NEW MEXICO

Prepared by

Douglas H. M. Boggess, M.A. And Richard M. Begay

Prepared for

Jed Thompson MWH P.O. Box 774018 Pine Grove Road, Ste. 109 Steamboat Springs, Colorado 80487

Submitted by

Douglas H. M. Boggess, M.A. Lone Mountain Archaeological Services, Inc. 2625 Pennsylvania St. NE Suite 2000 Albuquerque, New Mexico 87110

Navajo Nation Historic Preservation Division Permit No. B05230

Lone Mountain Report No. 825

July 11, 2005

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I. HPD REI	PORT NO:	2. (FOR HPD	USE ONLY)	3. RECIPIENT'S ACCESSION NO.	
4. TITLE C	OF REPORT: A Cul	Itural Resources Su	rvey of 125 Acres	5. FIELDWORK DATES	
for the Proposed Closeout of the Northeast Church Rock Mine,			urch Rock Mine,	March 23 to May 20, 2005	
McKinley County, New Mexico Author(s): Douglas H. M. Boggess and Richard M. Begay			Begay	6. REPORT DATE July 11, 2005	
7. CONSUL	TANT NAME ANI	D ADDRESS		8. PERMIT NO. B05230	
Org. Name: I	Lone Mountain Archa	eological Services,	Inc.		
Org. Address Albuquerque	s: 2625 Pennsylvanian , NM 87110	NE, Ste. 2000		9. CONSULTANT REPORT NO. 825	
Phone: 505-8	BI-0011	DBESS		11 SPONSOR PROTECT NO	
Ind. Respons	sible: Jed Thompson	JUILESS		1004287.011801	
Jrg. Address	S: MWH Global			12. AREA OF EFFECT approx 50 AC	
1475 Dine Cu	FOID Road Sta 100			AREA SURVEYED 125 AC	
Steamboat St	nings (`() 80487			_	
Phone: 970-8	79-6260				
3. LOCATI	ION (MAP ATTAC] Fastern Navaio	HED) e. HTM	Center: Zone 12	Easting Northing	
agency. 1	Laboran Isatalo	See	introduction of re	port for summary of boundary points	
. Chapter:	Church Rock	f. Land	d Owner/User Na	me: Tribal Trust	
. County:	McKinley.	g. Area:	T R,	4 of Section N.M.P.M.	
		See	introduction of re	port for summary of legal description	
d. State: .	New Mexico	h. 7.5'	Map Name(8): }		
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ABSTRACT

On March 23 through March 28, 2005, Richard Clement and Douglas Boggess, archaeologists with Lone Mountain Archaeological Services, Inc., completed a 100 percent pedestrian survey for cultural resources of an area totaling 50.6 hectares (125 acres) on Tribal Trust lands containing the Northeast Church Rock mine, operated by the United Nuclear Corporation, in McKinley County, New Mexico. On April 29 through May 20, 2005, Richard Begay of Dinétahdóó Cultural Resources Management conducted an ethnographic study of the area. These studies were conducted under Navajo Nation Historic Preservation Division Permit No. B05230 (expiration 06/22/2005) for the proposed closeout and reclamation of mine installations. The closeout is being undertaken under the Mining Act Reclamation Program at the request of Jed Thompson of MWH.

The area surveyed consists of an area totaling 50.6 hectares (125 acres) on Tribal Trust lands located within

United States Geological Survey Quadrangle. The project area is located in the Church Rock Chapter in the Eastern Agency of the Navajo Nation, McKinley County, New Mexico.

A review of the State Register of Cultural Properties, the National Register of Historic Places, the Archeological Records Management Section of the State Historic Preservation Office and the Navajo Nation Historic Preservation Division revealed that no previously recorded sites occur within 100 meters of the project area.

The Northeast Church Rock Mine is an in-use property that dates from the 1960s to the 1980s. It has been previously disturbed by closeout procedures performed according to Nuclear Regulatory Commission regulations and does not retain sufficient integrity to be eligible for nomination to the National Register under any of the four criteria, nor does it have significance under AIRFA. Lone Mountain archaeologists recorded three isolated occurrences within the project area. Interviews with local informants indicated that a burial had been present within the project area but a field check of the location indicated that his resource is no longer present and no other Traditional Cultural Properties are present within the project area. Clearance for this undertaking is recommended. If, however, any buried cultural deposits are encountered while conducting the closeout, work should cease immediately, the Navajo Nation Historic Preservation Division should be notified, and an assessment should be made by a qualified archaeologist.

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INTRODUCTION

On March 23 through March 28, 2005, Richard Clement and Douglas Boggess, archaeologists with Lone Mountain Archaeological Services, Inc. (Lone Mountain), completed a 100 percent pedestrian survey for cultural resources of an area totaling 50.6 ha (125 ac) on Tribal Trust lands containing the Northeast Church Rock mine, operated by the United Nuclear Corporation (UNC), in McKinley County, New Mexico. On April 29 through May 20, 2005, Richard Begay of Dinétahdóó Cultural Resources Management (Dinétahdóó CRM) conducted an ethnographic study of the area. These studies were conducted under Navajo Nation Historic Preservation Division (HPD) Permit No. B05230 (expiration 06/22/2005) for the proposed closeout and reclamation of minc installations. The closeout is being undertaken under the Mining Act Reclamation Program at the request of Jed Thompson of MWH Global.

The area surveyed consists of an area totaling 50.6 hectares (125 acres) on Tribal Trust lands located within

NM (1979) 7.5-minute USGS Quadrangle. The project area is located in the Church Rock Chapter in the Eastern Agency of the Navajo Nation, McKinley County, New Mexico (Figures 1 and 2). A detailed description of the project area is provided in Table 1, including a legal description and UTM boundary points provided in a clockwise order. As Sections 34 and 35 are irregular, the template has been placed in the southwestern corner of each section.

Table 1: Description of Project Area



All work was completed in compliance with applicable Tribal, Federal, and state legislation and procedures designed to protect nonrenewable cultural resources, including the Navajo Nation Cultural Resources Protection Act, Section 106 of the National Historic Preservation Act of 1966 as amended (PL 89-665), the National Environmental Policy Act of 1969 (PL 91-852), the Archaeological Resource Protection Act of 1979 (PL 96-95), and Executive Order 11593.



Figure 1. Project Vicinity Map. Lone Mountain Archaeological Services, Inc.





Figure 2. Project Area Map Showing Locations of Cultural Resources. Lone Mountain Archaeological Services, Inc.

ENVIRONMENTAL SETTING

The Northeast Church Rock Mine is located 16 mi northeast of Gallup, NM, just north of Church Rock, New Mexico. The project area containing the mine is situated on a canyon floor, and on portions of mesa tops immediately adjacent to this canyon. The cliffs of the canyon are formed of sandstones from the Dalton Sandstone Member of the Cretaceous period Crevasse Canyon Formation. Soils within the project area are silty sands with some silts and clays. The elevation of the survey area ranges from 2,164 m to 2,210 m (7,100 ft to 7,250 ft) above mean sea level. Vegetation includes piñon, juniper, sage, cacti, Gambel oak, grasses, and forbs.

The mine property was operated by UNC under the terms of a lease with the predecessors of what is now the Newmont Gold Corporation, the current owner of the mineral estate. The operation of the mine from the 1960s through the 1980s resulted in a substantial alteration of the landscape in the form of the construction of access roads, the placement of drill holes, the construction of ponds, the construction of temporary and permanent facilities and structures, the grading and construction of working pads, and the placement of non-economic mine materials (i.e. waste rock). The closure of the mine sitc, which took place between 1986 and 1994 pursuant to relevant Nuclear Regulatory Commission regulations, also resulted in some substantial alterations of the landscape. Closure involved the backfilling and sealing of two mineshafts and their associated air vents, and the regrading, covering (with locally obtained fill), and reseeding the area used for the disposal of noneconomic mine material disposal. Access to the property is still restricted by UNC as part of the restoration process and a staff concerned with the mine is maintained. For these reasons the mine site is an in-use property.

The local area is partly developed, with a moderate amount of traffic on several nearby paved roads, and numerous dirt roads that serve several residences to the east and north of the project area.

PROPOSED UNDERTAKING

The closeout and reclamation of the Northeast Church Rock Mine will include the placement of erosion control devices, regrading of the two working pads associated with two mineshafts, as well as the regrading of Pond 2, the possible regrading of Pond 3, the reclamation of roads, and the removal of structures and foundations within the project area (MWH 2004). This will be undertaken with the goal of making the area suitable for livestock grazing and wildlife habitat.

Erosion control will initially consist of the installation of straw bales and silt fences, placed to limit flow velocities followed by the placement of riprap-lined diversion channels designed to direct runoff away from regraded and revegetated areas toward Pond 3. Although no regrading is anticipated in areas that were reclaimed in 1994, a riprap-lined channel will be placed to prevent degradation of the waste rock disposal area. All riprap will be composed of limestone obtained form a local quarry.

The working pads are associated with Northeast Church Rock Mineshaft 1 (NECR-1) and Northeast Church Rock Mineshaft 2 (NECR-2). The NECR-1 working pad is a level area covering approximately 5.5 ha (13.6 ac). The southeast portion of the pad is made of leveled sediments while the northwest portion is composed of waste rock approximately 6 m to 9 m (20 ft to 30 ft) thick. Regrading of this pad will involve the removal of structures and foundations (as discussed below),

followed by the creation of a slope between 0.5 percent and 3 percent across the surface of the pad. All headcuts and rills will be removed by regrading the embankment, and both the pad and embankment will be revegetated. The NECR-2 pad is 1.6 ha (3.9 ac) in area and is composed of leveled sediments. Foundations will be removed, and the embankment at the edge of the pad will be regraded to repair headcuts and rills. Some recontouring will take place to divert runoff into a riprap-lined diversion channel. Following this work, revegetation will take place.

There are three ponds included in the proposed undertaking. All three ponds were constructed using massive graded earthen embankments placed to trap water. Pond 1 will be discussed below. Pond 2 will be leveled by cutting into the embankment and pushing the fill into the pond depression. The surface will then be regraded to allow non-erosive runoff, and revegetated. Pond 3 at present traps water running off the property after storm events. This water will be sampled prior to reclamation. If the water is not suitable for livestock and wildlife use, the pond will be left in place to trap runoff during the closeout process, and then the embankment forming the pond will be removed and the slopes recontoured and revegetated. If the water contained in the pond proves suitable for use by animals, then the pond will be left in place, the embankment will be lowered, the existing outlet pipe will be removed, and the outlet channel will be lined with riprap.

There are many roads leading to drillhole locations and mine-related facilities on the property. These will be ripped, regraded, and associated culverts will be removed. The roadbeds will then be reseeded. MWH (2004) anticipates that no roads will be left on the property.

All existing structures and foundations will be removed and placed in Pond 1. The existing embankment forming the pond will be removed and spread across the building debris to form a cover at least 1 m (3 ft) thick. All powerlines and power poles will be removed. Following the removal of these structures, disturbed areas will be revegetated.

Revegetation, to be performed in association with all of the abovementioned tasks, will consist of planting a self-sustaining plant community made up of native grasses and forbs. It is possible that fertilizers may be used in places. Although the exact placement of erosion control devices and road reclamation activities may change (and volume of land affected by such), it is likely that the area of potential effect totals no more than 24.28 ha (60 ac) within the 50.6 ha (125 ac) covered by this survey and ethnographic study. The project area measures between 490 m and 514 m N/S by 917 m E/W

CULTURAL OVERVIEW

(By Lone Mountain's Staff)

Culture histories provide a context in which cultural resource studies in particular regions can be implemented and evaluated. Because the sequence of cultural developments and events may be spatially distinctive and temporally restricted, it is possible to categorize archaeological finds with reference to specific time periods, culture groups, and adaptive strategies. Research questions are usually tailored to these categories and are often called "periods" or "phases" when they refer to time, and are called "culture groups" when they refer to differing assemblages of material culture thought to reflect distinctive adaptations. Comprehensive culture history overviews for northwestern New Mexico have been prepared by Stuart and Gauthier (1981), Pratt and Scurlock (1990), and others. Their work provides the basis for much of the following discussion. The purposes of this overview are to outline the prehistory and history of the area and to provide an understanding of changes in settlement patterns and adaptations through time.

Paleoindian Period (ca. 10,500 to 5500 B.C.)

The earliest consistent evidence for human settlement in North America dates to approximately Despite some controversial evidence indicating a human presence in the New World 10.500 B.C. carlier than 10,500 B.C. (e.g. Hibben 1941), Anderson and Faught (2000) argue that current evidence is insufficient to describe any cultural trends prior to the appearance of the Oovis complex at around 10,500 B.C., Hayden's (1976) arguments for the Malpais pre-San Dieguito/San Dieguito material notwithstanding (Heilen 2004). These settlers that appear around 10,500 B.C. are referred to as Paleoindians, and diagnostic artifacts associated with the Paleoindian culture continue possibly as late as 5500 B.C. Paleoindian peoples are characterized as small, nomadic bands of huntergatherers who relied, at least in part, on hunting now-extinct Pleistocene megafauna, including Bison antiques and mammoth (Manutus primogenes) (Cordell 1978). Diagnostic stone tools associated with this period include end scrapers and large, unstemmed lanceolate projectile points that are often fluted (Irwin-Williams 1979). During the Paleoindian period, projectile points were attached to spears that were thrust or to darts that were propelled by atlatls (throwing sticks). A reliance on big game hunting has been established (Judge 1982), but it is unclear to what extent these people exploited other available resources such as plants and smaller game. Little evidence has been found to suggest the use of structures during this period. From a lack of evidence, it has generally been assumed that people lived a nomadic lifestyle with the use of structures apparently uncommon.

Three complexes have been identified for the Paleoindian period: Clovis, Folsom, and Plano. In general, archaeological sites are assigned to particular complexes of the Paleoindian period based on the presence of distinctive diagnostic projectile points.

The first known occupants of the New World are referred to as the Clovis people (10,500 to 9000 B.C.), named after a modern settlement located in eastern New Mexico where the first evidence of this occupation was identified (Irwin-Williams 1973b). The tool assemblage is characterized by Clovis points (bifacially worked and fluted lanceolate projectile points with a concave base), transverse end scrapers, side scrapers, bifacial knifes, gravers, perforators, and hammerstones (Cordell 1997). Although the tool assemblage diagnostic of this complex is generally related to big game hunting and processing, the rare occurrence of manos on Clovis sites suggests some plant foods were also utilized. The premier study of Paleoindian remains in this region was conducted by Judge (1973) and his associates (Judge and Dawson 1972). Judge found only two occupational loci in the Middle Rio Grande that could be ascribed to the Clovis period (ca. 9500 to 9000 B.C.). In the Albuquerque area, Clovis points are generally found in surface contexts (Crollett et al. 1995:20).

The following Paleoindian complex is referred to as the Folsom complex (9000 to 8200 B.C.). The first conclusive evidence of early humans in North America was uncovered at, and named for a type site found at Folsom, New Mexico, in the 1920s. Most Folsorn sites in this region have been found west of the Rio Grande in close association with locations near playas, lakes, and dunal ridge overlooks that may have been conducive to grazing game (Judge and Dawson 1972).

The Folsom complex exhibits technological distinctions from the Clovis complex. Diagnostic projectile points include fluted Folsom and unfluted Midland points, which are similar in outline. In addition to these points, Folsom tool assemblages include spokeshaves, end scrapers, perforators, knives, denticulates, drills, choppers, awls, and abrading stones. These artifacts are often found in association with extinct bison (Cordell 1997).

The Plano complexes are generally thought of as the terminus of the Paleoindian period. Plano is known for a number of artifact complexes (Irwin-Williams 1973a). Each complex is distinguished by a series of large, lanceolate and unfluted projectile points, including Plainview, Midland, Frederick, Agate Basin, Hell Gap, Firstview, Alberta, and Cody. Stuart and Gauthier (1984) note that the Lucy Site and Manzano Cave, both located in central New Mexico have yielded Paleoindian materials.

Archaic Period (ca. 5000 B.C. to A.D. 400)

Although Paleoindian groups probably utilized small game and plant foods in addition to large game species, a change in subsistence strategy to full reliance on these food sources marks the transition to the Archaic from the Paleoindian period. Large-scale climatic changes and the extinction of megafauna caused inhabitants to develop a more diverse subsistence base. Mobility was cyclical and more restricted in extent, compared to Paleoindian strategies. Once productive resource procurement locations were established, they were reused on a seasonal basis.

This change in food procurement is marked by wide changes in the Archaic tool assemblage. While Paleoindian assemblages consist mainly of projectile points and meat processing tools, a growing number of groundstone implements suggest a greater reliance on plant foods at this time. Archaic projectile points are shorter than those of the Paleoindian period, and larger than arrow points used during the following Ceramic period. Points of this period are generally stemmed or cornernucled, and exhibit more extensive morphological variability and less precision in the quality of manufacture than those of the Paleoindian period.

Archaic sites in the project area have been classified as belonging to the Oshara tradition, defined by Irwin-Williams (1973a) based on work conducted in the Arroyo Cuervo area west of Albuquerque. The Oshara tradition extended from ca. 5500 B.C. to about A.D. 600 and is divided into the early Archaic (Jay, Bajada, and San Jose) and late Archaic (Armijo and En Medio) periods.

Jay Phase (ca. 5500 to 4800 B.C.)

Most sites of this period are located in sheet sand deposits on cliff tops at canyon heads. The sites are located near several resource zones, and evidence suggests a full range of seasonal activities. Special-use sites are found at other locations. This period was characterized by a diversified subsistence pattern in which resources were exploited year-round from sites near the water sources.

Bajada Phase (ca. 4800 to 3200 B.C.)

The settlement pattern in this period was similar to that of the Jay phase. There are slightly more sites, suggesting that the population may have grown. There is an increase in large chopping tools, cobble-filled hearths, and earth ovens, which are associated with base camps.

San Jose Phase (ca. 3200 to 1800 B.C.)

In this period there is a noticeable increase in both the number and size of sites, especially at canyon heads. Specialized sites continued to be used. The artifact scatters at base camps are denser and more extensive than previously found, and posthole patterns have been documented, suggesting the use of temporary structures. There were important additions to the tool kit in this period, including shallow-basin grinding slabs and simple cobble manos, implying an expansion of the subsistence system to a greater reliance on seeds and nuts.

Armijo Phase (ca. 1800 to 800 B.C.)

In this period there were significant changes in technology, land use, and seasonality. Sites continued to be occupied at the canyon heads. Artifacts suggesting ritual activities are found for the first time. It is likely that Armijo phase societies were more complex than those found in the area previously. The Armijo phase is significant also for an expansion of the settlement system and the introduction of Zea mays. Maize was cultivated in limited quantities in the narrow floodplains near canyon headsprings.

En Medio Phase (ca. 800 B.C. to A.D. 400)

The En Medio phase is equivalent to Basketmaker II elsewhere in the Southwest (Kidder 1927). It is the terminal Archaic phase, and clearly demonstrates the technological and social continuity between Oshara tradition groups and subsequent Anasazi-Pueblo populations. During this time, hunting and gathering subsistence strategies lessened in favor of an agricultural economy. Major technological indicators of En Medio sites include the earliest arrow points (late in the period), increased and improved use of soft-hammer percussion and pressure flaking techniques, and an abundance of groundstone, including the first trough metates and two-hand manos (Irwin-Williams 1973a). A much higher site density is noted, both in previously occupied areas and in those localities that had been peripheral to cultural uses in earlier phases. It is inferred from this expansion in settlement patterns that populations grew during this time. Base camps at rockshelters and canyonhead cliff bases show evidence of repeated seasonal occupations.

Anasazi-Ancestral Pueblo Period (ca. A.D. 400 to A.D. 1540)

The primary cultural sequence used to discuss the Anasazi-Ancestral Pueblo cultures through much of the Southwest is referred to as the Pecos Classification (Kidder 1927). This classification divides cultures temporally and includes Basketmaker II, Basketmaker III, Pueblo I, Pueblo II, Pueblo III, and Pueblo IV. It was formulated to provide a general framework for organizing data pertaining to Southwestern prehistory. Researchers in sub-areas have developed more specific chronologies using recent data. The project area is arguably at the southern edge of the Chaco Canyon region. The Chaco Canyon synthesis provided by Vivian (1990) includes Early and Classic Bonito phases that temporally correspond with Pueblo II, and Late Bonito (A.D. 1120 to 1200) and Mesa Verde (A.D. 1200 to 1300) phases that are uniquely Chacoan. The Pecos Classification along with its equivalents specific to the Chaco area will be used primarily to discuss temporal periods in this section.

Basketmaker III (A.D. 400 to A.D. 750)

During Basketmaker III, formalized pithouse structures numbering between one and 20 semisubterranean houses are found in settlements. The structures are oval to subrectangular in outline with interior features such as antechambers, central slab-lined firepits, four roof-support posts, deflectors, and sipapus. Usually these sites are located on mesa tops overlooking arable land, although there are almost certainly others buried by alluvium on canyon or floodplain floors (Cordell 1997). There was an ever-increasing dependence on cultivated crops, with the continuation of local plant food gathering and hunting. The primary ceramic type being produced was Lino Gray, which later developed into Lino Black-on-gray when drawn patterns were applied.

Pueblo I (A.D. 750 to A.D. 920)

The shift from Basketmaker III to Pueblo I is marked by several important developments. Architectural style changes from belowground pitstructures to aboveground masonry dwellings, some with proto-kivas. Painted pottery, mostly black-on-white but also red-on-orange and blackon red, first appears during Pueblo I. The predominant ceramics are the neck-banded Kana'a Gray utilityware and the Lino plain and decorated graywares. Projectile point styles decrease in size, indicating the replacement of the atlatl by the bow and arrow. With the increased dependence on agriculture, methods such as terracing, irrigation, and gridding were used to improve crop production. There is an increase in the number of sites found in floodplains and along canyon floors, as proximity to agricultural fields becomes of primary concern.

Pueblo II/Early and Classic Bonito (A.D. 920 to A.D. 1120)

During Pueblo II, multi-story structures with adjoining round kivas are built using masonry rather than jacal construction. Tree-ring dating indicates that construction on Peñasco Blanco and Pueblo Bonito in Chaco Canyon began early in this period, although subsequent additions increased the size of these settlements dramatically. Settlements in general increased in size and complexity, suggesting a larger population and a trend toward centralization in larger villages. Ceramics are quite varied with many different types of black-on-white and polychrome pottery types that have become important in identifying the geographic region and producer of the pottery. Agriculture became even more important to the subsistence strategy of the people, and complex canals, terraced gardens, and grid systems were constructed. It was also during this time that a system of roads was built linking the Chaco Canyon settlements with outlier villages throughout the San Juan Basin.

Pueblo III/Late Bonito and Mesa Verde (A.D. 1120 to A.D. 1300)

Pueblo III is a period of decreased population and increased abandonment of individual and small sites in the Central San Juan Basin. Many theories have been put forth to explain this phenomenon, including salinization of soil from irrigation, poor crop yields, factionalism, and disease. What is even more puzzling is the abandonment of large districts, which have no satisfactory explanation in the archaeological record to date. For whatever reason, towns began to decline, and imported ceramic types became dominant. The few new settlements from this period are found on mesa tops and in cave settings as well as canyon floors. Changes in burial patterns and introduced Mesa Verde Black-on-white and St. John's Polychrome ceramics suggest economic and cultural interaction with Mesa Verde peoples to the north (Toll et al. 1980). By the end of this period, the spectacular towns of Chaco Canyon and most of its outlier villages were abandoned.

Pueblo IV/Early Athapaskan (A.D. 1300 to A.D. 1540)

Most pueblo sites in the project area had been abandoned by the early 1300s, with only marginal use of the southern and eastern San Juan Basin boundaries. Most of the area was utilized only occasionally by hunters, gatherers, and traders who camped briefly as they were passing through the basin. The Gibola-Tiguex Trail, a major prehistoric trade route, extended eastward from Zuni area villages, connecting them to the pueblos of the Rio Grande, Galisteo Basin, and Pecos areas. Other trade routes were established to the north, south, and west, bringing exotic goods from as far away as central Mexico and the Pacific.

As detailed by Pratt and Scurlock (1990), the first Athapaskans, or ancestral Navajos and Apaches, may have entered the project area as early as A.D. 1000, but a more widely accepted view is that they arrived sometime during the mid-1400s. They may have migrated from the Great Plains and the Rocky Mountains. The Navajo were nomadic bison hunters who built forked-pole hogans covered with skins and made grayware ceramics that had a distinctive pointed bottom. They moved into areas previously occupied by pueblo tribes and may have adopted the horticulture of corn, beans, and squash from the puebloans. Hunting was also a very important means of subsistence with seasonal communal hunts of pronghorn and bison.

Historic Period (A.D. 1540 to A.D. 1955)

The first Spanish explorations into the project area did not occur until 1583 when contact was made with the Acoma and Zuni Pueblos and with the Navajo to the north. The Navajo resented Spanish intrusion into their territory and resisted by raiding the Pueblos and Spanish missions. A mission was established at Jemez Pueblo in the early 1600s, and by 1624 the Jemez peoples had abandoned their villages. Soon thereafter, a mission was established in Navajo country, but following an attempt on the life of the one friar who stayed at the mission, the Spanish gave up all attempts to convert the Navajo in 1629. Hostilities continued in the form of slave trading of captive Navajos by the Spanish, and raiding of the Spanish by the Navajo. These early raids precipitated a shift in the Navajo economy as Spanish livestock, notably horses, sheep, and goats, were incorporated into the Navajo lifestyle.

Encouraged by the Navajo, the Rio Grande Pueblos revolted against Spanish control in 1680. The reconquest of Santa Fe and the submission of the Pueblos in 1693 angered many villagers, many of whom subsequently joined the Navajo. In 1704 the Spanish resumed official military action against the raiding Navajo. By 1709, a period of relative peace began, which lasted for 50 years. This was brought on mostly by droughts and attacks by Ute and Comanche raiders on Navajo, puebloans, and Spaniards alike.

Beginning in 1753, Spanish settlers were awarded land grants that encroached on the lands being used by the Navajo for hunting and grazing. The Spanish instigated war between the Utes and Navajos as a means of gaining control in the area. The Navajo retaliated by attacking Spanish settlements from San Mateo to Nacimiento, driving the Spanish settlers from the area. A cycle of drought, raiding, land grant occupation, and military action continued until 1805 when a peace treaty was signed between the Navajo and the Spanish. The Navajo were granted land rights from the Canyon de Juan Tafoya, Rio del Oso, and San Mateo to the San Juan River.

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The Spanish government soon violated the treaty by allowing Spanish settlers to move into areas assigned to the Navajo. The Navajo resumed raiding in 1818, but suffering from droughts, loss of livestock and grazing lands, and military assaults, they split into two factions in 1819. One band agreed to submit to Spanish authority, and was compelled to move to the Jemez area. Other Navajos retreated to the Beautiful Mountain (Sierra de Cayetano) and Big Bead Mesa-Cebolleta Mountain areas, where they joined with the Ute in preparation for an all-out war with the Spaniards. Two Spanish attacks left the Navajo and their allies weakened and geographically scattered, leading to another peace treaty in 1819.

An uneasy coexistence was maintained until Mexico's declaration of independence from Spain in 1821. That same year, the first officially sanctioned Anglo-American traders moved west along the Santa Fe Trail. This opened up the area to increasing interest from the United States as westward expansion continued. However, relations between the Mexican government and the Navajos continued much as before, with cycles of drought, raids, retaliation, and temporary treaties. In 1848 a treaty was signed between the U.S. and the Republic of Mexico giving the territory of New Mexico to the United States. Several military campaigns finally ended in placing the Navajo and Ute on reservations. The U.S. military was also responsible for the mapping and exploration of the new territory for natural resources and settlement.

A military presence was established in the San Juan Basin as a buffer between the Navajos and the Rio Grande settlements. One fort was built at Cebolleta in 1850, and another, Fort Defiance, was placed in Navajo country at Cañon Bonito a year later. Tensions grew between the Navajo and the fort personnel over the use of resources, especially grazing land. Grass from outlying areas was cut to support the fort's livestock, and high-quality coal was soon discovered. A bloody confrontation in 1858 led to yet another treaty, but intermittent hostilities eventually led to the establishment of Fort Fauntleroy at Ojo del Oso in 1860. This settlement would be renamed Fort Lyon after the defection of Colonel Fauntleroy to the Confederacy. The fort was mostly abandoned during the Givil War, but in 1868, the remaining garrison and additional troops were moved to the newly built Fort Wingate in its present-day location near Gallup.

The establishment of Fort Fauntleroy begins a dark chapter in Navajo history. Relentless military campaigns were launched to force the Navajo into submission. Hispanic slave raiders and ongoing drought and famine also contributed to the eventual surrender of thousands of Navajos in the winter of 1863 to 1864. They were marched to Fort Sumner on the Pecos River, where they were installed in the newly created Bosque Redondo Reservation and forcibly persuaded to adopt an agricultural, sedentary lifestyle. After four years of living in exile at the woefully inadequate and problem-ridden reservation, the Navajo were allowed to return to their homeland in 1868. The treaty that established the still-extant Navajo Reservation brought schools, a semi-successful attempt to allot tracts of land for farming, and an agent to ensure that the interests of the U.S. Government were being furthered. In spite of these attempts, the Navajo never fully accepted the agricultural lifestyle that the government relentlessly insisted on, preferring still to herd sheep and goats and cultivate their small patches of corn, beans, squash, and melons.

A few explorers, prospectors, and ranchers settled in the San Juan Basin between 1860 and 1880, but the railroad opened the area up to large-scale expansion. The town of Gallup began as a single saloon next to a tiny station that served the Overland Mail, Pony Express, and Wells Fargo. Coal companies were first established in the Gallup area in 1880, and the railroad followed soon thereafter. By 1882, the town (named for Atlantic and Pacific Railroad's paymaster, David Gallup)

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was at the end of the track, and the inter-relating industries of coal and rail brought on rapid Euro-American population growth (Fugate and Fugate 1989). As many as 57 operating mines were located within 5 miles of the town between the late 1800s to early 1900s. With the increased growth, McKinley County was established in 1899 with Gallup as the county seat. Fort Wingate was deactivated in 1911, but briefly reopened between 1912 and 1918 to house 4,000 Mexican refugees from Poncho Villa's revolution. In 1918 the U.S. Army Ordnance Department took over the fort for munitions storage; it still serves in that capacity (Fugate and Fugate 1989).

During this time, several trading posts were established on the Navajo reservation and in the surrounding area, leading to a brisk trade in raw wool, woven blankets, jewelry, and other dry goods. Accompanied by enforced schooling of children at one of several government or mission-run schools, this precipitated a shift from the traditional subsistence lifestyle of the Navajo toward a more commercial economy. Unfortunately, this left the Navajos as vulnerable as their Euro-American counterparts during the Great Depression, and low wool prices and the harsh winter of 1931 to 1932 took their toll throughout the Navajo Reservation as well as the rest of the country.

World War II brought a resurgence to the local economy, as McKinley County residents were called upon not only to serve in the ranks of the enlisted, but also to work on war-related construction projects. Large numbers of Navajos were involved in the war effort, with as many as 1,500 employed in building the ordnance facilities at Fort Wingate. Navajo workers were housed at a railroad siding near Route 66, 5 mi south of the Springstead Trading Post (established in the 1930s), and following the end of the war, this new settlement, the community of Church Rock, was deeded to the Navajo Nation and serves as a dormitory community for Gallup (Linford 2000).

Mining and railroads continued as the driving force behind the Gallup area's economy until after World War II. Then, as the United States moved toward a heavier reliance on oil, the coalmines were closed. Railroads declined due to the burgeoning popularity and accessibility of automobile and air travel, and the economy of McKinley County had to change with the times. Since the beginning of the American "car culture" in the 1920s, travelers had stopped to experience a bit of the legendary frontier west and unique Native American culture. The town now capitalized on that fascination, and began advertising itself as the "Heart of Indian Country." The annual Inter-Tribal Indian Ceremonial and similar events drew all manner of tourists and onlookers, including Hollywood. More than a dozen motion pictures were filmed in and around Gallup during the middle part of the twentieth century, increasing its reputation as a tourist destination. Other economic factors have helped keep Gallup growing, including the resurgence of coal mining in the 1960s, the discovery of uranium in the San Juan Basin, and a local brick-making industry (Fugate and Fugate 1989).

U.S. Route 66 helped funnel through Gallup a steady stream of sightseers, adventurers, dustbowl refugees, and restless writers in search of the American dream. Other towns along the route of Steinbeck's "mother road" have been all but abandoned in the years since the construction of Interstate 40, but the old highway still forms a main thoroughfare of downtown Gallup. Hotels, motor courts, trading posts, restaurants, and gas stations line the road, ranging from the earliest turn-of-the-century brick buildings to the most recent fast-food chains. The intermingling of the distant and recent past in and around Gallup presents a unique challenge to cultural resource managers.

Cultural Overview

The project area is located in the Church Rock Chapter of the Navajo Nation. The name refers to a sandstone formation at the south edge of the chapter that vaguely resembles a church. The sandstone formation is known as Tsé 'Ii'áhí (Standing Rock). The Navajo name for the chapter is Kinhitsoh sinilí, often translated as "Group of Yellow Houses" (Rodgers 2003:419; see also Wilson 1994:14 for a variation on the translation). The name likely refers to a cluster of houses once known as Indian Village constructed during the World War II era near the intersection of old US Route 66 and NM Route 566. A modem housing development has replaced the old housing tract.

Two Council Delegates represent the chapter on the Navajo Nation Council in Window Rock, Arizona. The chapter is located in the Eastern Agency of the Navajo Nation. Agencies are administrative units of the Navajo Nation and the Bureau of Indian Affairs. The day-to-day operations are handled by a Community Services Coordinator ("Chapter Coordinator"). The chapter membership decides on chapter policies and decisions affecting the community at monthly chapter meetings. The central Navajo Nation government in Window Rock provides oversight of the chapter's operations.

The chapter is located adjacent to the city of Gallup, whose 2003 estimated population was 19,868 (<u>www.census.gov</u>, accessed 5/6/2005). Many of the employed chapter residents work in and around Gallup. Most of the chapter's school-age children attend Gallup-McKinley County Schools or the Bureau of Indian Affairs schools in Gallup, Church Rock, or nearby Fort Wingate. Elementary school students (grades 1-8) make up 55.0% (n=699) of the total school enrollment in the community. High school students (grades 9–12) make up 20.3% (n=258) of the enrolled students. College students number 167, or 13.1% (information compiled from Rodgers 2003:421). Nursery school, preschool, and kindergarten students make up the rest of the school enrollments.

Mineral resources in the area include coal and uranium. Baars (1995:179) reports that discovery of uranium in the Church Rock area in 1962 by the Pinon-Sabre Corporation and 1966 by Kerr-McGee led to competitive bid leases by the Navajo Nation. United Nuclear's Church Rock Mine began operations in the 1960s. The production of uranium on these leases was part of a larger San Juan Basin trend. Many Navajos worked in these mines.

The Church Rock Chapter has actively pursued housing, utilities, and economic development projects. The chapter comprises 21,335 ha (52,719 ac) (Rodgers 2003:419). The community boasts an elementary school, a Head Start (preschool) center, several churches, a chapter house, a convenience store/gas station, a senior citizens center, and several housing developments. Many of the Navajo Nation offices provide services within the community. The community is served by two paved roads, NM 566 and US 66. Interstate 40 bypasses the community and is accessible only at Gallup and Iyanbito (east of Church Rock). Many community members obtain medical services in Gallup and Fort Wingate through the Indian Health Service.

The chapter has a population of 2,802 with a median age of 23.6; 97 percent of the population is Native American. Approximately 10 percent have some type of college degree. Of the portion of the population that is 16 years and over (n=1,781), 55.4 percent (987) are in the labor force. 42.7 percent (761) are employed, and 22.9 percent are unemployed. The average travel time to work

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exceeds 31 minutes. In 1999, 42.9 percent of the families in the chapter were living in poverty (information compiled from Rodgers 2003:421).

Many of the community members still raise livestock. On the reservation proper, exclusive of the Eastern Agency, the Navajo Nation has more than 4,169 livestock permittees (to own and graze livestock on the Navajo Nation, a person must have a permit issued by the Bureau of Indian Affairs). In 2003 sheep, goats, cattle, horses, llamas, and alpacas numbered about 108,639 across the reservation. The predominant species is sheep, followed by cattle and goats (information compiled from the Navajo Nation Department of Agriculture's 2003 Livestock and Permittee Report). Although the 2003 report excludes the Eastern Agency, we can expect the pattern to hold in the community of Church Rock. Livestock still plays an important role in the lives of Navajo people.

METHODS

This section describes the methods used for the prefield investigation, survey, and ethnography as well as the types of cultural resources that were anticipated in the project area.

Prefield Investigation

Prior to entering the field, a site files review was conducted of the HPD site records, the State Register of Cultural Properties, the National Register of Historic Places (NRHP), and the Archeological Records Management Section (ARMS) of the Museum of New Mexico to determine if previously recorded cultural resources and previously conducted surveys are located in or near the project area. The files check located no known sites located within 100 m of the project area radius, with no previously recorded sites falling within the project boundary. A review of the confidential Sacred Places Database at the HPD offices in Window Rock on April 29, 2005, revealed no sacred places within or immediately adjacent to the project area.

However, in reviewing the database, it is clear that this general area is important in Navajo ceremony and culture. Specific ceremonics that have history and offering locales in the area include Hózhóójí (Blessingway) and Tl'éejí (Nightway). Undoubtedly, the area figures in many more, unrecorded ceremonial traditions. The database also refers to the general area as a route for the Western Water clans' return to Navajo lands, and it suggests the area as a possible route for certain ceremonial progenitors between Jemez Pueblo and Walpi on the Hopi mesas. The database also hints of an early (eighteenth-century) Navajo habitation in the area.

Many of the important places mentioned in the Sacred Places Database and referred to in ceremonial repertoires are natural features (hills, springs, mesas, mountains, flora and fauna) and, in many instances, prehistoric sites. Many archaeological sites are important in Navajo history, traditions, clan origins, and the development and practice of ceremony and rituals.

A review of HPD's Cultural Resources Compliance Section files revealed that four sizeable projects have been conducted near the present project area. The present project area has not been the subject of any known Traditional Cultural Property (TCP) study. Each of the four projects provides archaeological information, although one is primarily focused on ethnographic research.

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OCA, the Office of Contract Archeology at the University of New Mexico, conducted an archaeological survey, tested certain sites, and collected ethnographic information for the Transwestern Pipeline expansion project (Winter 1989). It is unclear if OCA attempted to collect ethnographic information on sacred places or burials within or adjacent to the current project area, as the file at HPD does not contain any information to that regard. Ethnographic information may have been gathered only for the archaeological sites identified during the archaeological survey. In any case, there is no information regarding TCPs that might have been identified during the course of this project HPD's files. The pipeline is located about 0.5 mi east of the current project.

Yazzie (2000:12) conducted ethnographic interviews with community residents to identify TCPs in his waterline and scattered homes project but provides no information from his interviews and does not identify any TCPs or areas of traditional concern. The subsequent phases of this project also do not provide any information on TCPs.

Higgins and others (2003) also conducted work for the Transwestern pipeline project and identified some sacred places, such as eagle gathering areas, and also hurials. None of the identified resources is in the vicinity of the project area.

Although the records indicated that a project numbered 76-213 had taken place in the area, no file for project 76-213 was found at HPD. No other information was located for this project number, and it is doubtful that the project would have any information on sacred places as it was not standard practice to collect information on TCPs in the 1970s.

Van Valkenburgh (1974) does not identify any TCPs within or in the immediate vicinity of the project area. The nearest identified resource is Church Rock, Tsé 'Íi'áhí, several miles south of the project area. The sandstone pinnacle has ceremonial significance in a Holyway ceremony (see also Linford 2000:193).

Survey Methods

A two person crew composed of Richard Clement and Douglas Boggess, surveyed the project area by walking parallel 15-m (50-ft) wide transects across the project area. Transect edges were located and followed using a GPS. The survey was completed on March 28, 2005.

When cultural remains that are not in-use are encountered, a determination is made as to whether they were an isolated occurrence or a site. Lone Mountain employed definitions supplied by HPD. A low-density artifact scatter including fewer than 10 artifacts per 10 sq m or no more than two classes of artifacts or two raw materials/types with no other artifacts were classified as isolated occurrences. A site might therefore be three classes of artifacts, artifacts of at least two different raw materials or types in association with a second class of artifact, and any features (i.e., anything that does not meet HPD's isolated occurrence definition). Isolated occurrences are recorded in the field on an isolated occurrence form and their locations are plotted on the USGS quadrangle.

Site Definition

For this survey, sites were defined in accordance with the guidelines established by HPD. Cultural resource sites are extremely variable in size, and may range from a cluster of several objects or

materials to structures with associated objects and features. A site may consist of secondarily deposited cultural resource remains or may consist of a single feature. Features such as hearths, cairns, rock alignments, masonry concentrations, burned adobe, fire-cracked rock (when it appears as a coherent mass suggesting a feature), cists, rock art, etc. are recorded as sites. Locations containing more than 10 artifacts per 10 sq m, two artifact types/raw materials and an additional artifact class, or three artifact classes are considered sites. When sites are first encountered while walking transects, they are assigned a temporary field number and later registered with HPD to receive a Navajo Nation site number. In accordance with HPD guidelines, TCP's are not registered as archaeological sites.

Site Recording

When sites are encountered, artifacts and features are marked and site boundaries are determined by the distribution of these marked cultural materials. After a site is delineated, the site boundary is marked using brightly colored flagging tape. A sketch map is drawn, and the site location is plotted on the appropriate USGS quadrangle. Artifact forms are used to record flaked-stone, ceramics, groundstone, and historic artifacts. The location of the cultural property is then plotted on the appropriate USGS quadrangle. GPS readings are taken to verify the accuracy of the field plot and are taken from a datum point located on each sketch map.

Photographs are taken showing the setting of the site and any unique or representative features. A representative sample of artifacts from each site is recorded using Lone Mountain artifact analysis forms. Drawings of diagnostic or representative formal user made. Trowel tests are excavated in locations most likely to reveal subsurface cultural deposits such as features, a criterion used to determine National Register eligibility. In addition to trowel tests, examinations of rodent burrows, road cuts, drainages, and other disturbed locations are employed to determine if subsurface cultural deposits were present. Buried charcoal, ash, artifacts, burned caliche, or buried cultural strata constitute subsurface cultural materials.

Evaluation and Eligibility

Sites are further evaluated as to their National Register eligibility status. The key criterion is the potential of the site to contain additional data, typically in the form of buried cultural deposits, though additional ethnographic data may also be available. On each site, the possibility of buried cultural deposits was assessed by a variety of means. Observations are noted regarding the likelihood of buried cultural deposits based on several characteristics. For example, indications of potential site depth include stratigraphic soil profiles exposed along road cuts and arroyos or cultural materials in the back-dirt piles of rodent burrows. However, even a deflated site may be considered eligible for nomination to the National Register, especially if more than 100 artifacts are present.

Ethnographic Field Methods

The project location was verified on May 02, 2005, and contact was made with Ms. Doreen Brown, Administrative Assistant with UNC. After the project area was located, the ethnographer (Richard Begay) drove around in the area surrounding the mine to search for residents to interview. Contact was made with four nearby residences in an effort to obtain names of people who would be knowledgeable about the project area. Interviews were conducted with two of the nearby residents. With the exception of the contact at the chapter house, interviews were conducted primarily in Navajo.

Church Rock Chapter officials were also contacted. Mr. Edward R. Carlisle, Chapter Coordinator, was contacted on May 02, 2005, to formally notify the chapter of the ethnographic fieldwork, to obtain names of local knowledgeable residents, and to consult with him about possible TCPs within or near the project area. Mr. Carlisle was asked for recommendations for potential community members to interview. He was not able to supply any names during three separate contacts (twice in person and one telephone call).

Ms. Doreen Brown was also contacted on May 02, 2005, to verify the location of the project area and to make arrangements to access the project area with potential interviewees if needed. Although the project area is bordered by the Coyote Canyon Chapter to the north, no formal contact was made with that chapter; however, residents living in that chapter in close proximity to the project were contacted.

Six community members were interviewed about possible sacred places within or near the project area. Each of the community consultants was asked if they knew of any sacred places, such as offering places, plant gathering areas, ceremonial-ritual activity places, or cairns, within or in close proximity to the project area. Three were members of Church Rock Chapter, one was a member of the nearby Mariano Lake Chapter, and the other two were from Coyote Canyon Chapter.

One community member, YN, is a lifelong resident of the area (he is in his early 60s) and is very familiar with Navajo ceremony. He used to live in the project area before his family was removed prior to mine operations and the establishment of associated facilities. In addition to his practice of many minor rituals, YN's grandfather was a singer of two major Navajo ceremonials: Na'at'oyee ba'áádjí (female version of the Shootingway) and Hóchxó'íjí (Evilway). YN currently lives south of the project area. He was an employee of UNC when the mine was in operation, so he is very familiar with the project area. YN volunteered to take a field trip with Mr. Begay to point out relevant ceremonial areas and burials. The field trip took place on May 11, 2005.

CS (mid 60s) is a member of Mariano Lake Chapter and is a longtime assistant ('akéé naagháii) to a well respected Nightway (Tl'ééji) and Blessingway (Hózhóójó) ceremonial practitioner, otherwise known as a hataalii. He was interviewed because the general area is important to the Nightway ceremony according to HPD's Sacred Places Database. He referred me to a potential interviewee (BA), but two attempts to contact BA were not successful.

BP is a resident near the project area; in fact he lives at the mouth of the canyon where the project area is situated. He is about 50 years old and has been living there since he was a child. He is the caretaker of his family's livestock and oversees the safety of his family's homes and property. His mother and his siblings are lifetime residents of the area. An attempt to interview the mother was discouraged by BP because of her age and health. BP's family use area is within the Coyote Canyon Chapter area.

KL is a lifetime resident of the Church Rock Chapter, is in his mid-40s, and is very familiar with the families in the general area. He was contacted after the initial interviews and he referred me back to BP's mother and YN; he was interviewed by phone. He lives south of the project area.

JM (early 70s) and LV (30s) were interviewed on May 20, 2005. LV, who lives south of the project area, did not know of any cultural resources in the project area and referred me to her uncle, who was not at home. JM did not know of any resources in or near the project area and referred me to BP's mother. JM lives northeast of the project area, in the Coyote Canyon Chapter.

RESULTS

As discussed above, a review of the HPD site records, the State Register of Cultural Properties, the National Register of Historic Places, and ARMS, revealed that no previously recorded sites occur within the project area or within 100 m of the project area (see Table 2). Lone Mountain archaeologists recorded three isolated occurrences. Richard Begay identified two burials, only one of which was identified as having been within the project area, four TCPs located in the vicinity of the project area, place names, and plant gathering areas.

Isolated Occurrences

Three isolated occurrences were found in the project area. The locations of the isolated occurrences were recorded using a Garmin GPS-76S global positioning system. The location of these isolated occurrences are plotted on Figure 2, and details are listed in Table 2.

Table 2: Isolated Occurrences

IO No.	NAD27 UTM Coordinates (Zone 12)	Description
1		Neckbanded grayware jar sherd; grayware body jar sherd, both 4 mm thick, on gravel bar on top of cliff edge, likely from single pot break
2		Gallup Black-on-white bowl sherd (A.D. 1000 to A.D. 1150)(Lucius and Breternitz 1992), 4 mm thick, in drill hole access road bed.
3		Grayware sherd, indeterminate form, 4.5 mm thick

Ethnographic Results

Two interviewees provided information about two burials and cultural resources in the general area. These resources include four sacred areas, plant gathering locations, and place names. With the exception of one burial, all the resources are outside the project area, and the identified culturally significant plants may be found outside the project area. In keeping with HPD guidelines, descriptions and locational data concerning the burials and sacred areas (TCPs) are included in a confidential appendix (A).

The graves have been completely destroyed by the mining activities. The individuals interred at these two locations were most likely originally buried with funerary items that have also been destroyed. The two individuals would most likely have been interred by their survivors according to the prevailing Navajo customs of the time. See Ward (1978 and 1980) for a discussion of historic Navajo burial practices.

Place Names

Names of places are important for orienting people on their landscape and may contain important clues to historical events, sacred places, or land use practices. Seven places names were identified in the vicinity of the project area (See Figure 2).

1. Bighaa da'askaani [Mesa on the Summit] (no known English name). Location:

2. Lee'siyini [Buried in Earth] (Ram Mesa). Location:

3. Lee'siyini chili [Buried in Earth-Small] (No English name). Location:

4. Líí' ha'atiin [Horse Trail Up] (no known English name). Location:

5. Ní dóók'aalí [Burning to Ground] (no known English name). Location:

6. Lee'siyini bito [Buried-in-Earth Spring] (no known English name for this unidentified spring on east end of Ram Mesa). Location: (see location of #2 Lee'siyini on Figure 2).

7. Lichii deez'a [Red Point] (no known English name). Location: (unplatted, projected from (unplatted)). BP also identifies this area as "Four Meadows," a reference to the meadows that converge here.

Plant Gathering

YN identified the general area, including the project area, as a place to gather plants for ceremonial, ritual, or practical use. According to him, most of the plants gathered in this area belong to the general category of 'Iináájí (Lifeway) ceremonies. Some of the plants he specifically mentioned as being located within and around the project area include *tsá'ázi*, all yucca species; *chi'il bilatah daaltsoi*, certain yellow composites—specifically, bitterweed (*nt'éshjaa' yilkee'e*); and *le'azee'*, wild buckwheat. These plants have ceremonial associations and also have some practical uses. Other plants observed in the immediate area that have cultural significance include cliffrose, *awééts'áák*; juniper (all species), *gad*; and pinyon, *chá'ol*.

A comprehensive list of plants and their uses was not undertaken because the plants observed and identified are common throughout the valleys and mesas surrounding the project area. Many of the plants are identified and their uses are discussed in Mayes and Lacy (1989), Mayes and Rominger (1994), Dunmire and Tierney (1995), and Begay and Begay (2003). Many common plants are also used for dying wool and other textile fibers, as discussed in Young (1978).

CONCLUSIONS AND RECOMMENDATIONS

The Northeast Church Rock Mine is an in-use property that dates from the 1960s to the 1980s. It has been previously disturbed by closeout procedures performed according to Nuclear Regulatory Commission regulations and does not retain sufficient integrity to be eligible for nomination to the

National Register under any of the four criteria, nor does it appear to have significance under AIRFA.

The isolated occurrences encountered during the survey have been completely recorded in a manner consistent with current standards and do not require any additional work. An ethnographic study of the area has indicated that there are no traditional cultural properties within the 50.59 ha (125 ac) project area. All sacred places discussed in this report are well away from the project area, and will not be impacted by the proposed action. The two burials identified, as described in the confidential appendix (A), have been completely destroyed and warrant no further recordation or protection. Access to what is now the Northeast Churchrock Mine project area has been restricted since the 1960s and any sacred places (offering areas, resource collection areas) would bave most likely been destroyed or altered in a way that they are no longer useable. All sacred places identified by community members during the course of this project are well away from the project area, and will not be impacted by the proposed action.

Cultural resources clearance is therefore recommended for this undertaking, with the proviso that should any inadvertent discovery of buried cultural resources take place during the proposed work, all work should cease immediately at that location, HPD should be informed, and an assessment should be made by a qualified archaeologist.

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APPENDIX A: CONFIDENTIAL MATERIALS



APPENDIX A5.2

CULTURAL RESOURCE SURVEY

DINETAHDOO

CULTURAL RESOURCES COMPLIANCE FORM HISTORIC PRESERVATION DEPARTMENT PO BOX 4950 WINDOW ROCK, ARIZONA 86515

ROUTING:	COPIES TO
NM	SHPO
	REAL PROPERTY MGT/330
XX	DCRM

NNHPD NO. HPD-09-454 OTHER PROJECT NO.

DCRM 2009-25

PROJECT TITLE: A Cultural Resources Inventory of 68.87 Acres of Proposed Reclamation North of the Church Rock Mine, **McKinley County, New Mexico**

LEAD AGENCY: BIA/NR

SPONSOR: Jed Thompson, MWH P.O. Box 774018 Pine Grove Road, Ste. 109 Steamboat Springs, Colorado 80487

PROJECT DESCRIPTION: The proposed undertaking will involve the removal of surface soils from one area, which will be transported off-site, and soil will be replaced in the excavated area within the 68.87 acre lease area. Ground disturbance will be extensive and intensive.

LAND STATUS: Navajo Tribal Trust CHAPTER: Church Rock LOCATION: T.17N, R.16W; Unplatted; Hard Ground Flats Quadrangle; McKinley County, New Mexico; NMPM

PROJECT ARCHAEOLOGIST: Rena Martin and Richard Begay NAVAJO ANTIQUITIES PERMIT NO .: 809270

DATE INSPECTED: 5/4/09 and 5/5/09 DATE OF REPORT: 5/15/09 TOTAL ACREAGE INSPECTED: 68.87

METHOD OF INVESTIGATION: Class III pedestrian inventory with transects spaced 15 m apart.

LIST OF CULTURAL RESOURCES FOUND:

LIST OF ELIGIBLE PROPERTIES: LIST OF NON-ELIGIBLE PROPERTIES: LIST OF ARCHAEOLOGICAL RESOURCES: (1) Site NM-Q-20-48, (7) Isolated Occurrences (IO), and (2) In-Use Areas (IUA) and (1) Traditional Cultural Property (TCP) None (1) NM-Q-20-48, (7) IO and (2) IUA and (1) TCP None

EFFECT/CONDITIONS OF COMPLIANCE: No historic properties affected, with the following conditions:

TCP:

1) All construction within 50 ft of the TCP must be flagged and monitored by a gualified archaeologist prior to any activity.

In the event of a discovery ["discovery" means any previously unidentified or incorrectly identified cultural resources including but not limited to archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices], all operations in the immediate vicinity of the discovery must cease, and the Navajo Nation Historic Preservation Department must be notified at (928) 871-7148.

FORM PREPARED BY: Ettie Anderson FINALIZED: May 27, 2009

Notification to Proceed Recommended: Conditions:

Yes XX No Yes XX No

Alan S. Downer

Navajo Nation Historic Preservation Officer

Navajo Region Approval: m 6/9/09

No_

ACTING

Regional Director

Dinétahdóó Cultural Resources Management

P.O. Box 2012 · Farmington, New Mexico 87499 Telephone 505-598-9478 · Fax 505-598-9485 · <u>Dinetahdoo@yahoo.com</u>

May 21, 2009

Mr. Jed Thompson, Engineer MWH P.O. Box 774018 Pine Grove Road, Ste. 109 Steamboat Springs, Colorado 80487

RE: Submission of Report—DCRM 2009-25, A Cultural Resources Inventory of 68.87 Acres of Proposed Reclamation North of the Church Rock Mine, McKinley County, New Mexico.

Dear Mr. Thompson,

Enclosed is your copy of the above mentioned report describing the completion of the cultural resources inventory on contaminated lands north of the Church Rock Mine, Navajo Reservation. The report has been submitted to the Navajo Nation Historic Preservation Department (NNHPD) for compliance review. Remember they have a 30 day review period. You will hear directly from NNHPD once a determination of effect has been made.

We identified one Traditional Cultural Property (TCP 1), one Anasazi site, two In-use sites, and 7 isolated occurrences during our survey. Avoidance is recommended for TCP 1 and of course the In-use sites.

Please call me at 505-598-9478 if you have any concern regarding this project.

Sincerely, Pera Mar

Rena Martin, Archaeologist

2009-160 Project files

A Cultural Resources Inventory of 68.87 Acres of Proposed Reclamation North Of the Church Rock Mine, McKinley County, New Mexico.

Prepared by Rena Martin, Archaeologist and Richard Begay, Anthropologist

DCRM 2009:25 HPD Permit No. 9270

May 15, 2009

Submitted by Rena Martin, Anthropologist/Archaeologist Dinétahdóó Cultural Resources Management P.O. Box 2012 Farmington, New Mexico 87499

Submitted to Navajo Nation Historic Preservation Department Cultural Resources Compliance Section P.O. Box 4950 Window Rock, Arizona 86515

> Prepared for Jed Thompson, Engineer MWH P.O. Box 774018 Pine Grove Road, Ste. 109 Steamboat Springs, Colorado 80487

Abstract

The following report is submitted to the office of Navajo Nation Historic Preservation Department's Cultural Resources Compliance Program for review as part of the Navajo Nation cultural resources clearance process. The report details the results of the cultural resources inventory conducted in conjunction with the project entitled "A Cultural Resources Inventory of 68.87 Acres of Proposed Reclamation North of the Church Rock Mine, McKinley County, New Mexico." The remediation project will involve the excavation of partials of surface soils, hauling of contaminated soils off the project area, and importing uncontaminated soils from an off-site location to cover the stripped areas. The undertaking will involve extensive use of heavy equipment and vehicular traffic. The project area is located in the central portion of the Navajo Reservation within the Eastern Navajo Agency. The legal description for the project area is found on the 1979.

The total number of acres surveyed in conjunction with this project is approximately 68.87 acres (27.87ha.). One archaeological site (NM-Q-20-48), one traditional cultural property (TCP 1), seven (7) isolated occurrences, and two in-use sites were identified during the project. The archaeological site was not evaluated to be eligible for nomination to the National Register of Historic Places. Archaeological clearance is recommended for the proposed remediation provided that the construction activities are confined to the survey areas and that the home owners be consulted with regarding traffic, and that TCP 1 be avoided during all construction activities.

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Introduction

On May 4 and 5, archaeologists with Dinétahdóó Cultural Resources Management (DCRM) conducted a cultural resources inventory of approximately 68.87 acres (27.87ha) parcel of land scheduled for environmental reclamation. The project was completed for United Nuclear Corporation at the request of Jed Thompson, Engineer of MWH Global. This cultural resources inventory was completed under Navajo Nation Cultural Resources Inventory Permit Number B09270.

Description of Undertaking

MWH Global proposes remediate portions of the project area by excavating contaminated surface soils from portions of the survey area. Surface excavations will consist of removing 6 to 12 inches of dirt, while 6 to 12 feet of material will be removed from the unnamed arroyo located along the western and northern edge of the survey area. The contaminated soil will be removed from the project area and off-site soil will be brought in to replace the removed soil. In addition, some temporary erosion control measures will be constructed to prevent soil loss, and finally, vegetation will be re- established. The irregular shaped project area measures roughly 68.87 acres, and is bounded on the southern end by the Navajo Reservation fence boundary, an unnamed drainage on the west and northern edges, and an improved road on the eastern edge. A total of approximately 68.87 acres (27.87 ha.) was surveyed. The total area of effect is potentially 68.87 acres (27.87 ha.).

Location

The project area is located in north of the Red Rock Park and is located in the Church Rock Chapter. Figure 1 is a general vicinity map of the project area, and Figure 2 is the project map showing the identified cultural resources.

Designation Point	Northing	Easting	Section	Township	Range
P 1			Unplatted		
P 2			66 33		
P 3			66 33		
P 4			cc >>		
P 5			دد. »		

Table 1 shows the legal and (Zone 13) UTM Coordinates for the project area.

Area Environmental and Cultural Setting

The project area is located just outside the northern boundary of the former Northwest Church Rock Mine lease area in the midst of several homesteads. The survey area contains two occupied homes. The project area is characterized with by a pinyon/juniper ridge on the southern edge; the area slopes north and drains into a large unnamed arroyo. Mesas and canyons surround the project area. The dominate vegetation include Indian ricegrass, cheatgrass, rabbitbrush, snakeweed, pinyon/juniper, Gamble oak, and sage. The elevation for the project area ranges between 7,258 feet (2,212 m) and 6,980 feet (2,127 m) above sea level. Several homesteads are located in or near the project area.

Soil on the ridge consists of residual sand with sandstone outcrops and silty sand and clay. The flat area above the arroyo is void of vegetation or characteristic features.



Figure 1. General Project Location Map (DCRM 2009-25).



The project area is located in the Church Rock chapter. The Navajo name for Church Rock is Kinlitsoh sinili, which, when translated, means Group of yellow houses. The Church Rock Chapter House is located north of the junction between State Route 56 and the old US Route 66, generally within 6 miles west of Gallup, New Mexico. Some of the remote areas of the community have significant archaeological sites such as ancient petroglyphs, kiva circles, and remnants of Anasazi ruins. Being located adjacent to Red Rock State Park and the City of Gallup enable the chapter to generate revenues through related activities and provides some access to employment (LSR Innovations: 2004).

Existing Data Review

Prior to the fieldwork, a literature search of the project area was conducted at the Navajo Nation Historic Preservation Department (NNHPD) in Window Rock, Arizona. The records check indicated that at least previous three projects have been conducted within 300 feet of the project area. The previous surveys include HPD 99-311, 05-1133, and 05-855. Site NM-Q-20-20 (HPD 99-311), is located to the east at a distance of 200 feet of the project area.

The review of the confidential Sacred Places Database at the Navajo Nation Historic Preservation Department (HPD) in Window Rock, revealed no sacred places within or immediately adjacent to the project area. Only Boggess and Begay (2005) provided ethnographic information regarding traditional cultural properties near the project area; however, none of the traditional sites are located in this project area and will be impacted by this undertaking. The closest place named is Lichii deez'a, a mesa located to the immediate north.

The confidential database indicates that the general area is important in Navajo ceremony and culture. Specific ceremonies that have history and offering locales in the area include Hózhóójí (Blessingway), and Tł'éejí (Nightway). Undoubtedly, the area figures in many more, unrecorded ceremonial traditions. The database also refers to the general area as a route for the Western Water clans' return to Navajo lands, and it suggests the area as a possible route for certain ceremonial progenitors between Jemez Pueblo and Walpi on the Hopi mesas.

Many of the important places mentioned in the Sacred Places Database and referred to in ceremonial repertoires are natural features (hills, springs, mesas, mountains, flora and fauna) and, in many instances, prehistoric sites. Many archaeological sites are important in Navajo history, traditions, clan origins, and the development and practice of ceremony and rituals.

A check of Van Valkenburgh (1974) does not identify any TCPs within or in the immediate vicinity of the project area. The nearest identified resource is Churchrock, Tsé 'Íi'áhí located 15 miles to the south. The sandstone pinnacle has ceremonial significance in a Holyway ceremony (see also Linford 2000:193).

Field Methods

On May 4 and 5, 2009, Rena Martin, Loretta Chavez, and Richard Begay archaeologists with Dinétahdóó Cultural Resources Management (DCRM) conducted the cultural resources inventory of the 68.87 acre area partially slated for environmental reclamation. The project area was staked and easily defined by the natural landmarks, roads, and markers. The Church Rock Chapter officials, Johnny Henry, President, Robinson Kelley, Vice-President, and Louise Jim, Secretary, were consulted with regarding the inventory. The officials stated that they were aware of the pending undertaking, and to notify the local families.

The archaeologists completed the surveyed of the 68.87 acre project area by walking parallel transects oriented north and south spaced no more than 15 m apart. Isolated occurrences (IOs) were recorded upon discovery once they had been determined not to be associated with an archaeological site. The

archaeological site was recorded after the completion of the survey. The site was recorded using a metric tape measure and compass, and sufficient notes were taken to allow for completion of Site Survey and Management Forms. Site Forms were completed in-house during and after fieldwork on the project.

The two in-use sites were not mapped out of respect for the privacy of the individuals; however, as per NNHPD guidelines the client or a neighbor was interviewed regarding the dates of occupation, and questions were asked regarding potential traditional cultural properties and burials (TCPs—herb gathering areas, blessed and/or sacred places) in the vicinity. One traditional cultural property (TCP1) was identified by one of the homeowners in the project area. The TCP was recorded as per NNHPD guidelines and is attached to the report as a confidential appendix.

Cultural Resources Findings

One archaeological site, seven (7) isolated occurrences, and two (2) in-use sites (IUSs) were identified within the project area. Site and Survey Management Forms and Traditional Cultural Property Forms are appended to the report (Appendix A and B) and Table 2 provides a summary description of each the isolated occurrences. A brief summary of each of the in-use sites are listed in Table 3.

Archaeological Sites

Site Number: NM-Q-20-48 (Figure 3)

Map Reference:

Legal Description: UTM Coordinates:

Land Status: Navajo Tribal Trust

Site Type: Anasazi Ceramic Lithic Scatter (PII-AD 900-1000)

Site Size: 25 x 16 m (400 sq m)

Site Setting: The site is located in flat area just south of a deep arroyo. The site is surrounded by mesas, and several occupied Navajo homes are located with sight. An upright wagon wheel that marks the entrance into the homesites is located in the middle of the site.

Site Description: This site consists entirely of ceramic artifacts with no indications of the site having subsurface depth. The artifacts are not any concentrations, and no structures or other features were identified.

The ceramic artifacts were most likely associated with water procurement activities from the unnamed deep arroyo located to the immediate north. The identified ceramic artifact types include: Rio Puerco Black on whites and White ware, and corrugated utility ware. The majority of the identified ceramic types are Pueblo II (AD 900-1000).

Isolated Occurrences

Seven isolated occurrences (IOs) were identified during the survey.

Table 2. Isolated Occurrences Identified During the Survey.	. All of the IOs are located in the project area.
---	---

Designation	Description	Northing	Easting
IO 1	3 Rio Puerco Black on white Sherds	3949084	0726019
IO 2	1 Corrugated and 1 B/W Sherd	3949093	0725699
IO 3	7 Rio Puerco Black on white Sherds (from same pot)	3948883	0725911
IO 4	3 Rio Puerco Black on white Sherds	3948891	0725925



Figure 3: General Site map of NM-Q-20-48 (DCRM 2009-25).

Table 2. Continued

IO 5	3 Rio Puerco White ware Sherds	3948883	0725935
IO 6	9 White ware Sherds (from same pot)	3948908	0725926
IO 7	5 Gallup Black on white Sherds	3948917	0725915

In-Use Sites

Two in-use sites were identified in the project area. Teddy Nez, a resident of IUS 2 was interviewed regarding their in-use homestead, the possible presences of TCPs and any unmarked graves that may be located in the survey area. The interviewee identified the project area as being the "use-area" of his wife's family. His wife's former father, Jack Hood lived in IUS 1 for decades until his death; it is currently used periodically by extended family members. He explained that the house use to be located to the east and was moved due to the presences of an Anasazi site, and that now the house maybe moved again due to possible presences radioactive material. The house has been present in the location since about 1930, at which time TCP 1 (a sweatlodge) was known to have also been built and used. IUS 2 is the homestead of Teddy Nez; the homesite has been in existence since the late 1990s.

Traditional Cultural Properties

Interviews with Teddy Nez, resident of IUS 2 provided information on a TCP located near the homestead. The family requested that the structure be left undisturbed during any reclamation activities. The site is within view of the family's homesite and thus, any traffic near it will be monitored by the family. The TCP form is appended as a confidential attachment.

Evaluation of Significance

Under the **National Historic Preservation Act** (NHPA; 36 CFR 60.4), cultural resources may be eligible for nomination to the National Register of Historic Places if they "possess integrity of location, design, setting, material, workmanship, feeling, and association ... and if the resources in question are resources:

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of a person significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that posses high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that has yielded, or may be likely to yield, information in prehistory."

As defined in 36 CFR 60.4, cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historical buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years are not ordinarily considered eligible for the National Register. However, such properties may qualify if they are integral parts of districts that do meet the eligibility criteria.

The Archaeological Resource Protection Act of 1979 (ARPA; 43 CFR Part 7), has two fundamental purposes:

1) to protect irreplaceable archaeological resources on public lands and Indian lands from unauthorized excavation, removal, damage, alteration, or defacement; and

2) to increase communication and exchange of information among governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained prior to enactment of the Act.

Completing assessments under 43 CFR Part 7 involves two items. In order for a resource to be considered an archaeological resource and thus merit protection, it must be both greater than 100 years in age and of archaeological interest.

The American Indian Religious Freedom Act (AIRFA [P.L. 95-341]) is a resolution of Congress to the effect that American Indians shall have the right to freedom to believe, express, and exercise their traditional religions and have access to sites, use and possession of sacred objects, and freedom of worship through ceremonies and rites. Therefore, any site or place (prehistoric or historic) having religious, ceremonial, or sacred aspects or components needs to be dealt with in light of this law. Anasazi sites related to Navajo cultural traditions qualify for protection, as do all Navajo ceremonial sites, unmarked traditional places, and residential structures whose owners/users want them protected for religious and cultural reasons.

The Native American Graves Protection and Repatriation Act (NAGPRA [P.L. 101-601]) provides protection of Native American graves; establishes procedures and legal standards for the repatriation of human remains, funeral objects, sacred objects, and objects of cultural patrimony; and provides the United States district courts jurisdiction over any action brought by any person alleging a violation of the Act. The Act also recognizes certain tribal, Native Hawaiian, and individual rights in regard to burial sites located on Federal and Indian lands, and it sets forth procedures for the intentional excavation and inadvertent discoveries of these items.

Archaeological Sites

Site NM-Q-20-48 lacks the integrity of any of the qualities cited 36 CFR 60.4. The site does not meet criteria a, b, c, or d. The site does not appear to be eligible for the National Register of Historic Places because the field recording and analysis of the site's material culture has exhausted all of the potential scientific data that can be obtained from the site. Although the site meets the 100-year age requirement, it does not appear to be of archaeological interest due to the exhaustion of all its scientific data during recordation. The site however does not appear to be eligible for protection under ARPA, AIRFA, or NAGPRA. In addition, the nature of this undertaking will not elevate the disturbance to the site.

Isolated Occurrences

None of the seven (7) isolated occurrences (IOs) appear to be associated with any nearby sites. In the absence of subsurface exploration or other evidence that the artifacts are not associated with a nearby site, the IOs do not appear to be eligible for protection under the NHPA. The IOs do not meet eligibility requirements under criteria a through d since their research potential has been exhausted through recordation. However, the IOs meet the 50-year age guideline. The IOs appear to meet the 100-year age requirement under ARPA, but do not appear to be of archeological interest. The IOs are not materials that are usually considered for protection under AIRFA or NAGPRA.

In-Use Sites

The two homesites (IUSs) located in the project area possesses one or more of the qualities of integrity cited in 36 CFR 60.4. The IUSs do not meet eligibility requirements under criteria a through d. The ethnographic interviews with the homesite owners provided data that lead to the inventory of TCP 1. The

IUSs are not associated with any human remains that might be protected under NAGPRA. The family who resides within the project area has requested that the stone house associated with IUS 1, and the sweatlodge (TCP 1) be preserved, and not be destroyed or otherwise impacted by any reclamation activities.

Traditional Cultural Properties

One TCP, a sweatlodge was identified during this inventory. The resource is eligible for protection under the NHPA and AIRFA, as well as the Navajo Nation Cultural Resources Protection Act (CMY-19-88). Local resident, Teddy Nez brought the site to the archaeologist's attention. The family asked that the site not be disturbed.

Resource	Resource Description	Resource Evaluation
Designation/Location		
NM-Q-20-48,	Anasazi Artifact Scatter	NRHP: Criteria a-d – not eligible
located in the project		Does meet 50-year guideline
area		ARPA: 1) does meet 100-year age
		requirement
		2) is not of archaeological interest
	£	AIRFA: Is not eligible for protection
		NAGPRA: Does not merit protection
2 In-use Sites,	IUS 1, 1930s to present; 1	NRHP: Criteria a-d – not eligible
located in the project	house with associated	ARPA: 1) do not meet 100-year age
area	features.	requirement
		2) are not of archaeological interest
	IUS 2, 1 house with	AIRFA: Maybe eligible for protection
	associated features.	NAGPRA: Do not merit protection
TCP 1, located in the	Traditional Cultural	NRHP: Criteria a-d – maybe eligible under d
project area	Property—Sweatlodge	Does meet 50-year guideline
		ARPA: 1) does not meet 100-year age
		Requirement.
		2) is not of archaeological interest
		AIRFA: is eligible for protection
		NAGPRA: Does not merit protection
IOs 1-7, located in	Ceramic Artifacts	NRHP: Criteria a-d – not eligible
the project area		Do meet 50-year guideline
		ARPA: 1) do meet 100-year age
		Requirement.
		2) are not of archaeological interest
		AIRFA: Not eligible for protection
×		NAGPRA: Do not merit protection

Table3. Cultural Resource Eligibility

Recommendations

Archeological clearance is recommended for the proposed remedial reclamation in all proposed areas since the areas are confined to the drainages, and areas clearly marked. Conditional archaeological clearance with the following stipulations is recommended: (1) the homeowners be notified of all remedial

activities, (2) all construction traffic should confined to the existing roads, (3) TCP 1 is avoided by all reclamation activities, and (4)all new discoveries of cultural material be reported to NNHPD.

NM-Q-20-48

No further work or avoidance is required for this site.

TCP 1

This site is located outside the area slated for reclamation and will not be impacted by the reclamation activities; nonetheless, family (or a family member) should be consulted and should be present when the reclamation work is undertaken so as to prevent any damage to the in-use historic stone house located at IUS 1 and at TCP 1 (sweatlodge).

References

Boggess, Douglas H.M. and Richard Begay

2005 A Cultural Resources Survey of 125 Acres for the Proposed Closeout of the Northeast Church Rock Mine, McKinley County, New Mexico. Lone Mountain Archaeological Services, Inc., Report No. 825.

Errickson, Mary and Nancy S. Hammack

1998 NTUA Project NA 98-A95 East, 74 Scattered Homesites and 3.3 Miles of Waterline Extensions, Apache County, Arizona and San Juan and McKinley Counties, New Mexico. CASA.

LSR Innovations

2004 Chapter Images: 2004, Profiles of 110 Navajo Nation Chapters

Van Valkenburgh, Richard F.

1974 Navajo Sacred Places. In *Navajo Indians III*, edited by C. Kluckholm, pp. 9-99. Garland Publishing, New York.

Navajo Nation Site and Survey Management Forms

NAVAJO NATION SITE AND SURVEY MANAGEMENT FORM Dinétahdóó CRM & Ed Services

OTHER IDENTIFICATION: DATE RECORDED: 5/5/09 SITE NO: NM-Q-20-48

PROJECT NUMBER & NAME: DCRM 2009-25-A Cultural Resources Inventory of 68.87 Acres of Proposed Reclamation North of the Church Rock Mine, McKinley County, New Mexico.

ARCHAEOLOGIST(S): Rena Martin, ORGANIZATION: Dinétahdóó CRM & Ed Services Richard Begav, and Loretta Chavez.

USGS MAP REFERENCE: Hard Ground Flats, New Mex., 1963 (Photorevised 1979).

LEGAL LOCATION: (Unplatted) Township 17 North, Range 16 West

UTM COORDINATES: Zone 12, Northing 3949275, Easting 0725843

STATE: New Mexico COUNTY: McKinley CHAPTER: Church Rock

GROUND VISITBILITY (kind/extent of cover): The ground visibility is approximately 99-percent; the remaining area consists of vegetation coverage.

TOPOGRAPHY: This Anasazi site is located in a partially on flat ground located just south of a deep arroyo. The site is located in the midst of a series of roads that lead into occupied homesites located to the south and west.

DRAINAGE: An unnamed arroyo is located to the north at less than 200 feet.

ELEVATION (ft/m): 6,890 feet (2,100 m)

SOIL TYPE: silty and clayey sand

VEGETATION PRESENT: Russian thistle

CULTURAL AFFILATION: Anasazi

PERIOD OF OCCUPATION (Date, if known): PII A.D. (900 – 1000) How dated: Ceramic types

DIMENSIONS OF SITE (1xw): 25 x 16 meters

How determined: measured with a metric tape

ARCHITECTURE PRESENT? No Describe:

ARTIFACTS OBSERVED/COUNTED: Counted 78 ceramic artifacts

OF WHAT? N/A COLLECTIONS MADE? NO METHOD: N/A

PHOTOS TAKEN: No COLOR: Roll Frame

SITE TYPE: Ceramic and Lithic Scatter

SLOPE & DIRECTION: East less than 5-degrees

TOTAL AREA (sq. m) 600 sq. m.

OTHER: none

SITE DECRIPTION: This site consists entirely of ceramic artifacts with no indications of the site having subsurface depth. The artifacts are not any concentrations, and no structures or other features were identified.

The ceramic artifacts were most likely associated with water procurement activities from the unnamed deep arroyo located to the immediate north. The identified ceramic artifact types include: Rio Puerco Black on whites, Gallup Black on Whites, white ware, and corrugated utility ware. The majority of the identified ceramic types are of the Pueblo II (AD 900-1000) Phase.

CONDITION OF SITE: Poor Causes of disturbance: road traffic and livestock grazing

LOCATION OF THE SITE RELATIVE TO PROJECT AREA: The site is located in the project area.

EXTENT OF INVESTIGATION TO DATE: This recording.

RESEARCH POTENTIAL: This recording has exhausted all of the sites potential.

RECOMMENDATIONS: None

SITE ASSESSEMENT UNDER 36 CFR 60.4 (National Register):

INTEGRITY: Lacks integrity

CRITERIA a-d: Not eligible

EXCULSIONS: none

SITE ASSESSMENT UNDER 43 CRF 7.3 (Archaeological Resources Protection Act): 100-year guideline: Meets the guideline Archaeological Interest: Not of interest

SITE ASSESSMENT UNDER AIRFA (American Indian Religious Freedom Act): Not eligible for protection.

SITE ASSESSMENT UNDER NAGPRA (Native American Graves Protection and Repatriation Act): Associated Burial? None observed

PROVIDE A SITE MAP (including site description, north arrow, scale, recognizable features, landmarks, and relationship to project area):

HOW CAN SITE BE REACHED? (See attached USGS Map.)

OTHER COMMENTS (Ethnographic data, etc):



APPENDIX A5.3

CULTURAL RESOURCE SURVEY

A Cultural Resources Inventory of Five Proposed Borrow Pits for MWH Global in the NECR Mine Area, McKinley County, New Mexico.

Report prepared by Jeremy Begay, Archaeologist

DCRM 2013-55

NMCRIS Activity Number 128978 NM-13-236-SM

November 18, 2013

Submitted by Rena Martin, Anthropologist/Archaeologist Dinétahdóó Cultural Resources Management P.O. Box 2012 Farmington, New Mexico 87499

Submitted to and Prepared for: Richmond Leeson Jr., P.G. Principal Hydrogeologist/Location Leader Engineering and Technical Services Group MWH Global, Inc. 1475 Pine Grove Rd. Steamboat Springs, CO 80477

Abstract

This report is submitted to the New Mexico State Historic Preservation Office for compliance review as part of the cultural resources clearance process. The report details the results of the cultural resources inventory conducted in conjunction with the project entitled "A Cultural Resources Inventory of Five Proposed Borrow Pits for MWH Global in the NECR Mine Area, McKinley County, New Mexico". Mr. Richmond Leeson Jr., MWH Principal Hydrogeologist, requested the cultural resources inventory. The project involves the evaluation of five areas as potential soil borrow sites for the construction of a proposed evapotranspirative soil cover for a mine material repository at the existing Church Rock Mill Site tailings impoundment. Soil borings, soil sampling, and other field testing will be conducted to collect data in these areas to evaluate the potential use of soil from each of the identified areas. Once the soil properties have been evaluated, design grading plans will be developed to determine the potential volumes of suitable, available soil from the areas that are determined to be suitable. During construction of the proposed repository, suitable soils from the selected borrow areas would be excavated and hauled to the existing tailings impoundment by heavy machinery. The project area is located within McKinley County on privately held lands. The legal description for the project area is

The project area can be found on the

and

7.5-minute series USGS quadrangle maps. The total area surveyed in conjunction with this project is 73.94 acres (29.92 ha). In all, four (4) archaeological sites and seventeen (17) isolated occurrences were identified during the inventory. Archaeological clearance is recommended for the proposed undertaking provided that the recommendations prescribed in the report are adhered to.

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Introduction

Between October 22nd and 24th, 2013, Jeremy Begay, Clifford Werito, Matthew Martin, and Jeffrey Begay, archaeologists with Dinétahdóó Cultural Resources Management (DCRM), conducted an archaeological inventory of the five proposed borrow pits for MWH Global in McKinley County, western New Mexico. Mr. Toby Leeson, MWH Principal Hydrogeologist, requested the cultural resources inventory. Four newly documented archaeological sites and seventeen isolated occurrences (IOs) were identified and evaluated during the inventory. This cultural resources inventory was completed under New Mexico State Historic Preservation Office permit number NM-13-236-SM.

Description of Undertaking

The five borrow pit areas are being evaluated as potential soil borrow sites for the construction of a proposed evapotranspirative soil cover for a mine material repository at the existing Church Rock Mill Site tailings impoundment. Soil borings, soil sampling, and other field testing will be conducted to collect data in these areas to evaluate the potential use of soil from each of the identified areas. Once the soil properties have been evaluated, design grading plans will be developed to determine the potential volumes of suitable, available soil from the areas that are determined to be suitable. During construction of the proposed repository, suitable soils from the selected borrow area(s) would be excavated and hauled to the existing tailings impoundment by heavy machinery and transportation methods. A total area of approximately 72 acres (29.13 ha) is considered the area of effect.

Location

The project area is located in McKinley County, New Mexico, on privately held lands within the checkerboard area of Pinedale Chapter, a governmental unit of the Navajo Nation (Figure 1). Table 1 provides the UTM coordinates and legal descriptions of the project areas.

Designation	UTM Coo Zone 12 (Legal Description (NMPM; Sections Projected)							
	Northing	Easting	1⁄4	1/4	1⁄4	Sec	Т	R	7.5 min USGS Quad
201.00 million	No	rth Drainage	Borro	w Pit, 9	acres		3		
Centerpoint									
10.2000	Sou	th Drainage	Borrov	v Pit, 20	acres				e.
Centerpoint									
		Dilco Hill Boi	rrow P	it, 11 ac	res	10	24		
Centerpoint									
	700	East Borro	w Pit,	16 acres	3				A.
Centerpoint									ana
		West Borro	w Pit,	16 acres	s	3			
Centerpoint									
BOL Denotes Begin	ning of Line	B Denotes Bend		EOL Den	otes End	ofLine	* Depot	es Projected	14 and Section Data

Table 1. UTM Coordinates, Legal Descriptions, and USGS Maps for the five proposed borrow pits in McKinley Co. NM

BOL Denotes Beginning of Line

EOL Denotes End of Line

* Denotes Projected ¼ and Section Data

Environmental and Cultural Setting

The project area is located in the Zuni Uplift geological region, a large sedimentary landmass that was uplifted during the onset of the Laramide Orogeny during the Cretaceous-Tertiary transition. A considerable amount of tectonic activity exposed numerous geologic facies ranging in age from the Neogene to the Precambrian. Erosion of the numerous facies has produced a multitude of geographic features and geologic structures, such as the Hogback, Fenced Up Horse Canyon, Zuni Mountains, Oso Ridge, and the Malpais badlands. Within the uplift, strata representing marine transgressive and nonmarine regressive cycles have been exposed as well as Precambrian basement rock, which have produced redeposited packages of fine- to coarse-grained alluvial, fluvial, colluvial, residual, and aeolian sand, silt, clay, and multi-lithic sand. Outcrops of sedimentary, metamorphic, and igneous bedrock as well as pebble- to boulder-sized clasts derived from these outcrops are scattered throughout the region. Situated in the mixed conifer environ, the Zuni Uplift supports flora such as ponderosa and pinyon pine, juniper, gambel oak, aspen, green ephedra, sagebrush, Indian ricegrass, ring multy, blazing star, alkali sacaton, amaranth, dropseed, narrow- and broad-leaf yucca, prickly pear and cholla cacti, and Russian thistle.

The Navajo name for Pinedale is To beehwiisgani, which means "Harden (mud) around the water." Pinedale Chapter is in the Lobo Mesa region, an area with numerous archaeological sites that evidence Navajo occupation dating the seventeenth century. Pinedale Chapter has seen infrastructure development which has bettered the lives of the chapter residents. Most of the working-age population travel to the nearby town of Gallup for employment opportunities because wage work in the immediate area is scarce (LSR Innovations 2004).

Existing Data Review

Prior to the fieldwork, a records check was conducted at the Navajo Nation Historic Preservation Department (NNHPD) in Window Rock, Arizona, and the New Mexico Archaeological Research Management Section (ARMS) New Mexico Cultural Resources Inventory System (NMCRIS) online database. The review indicated that numerous projects have been conducted within 300 ft of the project areas. No previously recorded archaeological sites were identified near the project area.

The Sacred Places files located at NNHPD's Traditional Culture Program, which contains records of sacred places throughout the reservation, was researched to determine if any previously identified sacred places are located within 1 mile (1.609 km) of the project area. The records check indicated that no recorded sacred places are located within one mile of the project area.

A check of Van Valkenburgh (1974) indicates that the closest sacred place is Navajo Church Rock (Tse ii ahi / Standing Rock), located approximately 7.82 miles (12.58 km) southwest of the project area.

Field Methods

Between October 22nd and 24th, 2013, Jeremy Begay, Clifford Werito, Matthew Martin, and Jeffrey Begay, archaeologists with Dinétahdóó Cultural Resources Management (DCRM), conducted the cultural resources inventory of the project areas. The archaeologists were shown the five project areas by Mr. Rick Spitz, Project Manager with AMEC. The project areas were inventoried by walking parallel transects within the proposed borrow pit areas with archaeologists spaced no more than 10 m apart. A 50 ft buffer zone was added to each of the five proposed borrow pits. A total of 9.48 acres (3.83 ha) was surveyed for the north drainage borrow pit; 20.02 acres (8.10 ha) for the south drainage borrow pit; 11.48 acres (4.64 ha) for the Dilco Hill area; 16.48 acres (6.66 ha) for the east borrow pit; and 16.48 acres (6.66 ha) for the west borrow pit. Approximately 73.94 acres (29.92 ha) in total was inventoried in conjunction with the project.

The four archaeological sites were recorded after the completion of the survey. The sites were recorded using a metric tape measure, protractor, ruler, and a compass, and sufficient notes were taken to complete Navajo Nation Site Survey and Management Forms and Laboratory of Anthropology site forms in the office. Locations of the cultural resources identified during the inventory were recorded using a hand-held Global Positioning Satellite (GPS) unit. The site forms were filled out in-house once fieldwork was completed.

Isolated occurrences were recorded upon discovery once they had been determined not to be associated with an archaeological site. The locations of all isolated occurrences identified during the inventory were recorded using a hand-held GPS unit.

Cultural Resources Findings

Four (4) archaeological sites and seventeen (17) isolated occurrences were identified during the survey. A brief description of the identified isolated occurrences and their coordinates can be found in Table 2.

Archaeological Sites

Site: LA177466/NM-Q-21-122 (Figure 2) USGS Map Reference: Legal Location: UTM (NAD83): Land Status: Private State: New Mexico County: McKinley Chapter: Pinedale Site Type: Anasazi PI-PII Artifact Scatter Site Size: 32 x 30m Site Setting: LA177466/NM-Q-21-122 is located on the north slope of an unnamed west-oriented ridge.

Site Description: LA177466/NM-Q-21-122 is an Anasazi PI-PII artifact scatter. No features were identified or recorded during the inventory. There was no concentration of artifacts or identifiable midden; rather, artifacts were scattered throughout the site area. The 100+ sherds include Red Mesa, Gallup, Puerco, and Escavada Black-on-whites, Kana-a grey, Chaco corrugated, Puerco Black-on-red, and numerous unidentifiable white, grey, and red ware sherds.

Two Zuni spotted chert primary flakes were also noted; no other artifacts were found. Many of the artifacts are being redeposited down gradient to the north by natural erosional processes. An in-field, non-intrusive assessment determined that LA177466/NM-Q-21-122 does not contain any subsurface cultural materials.

Site: LA177467/NM-Q-21-123 (Figure 3) USGS Map Reference: Legal Location: UTM (NAD83): Land Status: Private State: New Mexico County: McKinley Chapter: Pinedale Site Type: Anasazi PI-PII Habitation Site Size: 56 x 42m Site Setting: LA177467/NM-Q-21-123 is located at the south base of an unnamed mesa.

Site Description: LA177467/NM-Q-21-123 is an Anasazi PI-PII habitation with seven recorded features.

Feature 1 is a collapsed L-shaped unit pueblo measuring $30 \times 6m$ and oriented to the east. It is believed to contain at least eight to ten rooms buried beneath a considerable amount of sandstone detritus. The amount of sandstone materials suggests that the feature was constructed entirely of masonry. No wall alignments were apparent.

Feature 2 is a circular depression in front of feature 1 measuring 6m in diameter and 70cm in depth. DCRM archaeologists believe that feature 2 may contain the buried remnants of a kiva or pithouse.

Feature 3 is a plaza area encompassing feature 2 and just south of feature 1. Feature 3 measures $15 \times 12m$ and appears to have been flattened from use by the prehistoric occupants. In and around feature 3 are scattered artifacts.

Feature 4 is a dense midden measuring 37 x 15m and containing thousands of artifacts. It may contain 100,000+ ceramic sherds, including Kiatuthlanna, White Mound, Red Mesa, Gallup, Escavada, Puerco, and Chaco Black-on-whites, Kana-a grey, Chaco and Coolidge corrugated, Puerco and Wingate Black-on-red, and numerous unidentified white, grey, and red wares too small to type. Lithic artifacts numbered 1,000+ and included flakes representing all stages of reduction; tested, exhausted, and multifacial cores; hammerstones; projectile point fragments; uniface and biface tools; and retouched flakes. Material types consist of petrified wood; Zuni spotted, grey, brown, tan, and black chert; rose, brown, grey, and white quartz; and clear chalcedony. DCRM archaeologists also identified several one-hand and two-hand sandstone mano fragments as well as basin and trough metate fragments and 200+ fire-cracked and -altered sandstone rock fragments. Many of the artifacts are being redeposited down gradient to the south by natural erosional processes.

Features 5, 6, and 7 are hearths located within feature 4. All three features measure 1m in diameter and consist of dark, ash-stained soil encircled by several oxidized sandstone fragments. No upright sandstone slabs were observed.

No other features were identified or recorded. DCRM archaeologists noted that LA177467/NM-Q-21-123 is in a pristine state with no evidence of tampering. Artifacts and materials from the structural features are being redeposited down gradient by natural crosional processes. An infield, non-intrusive assessment determined that LA177467/NM-Q-21-123 may contain subsurface cultural materials up to 4m in depth.

Site: LA177468/NM-Q_	21-123 (Figure 4)	1.52
USGS Map Reference:		
Legal Location:		
UTM (NAD83):		
Land Status: Private		<i>x</i>
State: New Mexico	County: McKinley	Chapter: Pinedale
Site Type: Anasazi PI-PI	II Habitation	- 10 10
Site Size: 37 x 39m		
Site Setting: LA177468/	NM-O-21-123 is located on a	a spur of an unnamed west oriented ridge.

Site Description: LA177468/NM-Q-21-123 is an Anasazi PI-PII habitation with five recorded features.

Feature 1 is a collapsed unit pueblo measuring 19 x 14m and consisting of scattered sandstone blocks and slabs covering at least ten to twelve rooms. No wall alignments were visible; however, the rubble mound covers a considerable amount of the ridge spur.

Located in the northern portion of feature 1 is feature 2, a kiva depression measuring 6m in diameter. Feature 2 is 1m deep and has been disturbed by illegal potting activities which have left an excavated pit in the middle of the feature. Feature 2 is composed of scattered sandstone blocks and slabs.

Feature 3 is a kiva depression measuring 6m in diameter, also consisting of scattered sandstone blocks and slabs. Feature 3 has not been disturbed by illegal activities.

Feature 4 is a midden in the east site area measuring 16 x 10m which contains 5,000+ ceramic sherds, including Kiatuthlanna, Red Mesa, Gallup, Escavada, and Puerco Black-on-whites, Kana-a grey, Chaco and Coolidge corrugated, Puerco Black-on-red, and numerous unidentified white, grey, and red ware sherds too small to type. Lithic artifacts numbered 500+ and included flakes representing all stages of reduction, tested and exhausted cores, hammerstones, and uniface and biface tools. Materials include petrified wood; Zuni spotted, grey, brown, tan, and black chert; and rose, brown, grey, and white quartz.. DCRM archaeologists also identified several one-hand and two-hand sandstone mano fragments and 100+ fire-cracked and -altered sandstone rock fragments. Many of the artifacts being redeposited down gradient to the south by

natural erosional processes. A trench measuring 13 x 2m has been excavated into the eastern side of the feature. The trench is most likely associated with illegal potting activities.

Feature 5 is a concentration of fire-cracked and -altered sandstone blocks and slabs measuring 1m in diameter. It may be the remains of a hearth.

No other features were observed or recorded. A bladed road on the eastern side of a fence line, outside the MWH property boundary, may have obliterated a portion of the site. An in-field, non-intrusive assessment determined that LA177468/NM-Q-21-123 may contain subsurface cultural materials up to 4m in depth.

Site: LA177469/NM-Q-	20-61 (Figure 5)		
USGS Map Reference:			
Legal Location:			
UTM (NAD83):			
Land Status: Private	Ϋ́ε.		
State: New Mexico	County: McKinley	Chapter: Pinedale	
Site Type: Anasazi PI-PI	II Habitation		
Site Size: 43 x 31m	₫.		
Site Setting: LA177469/	NM-O-20-61 is on the north s	lope of an unnamed east-to-west rid	dge.

Site Description: LA177469/NM-Q-20-61 is an Anasazi PI-PII habitation with two features.

Feature 1 is a disturbed roomblock measuring $19 \times 11m$ and consisting of scattered sandstone slabs and blocks and two walls exposed in a bulldozer cut. Both walls consist of unshaped sandstone slabs and blocks set in mud mortar, three courses high. The cut extends 1.5m below the surface at its deepest point. Feature 1 contained a minimum of six rooms before the feature was vandalized.

Feature 2 is a midden measuring 9 x 5m that has also been impacted by the bulldozer cut. It contains 200+ sherds, including Red Mesa, Gallup, Escavada, and Puerco Black-on-whites, Chaco and Coolidge corrugated, Puerco Black-on-red, and unidentified white, grey, and red ware sherds too small to type. Lithic artifacts numbered 50+ and included flakes representing all stages of reduction, tested cores, and hammerstones of Zuni spotted, grey, and white chert; petrified wood; and rose, brown, and grey quartz. Four mano fragments were also observed within the midden as well as 100+ fragments of fire-cracked and -altered rock. Feature 2 has been disturbed on the southeast side by the bulldozer cut that impacted feature 1. As a result of the disturbance, a thin lens of ash-stained soil was exposed in the north wall of the cut.

No other features were identified or recorded. DCRM archaeologists were unable to determine when the impact to the site occurred, although it is believed that 50% of the site remains undisturbed. An in-field, non-intrusive assessment determined that LA177469/NM-Q-20-61 does retain subsurface cultural materials possibly up to 4m in depth.

Isolated Occurrences

Seventeen isolated occurrences were identified within the project area. Their locations and descriptions are listed in Table 2.

IO #	Artifact Description	Location UTM Coordinates (Zone 12) NAD 83		
		Northing	Easting	
1	One gray ware sherd			
2	Two Chaco corrugated sherds			
3	One Chaco corrugated sherd			
4	One Chaco corrugated sherd			
5	Two gray ware sherds			
6	One gray ware sherd One Chaco corrugated sherd	81		
7	Two gray ware sherds			
8	Two incised gray ware sherds			
9	One gray ware sherd			
10	One Chaco corrugated sherd			
11	One gray ware sherd		17. 19.	
12	One gray ware sherd Seven Chaco corrugated sherds Five black on white sherds			
13	One Chaco corrugated sherd			
14	One Chaco corrugated sherd One gray ware sherd			
15	One Chaco corrugated sherd			
16	One Chaco corrugated sherd			
17	One gray ware sherd			

Table 2. List of identified isolated occurrences within the five proposed borrow pits in McKinley Co, NM

Traditional Cultural Properties

During the survey, the project archaeologists interviewed nearby residents concerning any sacred places, burials, or traditional cultural places that might be affected by the proposed undertaking. No TCPs were identified in the area of effect; however, it was clear that the region is culturally important in Navajo ceremony and culture. The interviews were conducted in English.

Evaluation of Significance

All cultural resources identified and recorded are evaluated for significance under certain federal statutes for the preservation and management of these resources. This process is intended to ensure that cultural resources are not inadvertently destroyed by the proposed undertaking, and to ensure that local communities are involved in the decision-making process.

The National Historic Preservation Act

Under the Section 106 process of the National Historic Preservation Act (NHPA; 36 CFR 60.4), cultural resources may be eligible for nomination to the National Register of Historic Places if they are more than 50 years old and "possess integrity of location, design, setting, material,

workmanship, feeling, and association." One or more of the following criteria (a-d) must be applicable:

- a. associated with events that have made a significant contribution to the broad patterns of our history; or
- b. associated with the lives of a person significant in our past; or
- c. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. has yielded, or may be likely to yield, information important in prehistory or history.

As defined in 36 CFR 60.4, cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historical buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years are not ordinarily considered eligible for the National Register. However, such properties may qualify if they are integral parts of districts that do meet the eligibility criteria.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 (ARPA; 43 CFR Part 7) has two fundamental purposes:

- to protect irreplaceable archaeological resources on public lands and Indian lands from unauthorized excavation, removal, damage, alteration, or defacement; and
- to increase communication and exchange of information among governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data that were obtained prior to enactment of the Act.

In order for a resource to be considered an archaeological resource and thus merit protection, it must be both more than 100 years old and of archaeological interest.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (AIRFA [P.L. 95-341]) affirms that American Indians have the right to believe, express, and exercise their traditional religions and have access to sites, use and possession of sacred objects, and freedom of worship through ceremonies and rites. Any site or place (prehistoric or historic) that has religious, ceremonial, or sacred aspects or components needs to be dealt with in light of this law. Anasazi sites related to Navajo cultural traditions qualify for protection, as do all Navajo ceremonial sites, unmarked traditional places, and residential structures whose owners/users want them protected for religious and cultural reasons.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA [P.L. 101-601]) provides protection of Native American graves; establishes procedures and legal standards for the repatriation of human remains, funeral objects, sacred objects, and objects of cultural

patrimony, including those from archaeological contexts; and provides the United States district courts jurisdiction over any action brought by any person alleging a violation of the Act. The Act also recognizes certain tribal, Native Hawaiian, and individual rights in regard to burial sites located on federal and Indian lands, and it sets forth procedures for the intentional excavation and inadvertent discoveries of these items.

Cultural Resource No.	Description	Evaluation	
LA177466/NM- Q-21-122 (Inside North Drainage Borrow Area)	Anasazi (PI-PII) Artifact Scatter	NRHP	 Eligible 1. 50-year guideline met 2. Retains integrity of location, setting, and materials 3. Does most griterion d
		ADDA	J. Does meet criterion d
		AKFA	1 100 year mideline met? Vec
			2. Is of archaeological interest? Yes
		AIRFA	Does not merit consideration
		NAGPRA	Does not merit consideration
LA177467/NM-	Anasazi (PI-PII)	NRHP	Eligible
0-21-123 (Inside	Habitation		1. 50-year guideline met
South Drainage			2. Retains integrity of location, setting,
Borrow Area)			workmanship, and materials
	2 A	141 (S	3. Does meet criterion d
		ARPA	Is Eligible? Yes
23			1. 100-year guideline met? Yes
			2. Is of archaeological interest? Yes
		AIRFA	Does not merit consideration
		NAGPRA	May merit consideration
LA177468/NM-	Anasazi (PI-PII)	NRHP	Eligible
Q-21-124 (Inside	Habitation		1. 50-year guideline met
East Borrow			2. Retains integrity of location, setting,
Area)			workmanship, and materials.
			3. Does meet criterion d
	5	ARPA	Is Eligible? Yes
			1. 100-year guideline met? Yes
		ATDUA	2. Is of archaeological interest? Yes
		AIRFA	Does not merit consideration
T A 1774COADA		NAGPRA	May merit consideration
LAI//469/NM-	Anasazi (PI-PII)	NRHP	
Q-20-01 (Inside	Habitation		1. 50-year guideline met
A real	16.		2. Retains integrity of location, setting,
rited)			3 Does meet criterion d
	a.	ARPA	Is Rligible? Yes
		ana	1 100-vear quideline met? Veg
	<i>a</i>	6	2. Is of archaeological interest? Yes
a	380	AIRFA	Does not merit consideration

Table 3: NHPA, ARPA, AIRFA, and NAGPRA Evaluation of Identified Cultural Resources documented within the five proposed borrow pits in McKinley Co, NM.

Cultural Resource No.	Description	Evaluation	
		NAGPRA	May merit consideration
Isolated	IO#1-17 (see table	NRHP	Not Eligible
Occurrences	2 for descriptions)		1. 50-year guideline met
			2. Lacks integrity
			3. Does not meet criterion a-d
		ARPA	Is Eligible? No
			1. 100-year guideline met? Yes
	8		2. Is of archaeological interest? No
•	1. 37). 1	AIRFA	Do not merit consideration
		NAGPRA	Do not merit consideration

Recommendations

Archaeological clearance for the proposed undertaking is recommended provided that the following stipulations are met: (1) all proposed construction activities shall be confined to the five proposed borrow areas, (2) any new discoveries shall be immediately reported to the New Mexico State Historic Preservation Office, and

At archaeological sites LA177467/NM-Q-21-123 and LA177468/NM-Q-21-124 (3) reflag site boundaries prior to construction, (4) avoidance.

At archaeological sites LA177466/NM-Q-21-122 and LA177469/NM-Q-20-61 (5) reflag site boundaries prior to construction, (6) monitor all ground disturbing activities within 50 ft of the sites.

References Cited

LSR Innovations Research & Planning

2004 Chapter Images: 2004 Edition. Navajo Nation Division of Community Development, Window Rock, Arizona.

Van Valkenburgh, Richard F.

1974 Navajo Sacred Places. In *Navajo Indians III*, edited by C. Kluckhohn, pp. 9-99. Garland Publishing, New York.
LABORATORY OF ANTHROPOLOGY SITE RECORD

1. IDENTIFICATION & OWNERSHIP
LA Number: 177466 (contact ARMS for site registration)
Current Site Owner(s): Private Site-Type: Non-Structural Occupation Type: Prehistoric
2. RECORDING INFORMATION
NMCRIS Activity No.: 128978 Field Site Number: MWH1 Site Marker? ☑ (specify ID#): LA177466 Recorder(s): J. Begay Agency: Dinetahdoo CRM Recording Date (dd-MMM-yyyy): 24-Oct-2013 Site Accessibility (choose one): ☑ accessible □ buried (sterile overburden) □ flooded □ urbanized □ not accessible Surface Visibility (% visible; choose one): □ 0% □ 1-25% □ 26-50% ☑ 51-75% □ 76-99% □ 100% Remarks:
Recording Activities: Image: sketch mapping Image: photography Image: instrument mapping (e.g., total station mapping) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: shovel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: showel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: showel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: showel or trowel tests; probes Image: surface collection (controlled or uncontrolled) Image: showel or trowel tests; probes Image: surface collection (controlled or
Description of Analysis or Excavation Activities: Ceramic identification, lithic artifact and materials analyzed in field; no excavation.
Photographic Documentation: color digital images 2 site overviews
Surface Collections (choose one): In o surface collection Uncontrolled surface collection Controlled (sample: <100%) Controlled (describe):
Records Inventory: Image: site location map Image: site location
Repository for Original Records: <u>Dinetahdoo</u> CRM Repository for Collected Artifacts:
3. CONDITION
Archaeological Status: surface collection test excavation partial excavation complete excavation Disturbance Sources: wind erosion water erosion bioturbation vandalism construction/land development
Percentage of Site Intact (choose one): [] 0% [] 1-25% [] 26-50% [] 51-75% [] 76-99% [] 100% Observations on Site Condition: Site is largely intact with in situ artifact assemblage being redeposited down gradient by natural processes.

LA 177,466 4. RECOMMENDATIONS (for Performer/Recorder use only) I eligible not eligible not sure National Register Eligibility (choose one): Applicable Criteria: (c) 🗌 (a) (b) (d) Basis for Recommendation: Site can provide data regarding the prehistoric Anasazi PI-PII occupation, subsistence strategies, and resource exploitation of the greater Pinedale region. Assessment of Project Impact: Site will be extensively marked to avoid disturbance, no impact. Treatment Recommendations: Avoidance i, 5. SHPO CONSULTATIONS (for SHPO and Sponsor use only) Sponsor NR Determination: 🔲 eligible 🗌 not eligible 🗌 not determined Applicable Criteria: (a) (b) (c) (d) Sponsor Remarks: SHPO NR Concurrence: eligible ont eligible ont determined Applicable Criteria: (a) (b) (c) (d) Date (dd-MMM-yyyy): HPD Staff: Register Status: 🔲 listed on National Register 🔲 listed on State Register 🛄 formal determination of eligibility State Register No.: SHPO Remarks: 6. LOCATION

Source Graphics:	
🖾 USGS 7.5' (1:24,000) topo maps] rectified aerial photos [Scale:]
🗋 other topo maps [Scale;] 🗌 unrecti	fled aerial photos [Scale:]
GPS unit GPS accuracy (choose one)	: □ < 1.0 m □ 1-10 m □ 10-100 m □ >100 m
other source (describe):	
UTM Coordinates (@ center of site; at least one set of coordinates Map-based Coordinates Datum: <u>NAD83</u> Zone: GPS-based Coordinates Datum: <u>NAD83</u> Zone: Directions to Site:	tes required):
In highway R-O-W?	
Town (if in city limits): State: MM County: McKinley	
USGS Quadrangle Name	Date USGS Code
Å	

PLSS Meridian	Unplatted	Township	Range	Section	14 Sections	Protracted?
New Mexico						
New Mexico		r	R			
New Mexico		т	R	S		□
New Mexico		т	R			□
7. PHYS	ICAL DESCR					
Site Dimension	15:32 x 30 me	eters Basis for Di	mensions (choose	one): 🗌 es	timated X measured	
Site Area: 960	sq m Basis for	Area (choose one): [🗌 estimated 🛛 🕅 r	neasured	Elevation: 7004 feet	
Site Boundarie	s Complete? (ch	noose one): 🛛 Yes	No (explain): _			
Basis for Site I	Boundaries: 🗵	distribution of archeo	logical features & a	rtifacts 🛛 🗍 mo	odern features or ground d	isturbance
🗋 pro	oerty lines 🛛 🗌 to	pographic features	<pre>other (specify):</pre>			15 1
Depositional/E	rosional Enviror	nment: 🛛 alluvial 📋] aeolian 🛛 🖾 collu	vial 🔲 residu	ual 🔲 no deposition (on l	bedrock)
🔲 oth	er process (descr	ibe):				
Stratigraphy &	Depth of Archee	ological Deposits (ch	oose one): 🗌 ur	known/not dete	ermined	12
🖾 no s	subsurface depos	its present 🛛 🔲 sub	surface deposits pr	esent 🗌 str	ratified subsurface deposit	s present
Estimated Dep	th of Deposits: _					
Basis for Dept	Determination	s: 🗌 estimated 📋 s	shovel/trowel tests	core/auger	r tests 🔲 excavations	
🗋 roa	f or arroyo cuts	rodent burrows [other observation	ns (describe): _		
Observations of	n Subsurface A	rcheological Deposit	s:	53		
Local Vegetatio	n (list species in	decreasing order of de	ominance):			
Overst	ory: Pinyon pi	ne, juniper				
Unders	tory: sagebrus	h, snakeweed, gra	uma grass, rabb	itbrush, pr	ickly pear cacti.	
Vegetation Con	munity (choose	one or two): forest	🛛 woodland 🔲	grassland 📋	scrubland 🗌 desert scru	ıbland 🔲 marshland
🗋 othe	r community (spe	ecify):				
Topographic L	ocation:	bench	🛄 dune		low rise	🗌 ridge
🖂 aliu	/ial fan	D blowout	🗌 flood pla	in/valley	mesa/butte	rockshelter
🗋 arro	yo/wash	🔲 canyon rim	🔲 foothill/n	nountain front	🖾 mountain	saddle
🗌 bad	ands	Cave	🛛 hill slope	¥	open canyon floor	🗌 talus slope
🗖 base	e of cliff	Cliff/scarp/bluff	🗋 hill top		🔲 plain/flat	terrace
🗖 base	e of talus slope	constricted cany	on 🛛 🗌 lava flov	/ (malpais)	🗌 playa	
🔲 othe	r location (descri	be):		.2	3	
Observations o	n Site Setting: a	ite is located or	the north el	one of an u	anamod west-oriented	ni dao

8. ASSEMBLAGE DATA

Assemblage Content (all components):	Prehisto	oric Cerami	cs			Other Artifa	cts and Materials:	
Lithics:	whole ceramic vessels				☐ bone tools			
🛛 lithic debitage	🛛 diagnostic ceramics					faunal remains		
chipped-stone tools		🛛 other p	orehistori	ic ceramics	S		macrobotanical remains	8
diagnostic projectile points	Historic Artifacts:				perishable artifacts			
non-local lithic material		🗌 diagno	stic glas	s artifacts		Ē	ornaments	
☐ stone-tool manufacturing items		other g	lass arti	facts			figurines	
(cores, hammerstones, etc.)		diagno	stic meta	al artifacts			mineral specimens	
around-stone tools		☐ other r	netal arti	facts			architectural stone	
C other stone tools		 □ whole	ceramic	vessel			burned adobe	
	61		stic cera	mics		П	fire-cracked rock/burned	l caliche
			istoric ce	eramics		0.		
Other items (specify):				Brannoo	ā		ž	
Assemblage Size (all components):			- estima	ted freque	ncv			
artifact class	O	1s	10s	100s	1000s	>10.000	*Counts (if <100)	
lithic artifacts (choose one)							<u>2</u>	
prehistoric ceramics (choose one)				\boxtimes			· · · · · · · · · · · · · · · · · · ·	
historic artifacts (choose one):	\boxtimes						<u>.</u>	
total assemblage size (choose one):				\boxtimes			·	
Dating Potential:	🗌 deno	drochronolo	gy	🗌 arche	eomagnet	ism 🗌	obsidian hydration	
🛛 relative techniques (e.g. seriation, c	liagnosti	cs, etc.)	🗌 ot	her metho	ds (specif	fy):		
Assemblage Remarks: Artifacts consis	t of 1	00+ cera	nics sh	nerds in	cluding	Red Mesa	, Gallup, Puerco,	and
unidentifiable white, grey, a	and rec	d ware sh	erds.	Lithic a	artifac	ts were tw	red, and numerous to Zuni spotted ch	art
primary flakes.	50°65							
9. CULTURAL/TEMPORAL AFFIL	IATIO	NS				<i>\$</i> .		
TOTAL NUMBER OF COMPONENTS DEFINE	D: 1							
COMPONENT #1 (EARLIEST)								
Cultural Affiliation: Anasazi Prehistorio	<u> 1</u>						8	
Basis for Temporal Affiliations (choose one):		not applica	ble	based	on assoc	lated chronol	metric data or historic re	cords
associated diagnostic artifact or feature type	5	🛛 based	on analy	tically deri	ived asse	mblage data	or archeological experie	ence
*Period of Occupation: (*see NMCRIS Guid	elines for	r valid perio	ods, defa	ult occupa	tion dates	s, and phase	/complex names)	
Perioc	Name	5				Begin Da	te End Date	-
Earliest Period: Puebl	<u>0 I</u>					700 A	D. 1100 AD	
Latest Period (if any): <u>Pueb1</u>	<u>o II</u>		-					12
Dating Status: ∐ radiocarbon ∐ d ⊠ relative techniques (e.g. seriation, d	endrochi iagnosti	ronology cs, etc.)	∐ ai ∏ oth	rchaeomag her methoo	gnetism ds (specif	obsid y):	lian hydration	
Basis for Cultural/Temporal Affiliation: Surf.	icial a	artifact	scatte	er with a	diagnos	tic artifa	acts	
Component Type: Artifact scatt	er ·			verentite of the first of a			15	
Remarks: Artifact scatter with	n no fe	atures,	functi	on unkno	own.			
AL 12 12 122 1	21			5. S		20 040	- NMCRIS 200	0 vers. 1/00

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Associated Phase/Complex Name(s):	
COMPONENT #2	
Cultural Affiliation:	
Basis for Temporal Affiliations (choose one): 🔲 not applicable 🗌 based on associated chronometric data or historic record	ls
 associated diagnostic artifact or feature types based on analytically derived assemblage data or archeological experience Period of Occupation: (*see NMCRIS Guidelines for valid periods, default occupation dates, and phase/complex names) 	
Period Name Begin Date End Date	
Earliest Period:	
Latest Period (if any):	
Dating Status: 🗍 radiocarbon 🗌 dendrochronology 🔲 archaeomagnetism 🔲 obsidian hydration	
relative techniques (e.g. seriation, diagnostics, etc.)	
Basis for Cultural/Temporal Affiliation:	
Component Type :	
Remarks:	
Associated Phase/Complex Name(s):	
10. FEATURE DATA	
see NMCRIS User's guide for a list of valid feature types)	

Feature Type	Reliable ID ?	# Observed	Assoc. Comp. #s	Feature ID, Notes
x			11 14 <u>1</u> 4	
4				
5 2028 SARE				
				22.1
	8			
2 3				
			10	

Feature Remarks:

11. REFERENCES

Written Sources of Information: DCRM 2013-55: A Cultural Resources Inventory of Five Proposed Borrow Pits for MWH Global in the NECR Mine Area, McKinley County, New Mexico. Dinetahdoo Cultural Resources Management, Huerfano, NM.

Additional Sources of Information:

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12. NARRATIVE DESCRIPTION

LA177466/NM-Q-21-122 is an Anasazi PI-PII artifact scatter. No features were identified or recorded during the inventory.

DCRM archaeologists.did not identify a concentration of artifacts or an identifiable midden, rather, artifacts were observed to be scattered throughout the site area. Artifacts consist of 100+ ceramics sherds including Red Mesa, Gallup, Puerco, and Escavada black on whites, Kana-a grey, Chaco corrugated, Puerco black on red, and numerous other unidentifiable white, grey, and red ware sherds. Lithic artifacts included two Zuni spotted chert primary flakes. No other artifacts were observed or recorded. DCRM archaeologists noted that many of the artifacts are being redeposited down gradient to the north by natural erosional processes. An in-field, non-intrusive assessment determined that LA177466/NM-Q-21-122 does not contain any subsurface cultural materials.

13. SITE RECORD ATTACHMENTS

i site location map (USGS 7.5' topo; required) is sketch map or site plan (required) in continuation forms? in other materials (itemize): _____

LABORATORY OF ANTHROPOLOGY SITE RECORD

1. IDENTIFICATION & OWNERSHIP
LA Number: 177467 (contact ARMS for site registration) Image: Site Update? (complete at least Sections 1-4) Site Name(s): MWH2 Agency Assigning Number:
NM-Q-21-123 Navajo Nation
Current Site Owner(s): Private
Site Type: <u>Structural</u> Occupation Type: <u>Prehistoric</u>
2. RECORDING INFORMATION
NMCRIS Activity No.: 128978 Field Site Number: MWH2 Site Marker? ☑ (specify ID#): LA177467 Recorder(s): J. Begay Agency: Dinetahdoo CRM Recording Date (dd-MMM-yyyy): 24-Oct-2013 Site Accessibility (choose one): ☑ accessible ☑ buried (sterile overburden) ☑ flooded ☑ urbanized ☑ not accessible Surface Visibility (% visible: choose one): ☑ 0% ☑ 1-25% ☑ 26-50% ☑ 51-75% ☑ 76-99% ☑ 100%
Remarks:
Recording Activities: Sketch mapping Image: Photography Image: Instrument mapping (e.g., total station mapping) Image: Shovel or trowel tests; probes Image: Im
 ☐ uncontrolled surface collection ☐ collections of specific items only ☐ controlled (sample: <100%) ☐ other method (describe):
Records Inventory: Image: Site location map Image: Site location
Repository for Original Records: Dinetahdoo CRM
Repository for Collected Artifacts:
3. CONDITION
Archaeological Status: surface collection test excavation partial excavation complete excavation Disturbance Sources: wind erosion water erosion bioturbation vandalism construction/land development
* 20

4. RECOMMENDATIONS (for Perform	er/Recorder us	e only)		-
National Register Eligibility (choose one): Applicable Criteria:	⊠ eligible □ (c) ⊠ (d)	not eligible	not sure	
Basis for Recommendation: <u>Site can provide</u> settlement patterns, subsistence strated Pinedale region.	data regarding gies, religiosi	the prehistori ty, and resource	a Anasazi PI-PII oc a exploitation of t	cupation, he greater
Assessment of Project Impact: Site will be es	tensively mark	ed to avoid dist	urbance, no impact	<u>.</u>
Treatment Recommendations: Avoidance				
5. SHPO CONSULTATIONS (for SHPO	and Sponsor (use only)		
Sponsor NR Determination: eligible inteligible sponsor Staff: Date (dd-MMN	ible 🔲 not determi. 1-yyyy): 💶 🚽	ned Applicable (Criteria: [](a) [](b)	□ (c) □ (d)
Sponsor Remarks:				
a ats Contraction and a state of the state o				
1				
SHPO NR Concurrence:	le 🔲 not determine	ed Applicable C	Criteria: □ (a) □ (b) HPD Log N	√o:(d)
Register Status: Ilisted on National Register Ilis	sted on State Regist	ter formal determ	-year	
State Register No.:			induction of ongloanty	
SHPO Remarks:				
	a11			
6 LOCATION	a			
Source Graphice	52			
USGS 7.5' (1:24.000) topo maps	☐ rectified	aerial photos (Scale	: 1	
☐ other topo maps [Scale:]	unrectified aerial	photos (Scale:	1	
GPS unit GPS accuracy (ch	oose one):	.0 m ∏ 1-10 m [] 10-100 m	
other source (describe):	, 1			
UTM Coordinates (@ center of site: at least one set or	f coordinates require	ed):		
Map-based Coordinates Datum: NAD83 Zone:				*
GPS-based Coordinates Datum: NAD83 Zone:			4	
Directions to Site: n highway R-O-W? L.				
Town (If in city limits): State: NM County: Mc	Kinley			52 - 981 i
USGS Quadrangle Name		Date	USGS Code	
*				

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PLSS		<u>s</u>			10	
Meridian	Unplatted	Township	Range	Section	1/4 Sections	Protracted?
New Mexico						
New Mexico		T R	l	_		
New Mexico		T R				🗆
New Mexico		T R			<u> </u>	· 🗆
7. PHYS	ICAL DESCR	RIPTION	2			
Site Dimension	ns: <u>56</u> x <u>42</u> m	eters Basis for Dim	ensions (choo	se one): 🗌 e	stimated 🛛 measured	
Site Area: 2,3	52 sq m Basis	for Area (choose one):	estimated	🛛 measured	Elevation: 7049 feet	
Site Boundarle	s Complete? (c	hoose one): 🛛 Yes 🛛	🗋 No (explain)		8	
Basis for Site I	Boundaries: 🛛	distribution of archeolo	gical features &	artifacts 🗌 m	odern features or ground o	disturbance
- 🗌 proj	perty lines 🛛 🗍 t	opographic features 🛛 🗋	other (specify)	:	6	
Depositional/E	rosional Enviro	nment: 🛛 alluvial 🔲	aeollan 🛛 co	lluvial 🔲 resid	ual 📋 no deposițion (on	bedrock)
🗋 othe	er process (desc	ribe):				
Stratigraphy &	Depth of Arche	ological Deposits (choo	ose one): 🔲	unknown/not det	ermined	
🗖 no s	subsurface depos	sits present 🛛 Subsu	urface deposits	present	tratified subsurface deposi	ts present
Estimated Dep	th of Deposits:	4m				
Basis for Depth	Determination	s: 🛛 estimated 🔲 sh	ovel/trowel test	s 🗌 core/auge	r tests 🔲 excavations	
🗋 road	d or arroyo cuts	C rodent burrows	other observal	ions (describe):		
Observations o	on Subsurface A	rcheological Deposits:		*		
Local Vegetatio	on (list species in	decreasing order of dor	ninance):	-		
Overst	Ory: Pinyon pi	ne, juniper		33		
Unders	tory: sagebrus	h, snakeweed, gram	a grass, ra	bbitbrush, p	rickly pear cacti.	
Vegetation Con	nmunity (choose	e one or two): 🔲 forest	🛛 woodland	🛛 grassland 📋	scrubland desert scr	ubland 🗌 marshland
othe	er community (sp	ecify):				
Topographic Lo	ocation:	bench	🛄 dune		low rise	🗌 ridge
🗌 alluv	vial fan	blowout	[] flood	plain/valley	🖾 mesa/butte	rockshelter
🗌 arro	yo/wash	anyon rim	🗌 foothi	I/mountain front	🔲 mountain	saddle
🗌 badl	ands	cave	🗌 hill slo	рө	open canyon floor	🗌 talus slope
🖾 base	e of cliff	Cliff/scarp/bluff	🗌 hill top	>	🗋 plain/flat	terrace
🗖 base	e of talus slope	constricted canyor	n 🗌 lava fi	ow (malpais)	🔲 playa	
🗋 othe	r location (descri	be):				
0	014 0 411	1991 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12127 2021 2021 2021	220	202	

Observations on Site Setting: site is located at the south base of an unnamed mesa.

8. ASSEMBLAGE DATA

Assemt	plage Content (all components):	Prehisto	oric Ceram	ics	×.		Other Art	ifacts and Materials:
Lithics:		whole ceramic vessels					I	☐ bone tools
	🛛 lithic debitage	☑ diagnostic ceramics					I	faunal remains
	Chipped-stone tools		🖾 other	prehistori	c ceramic	s	. I	macrobotanical remains
	diagnostic projectile points	Historic	Artifacts:				.	perishable artifacts
	non-local lithic material		🗌 diagn	ostic glas	s artifacts	10	[ornaments
	Stone-tool manufacturing items		🗌 other	glass arti	facts		l	figurines
	(cores, hammerstones, etc.)		🗌 diagnostic metal artifacts] mineral specimens
	ground-stone tools		other	metal arti	facts		[🛛 architectural stone
	other stone tools	×.	whole	ceramic	vessel		[burned adobe
			🗌 diagno	ostic cera	mics		[Ifire-cracked rock/burned caliche
			🗌 other I	historic ce	eramics			
	Other items (specify):							
	· · · · · · · · · · · · · · · · · · ·							ŝ.
Assemb	lage Size (all components):	a n a		– estima	ted freque	ncy		-
arti	fact class	0	1s	10s	100s	1000s	>10,000	*Counts (if <100)
	lithic artifacts (choose one): (include debitage)					\boxtimes		
	prehistoric ceramics (choose one)							
5 N	historic artifacts (choose one):	\boxtimes						<u>0</u>
	total assemblage size (choose one):						\boxtimes	· · · ·
Dating F	Potential: 🗌 radiocarbon	denc	Irochronol	ogy	🛛 arch	eomagne	tism	cbsidian hydration
Accomb	Include the second seco	lagnosti	cs, etc.)		ner metno	as (speci	Ty):	white Mound Dod Moon
Asseind	Gallup, Escavada, Puerco, and	d Chaco	black	on whit	es, Kan	a-a gre	y, Chaco	and Coolidge corrugated,
	Puerco and Wingate black on :	red, an	d numer	ous uni	dentifi	ed whit	e, grey,	and red ware sherds too
	small to type. Lithic artifactor	cts num Facial	bered 1	,000+ a hammer	nd incl	uded fl	akes of	all stages of reduction,
2 A	biface tools, and retouched	flakes	of petr	ified w	ood, Zu	ni spot	ted, gre	y, brown, tan, and black
	chert, rose, brown, grey, and	i white	quartz	, and c	lear ch	alcedon	y. DCRM	archaeologists also
	identified several one-hand a	and two	-hand s	andston	e mano : d gande:	fragmen	ts as we	11 as basin and trough
	metale fragments and 2004 IL	le-ordo		arcere	u sanus	COUR TO	OV TTAGH	
9.	CULIURAL/TEMPORAL AFFIL	IATIO	NS					
TOTAL N	UMBER OF COMPONENTS DEFINE	D: 1						e e

COMPONENT #1 (EARLIEST)

Cultural Affiliation: Anasazi Prehistoric

	e one): 📋 not applicable 📋 based on associa	ted chronometric da	ata or historic records
associated diagnostic artifact or feature	ure types 🛛 🛛 based on analytically derived assem	blage data or arche	eological experience
*Period of Occupation: (*see NMCR	IS Guidelines for valid periods, default occupation dates,	and phase/complex	(names)
-	Period Name	Begin Date	End Date
Earliest Period:	Pueblo I	700 30	1100 ND
Latest Period (if any):	Pueblo II	100 AD	III AD
Dating Status: 🗌 radiocarbon	dendrochronology	🔲 obsidian hydr	ation
🛛 relative techniques (e.g. ser	iation, diagnostics, etc.)		
Basis for Cultural/Temporal Affiliation	Habitation site with temporally diagnost	la features and	l artifacts.
Component Type: Multiple	residence		
Remarks: Habitation site	with residential structure and associated	features.	
*Associated Phase/Complex Name(s)	۱ <u> </u>		2
N - C 199 Contracto			
COMPONENT #2			
Cultural Affiliation:	· · · · · · · · · · · · · · · · · · ·		5
Deals for Toursel Affiliations (share)			
Basis for Temporal Amilations (choos	e one): 🗌 not applicable 🔄 🗌 based on associat	ed chronometric da	ta or historic records
associated diagnostic artifact or feature	e one):	ed chronometric da blage data or arche	ta or historic records ological experience
associated diagnostic artifact or feature *Period of Occupation: (*see NMCRI	e one):	ed chronometric da blage data or arche and phase/complex	ita or historic records ological experience names)
associated diagnostic artifact or feature *Period of Occupation: (*see NMCRI	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ta or historic records ological experience names) End Date
Earliest Period:	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ta or historic records ological experience names) End Date
Easis for Temporal Affiliations (choos associated diagnostic artifact or feature *Period of Occupation: (*see NMCRI Earliest Period: Latest Period (if any):	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ata or historic records ological experience names) End Date
Earliest Period: Latest Period (if any): Dating Status:	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ata or historic records ological experience names) End Date
Earliest Period: Latest Period (if any): Dating Status: I radiocarbon relative techniques (e.g. seriation, dia Basis for Cultural/Temporal Affiliation Component Type :	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ata or historic records ological experience names) End Date
Earliest Period: Latest Period (if any): Dating Status:	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ata or historic records ological experience names) End Date
Easis for Temporal Affiliations (choos associated diagnostic artifact or feature *Period of Occupation: (*see NMCRI Earliest Period: Latest Period (if any): Dating Status:	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ata or historic records ological experience names) End Date
Basis for Temporal Affiliations (choos ☐ associated diagnostic artifact or featu *Period of Occupation: (*see NMCRI Earliest Period: Latest Period (if any): Dating Status: ☐ radiocarbon ☐ relative techniques (e.g. seriation, dia Basis for Cultural/Temporal Affiliation Component Type : Remarks: *Associated Phase/Complex Name(s): 10. FEATURE DATA	e one):	ed chronometric da blage data or arche and phase/complex Begin Date	ata or historic records ological experience names) End Date

ture Type	Reliable ID ?	# Observed	Assoc. Comp. #s	Feature ID, Notes
mblock	Yes	1	1	Collapsed L-shaped unit pueblo measuring 30 x 6m with at least eight to ten rooms:
ression	Yes	1	2	Depression measuring 6m in diameter and 70cm in depth containing the buried remnants of a kiva or pithouse.
za	Yes	1	3	Plaza measuring 15 x 12m with a scattering of associated ceramics.
len	Yes	1	4	Midden measuring 37 x 15m containing over 100,000 artifacts and ash-stained soils.
rth	Yes	3	5,6,7	Three hearths measuring 1m in diameter with a concentration of ash-stained soil and associated oxidized sandstone fragments.
				soil and associated oxidi fragments.

LA 177,467

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		 ······································

Feature Remarks:

11. REFERENCES

Written Sources of Information: DCRM 2013-55: A Cultural Resources Inventory of Five Proposed Borrow Pits for MWH Global in the NECR Mine Area, McKinley County, New Mexico. Dinetahdoo Cultural Resources Management, Huerfano, NM.

Additional Sources of Information:

12. NARRATIVE DESCRIPTION

LA177467 is an Anasazi PI-PII habitation with seven recorded features.

Feature 1 is a collapsed L-shaped unit pueblo measuring $30 \times 6m$ and oriented to the east. It is believed to contain at least eight to ten rooms buried beneath a considerable amount of sandstone detritus. The amount of sandstone materials suggests that the feature was constructed entirely of masonry. No wall alignments were apparent.

Feature 2 is a circular depression in front of feature 1 measuring 6m in diameter and 70cm in depth. DCRM archaeologists believe that feature 2 may contain the buried remnants of a kiva or pithouse.

Feature 3 is a plaza area encompassing feature 2 and just south of feature 1. Feature 3 measures 15 x 12m and appears to have been flattened from use by the prehistoric occupants. In and around feature 3 are scattered artifacts.

Feature 4 is a dense midden measuring 37 x 15m and containing thousands of artifacts. It may contain 100,000+ ceramic sherds, including Kiatuthlanna, White Mound, Red Mesa, Gallup, Escavada, Puerco, and Chaco Black-on-whites, Kana-a grey, Chaco and Coolidge corrugated, Puerco and Wingate Black-on-red, and numerous unidentified white, grey, and red wares too small to type. Lithic artifacts numbered 1,000+ and included flakes representing all stages of reduction; tested, exhausted, and multifacial cores; hammerstones; projectile point fragments; uniface and biface tools; and retouched flakes. Material types consist of petrified wood; Zuni spotted, grey, brown, tan, and black chert; rose, brown, grey, and white quartz; and clear chalcedony. DCRM archaeologists also identified several one-hand and twohand sandstone mano fragments as well as basin and trough metate fragments and 200+ fire-cracked and altered sandstone rock fragments. Many of the artifacts are being redeposited down gradient to the south by natural erosional processes.

Features 5, 6, and 7 are hearths located within feature 4. All three features measure 1m in diameter and consist of dark, ash-stained soil encircled by several oxidized sandstone fragments. No upright sandstone slabs were observed.

No other features were identified or recorded. DCRM archaeologists noted that LA177467 is in a pristine state with no evidence of tampering. Artifacts and materials from the structural features are being redeposited down gradient by natural erosional processes. An in-field, non-intrusive assessment determined that LA177467/NM-Q-21-123 may contain subsurface cultural materials up to 4m in depth.

13. SITE RECORD ATTACHMENTS

☑ site location map (USGS 7.5' topo; required) ☑ sketch map or site plan (required) □ continuation forms?
 □ other materials (itemize): _____

LABORATORY OF ANTHROPOLOGY SITE RECORD

1. IDENTIFICATION & OWNERSHIP
LA Number: 177468 (contact ARMS for site registration)
Current Site Owner(s): <u>Private</u> Site Type: <u>Structural</u> Occupation Type: <u>Prehistoric</u>
2. RECORDING INFORMATION
NMCRIS Activity No.: <u>128978</u> Field Site Number: <u>MWH3</u> Site Marker? X (specify ID#): <u>LA177468</u> Recorder(s): <u>J. Begay</u>
Agency: Dinetahdoo CRM Recording Date (dd-MMM-yyyy): 24-Oct-2013 Site Accessibility (choose one): Accessible buried (sterile overburden) flooded urbanized not accessible Surface Visibility (% visible; choose one): 0% 1-25% 26-50% 51-75% 76-99% 100% Remarks:
Recording Activities: Image: sketch mapping Image: sketch map
Description of Analysis or Excavation Activities: Feature measurement and identification, ceramic identification, lithic artifact and materials analyzed in field; no excavation.
Photographic Documentation: color digital images 2 site overviews
Surface Collections (choose one): Image: Annotation in the surface collection in the surface collectio
Records Inventory: Image: Site location map Image: Site location
Repository for Original Records: <u>Dinetahdoo_CRM</u> Repository for Collected Artifacts:
3. CONDITION
Archaeological Status: Surface collection test excavation partial excavation complete excavation Disturbance Sources: wind erosion water erosion bioturbation vandalism construction/land development other source (specify): Vandalism: defaced glyphs damaged/defaced building surface disturbance manual excavation
Mechanical excavation ☐ other vandalism (specify): Percentage of Site Intact (choose one): ☐ 0% ☐ 1-25% ☐ 26-50% ⊠ 51-75% ☐ 76-99% ☐ 100% Observations on Site Condition: Site is largely intact with two areas (feature 2 and 4) impacted by mechanical and manual potting activities.

4. RECOMMENDATIONS (for Performer	/Recorder use	only)	÷	
National Register Eligibility (choose one): Applicable Criteria: ☐ (a) ☐ (b) ☐ ☐ ☐	⊠ eligible] (c)] (d)	🗌 not eligible	not sure	12
Basis for Recommendation: <u>Site can provide d</u> settlement patterns, <u>subsistence</u> strategie <u>Pinedale region</u> .	ata regarding es, religiosit	the prehistori y, and resourc	c Anasazi PI-PII occupation, e exploitation of the greater	8
Treatment Recommendations: Avoidance	shorvery marked			
5. SHPO CONSULTATIONS (for SHPO a	ind Sponsor us	se only)		
Sponsor NR Determination: eligible not eligible Sponsor Staff: Date (dd-MMM-y	e 🗋 not determine yyy): 🎾 👘	ed Applicable	Criteria: [] (a) [] (b) [] (c) [] 	(d)
Sponsor Remarks:				
				
				
SHPO NR Concurrence:	not determined איאי): <u>המל</u> שיים וב		Criteria: [] (a) [] (b) [] (c) [] HPD Log No:	(d)
Register Status: 🗌 listed on National Register 🗌 liste State Register No.:	id on State Registe	r 🔲 formal determ	nination of eligibility	
SHPO Remarks:			- XIII, 8145	
		•		_
,				_
6. LOCATION				
Source Graphics:				
🛛 USGS 7.5' (1:24,000) topo maps	rectified a	aerial photos [Scale	ə:]	
other topo maps [Scale:]	unrectified aerial p	photos [Scale;		
GPS unit GPS accuracy (choo	se one): □ < 1.0)m 🔲 1-10 m	☐ 10-100 m	
UTM Coordinates (@ center of site; at least one set of c	oordinates required	d):		
Map-based Coordinates Datum: NAD83 Zone: GPS-based Coordinates Datum: NAD83 Zone:				
Directions to Site:		1		
Town (If in city limits): State: NM County: McKa	in nig	Inway R-O-W?		
USGS Quadrangle Name		Date	USGS Code	
a a a		(w)		

PLSS Meridian	Unplatted	Township	Range	Section	1/4 Sections	Protracted?			
New Mexico									
New Mexico		T R	·						
New Mexico		т R	۱ <u> </u>	_					
New Mexico		T R	l	1		D			
7. PHYSICAL DESCRIPTION									
Site Dimensions: 37 x 39 meters Basis for Dimensions (choose one): □ estimated ⊠ measured Site Area: 1,443 sq m Basis for Area (choose one): □ estimated ⊠ measured Elevation: 7049 feet Site Boundaries Complete? (choose one): ⊠ Yes □ No (explain):									
Basis for Depti	n Determinations	≍ ≍⊠estimated ⊡sh	ovel/trowel test	s 🔲 core/auge	r tests 🔲 excavations				
🗌 roa	d or arroyo cuts	🗌 rodent burrows 🛛	other observat	ions (describe):	Illegal excavation p	its			
Observations on Subsurface Archeological Deposits:									
Local Vegetation (list species in decreasing order of dominance):									
Overst	ON: Pinyon pir	ne, juniper							
Unders	tory: sagebrush	n, snakeweed, gram	a grass, ra	bbitbrush, p	cickly pear cacti.	18 8			
Vegetation Cor	nmunity (choose	one or two): 🗌 forest	🛛 woodland	🛛 grassland 🗌	scrubland 🔲 desert scru	ubland 🔲 marshland			
🗌 othe	er community (spe	ecify);							
Topographic Lo	ocation:	bench	🗌 dune		🔲 low rise	🖾 ridge			
🗌 allu	vial fan	🗋 blowout	🗌 flood	plain/valley	mesa/butte	rockshelter			
🗌 arro	yo/wash	🔲 canyon rim	🗌 foothil	Vmountain front	🗍 mountain	Saddle			
🗌 bad	lands	cave	🗌 hill slo	pe	copen canyon floor	lalus slope			
🗋 base	e of cliff	Cliff/scarp/bluff	🛛 hill top)	🗖 plain/flat	terrace			
🗋 base	e of talus slope	constricted canyor	n 🗌 lava fl	ow (malpais)	🗌 playa				
🗌 othe	r location (describ	oe):			18				
Observations on Site Setting: site is located on a spur of an unnamed west-oriented ridge.									

8. A	SSEMBL	AGE	DATA	
------	--------	-----	------	--

Assemi	plage Content (all components):	Prehisto	oric Ceram	nics			Other Ar	tifacts and Materials:
Lithics:			whole ceramic vessels					Done tools
	🖾 lithic debitage		🛛 diagn	ostic cera	mics		faunal remains	
	C chipped-stone tools		🛛 other	prehistoria	c ceramic	÷	macrobotanical remains	
	l diagnostic projectile points	Historic	Artifacts:		12			perishable artifacts
	non-local lithic material		🗌 diagn	ostic glass	artifacts			ornaments
	Stone-tool manufacturing items		other	glass artif	acts			🗌 figurines
1991	(cores, hammerstones, etc.)		🔲 diagn	ostic meta	l artifacts			mineral specimens
	⊠ ground-stone tools		🗌 other	metal artif	acts	ж.		X architectural stone
	other stone tools		🗌 whole	ceramic v	/essel			burned adobe
	6 R		🗌 diagn	ostic cerar	nics			I fire-cracked rock/burned caliche
	*	6.	other	historic ce	ramics	π.		2 X
2	Other items (specify):							۵. ۲
Assemb	lage Size (all components):			— estimat	ed freque	ncy ——		
arti	fact class	0	1s	10s	100s	1000s	>10,000) *Counts (if <100)
	lithic artifacts (choose one (include debilage)):			\boxtimes			
	prehistoric ceramics (choose one):				\boxtimes		
A	historic artifacts (choose one): 🛛						<u>o</u>
	total assemblage size (choose one)): 🗌				\boxtimes		
Dating F	Potential: 🗌 radiocarbon	🗌 den	drochrono	logy	🛛 arche	eomagnet	lsm	obsidian hydration
	relative techniques (e.g. seriation,	diagnosti	cs, etc.)	🗌 oth	ter metho	ds (specif	y):	-
Assemb	lage Remarks: 5,000+ ceramic s	sherds : n white	includir as. Kana	ng types -a grev	such a	s Kiatu and Co	thlanna olidge (, Red Mesa, Gallup, corrugated, Puerco black
	on red, and numerous other u	inident	ified wh	ite, gr	ey, and	red wa:	re shere	ds too small to type.
	Lithic artifacts numbered 50 exhausted cores, hammer stor	10+ and les, and	include d unifac	e and b	s of al. iface to	l stage: ools of	petrif:	ied wood, Zuni spotted,
	grey, brown, tan, and black	chert,	and ros	e, brow	n, grey	, and wl	nite qua	artz. DCRM archaeologists
	altered sandstone rock fragm	ents.		and sand	us come i		agments	and 1004 IIIe-oracked and
9.	9. CULTURAL/TEMPORAL AFFILIATIONS							
TOTAL	UMBER OF COMPONENTS DEFINI	ED: 1						
001100					8			

COMPONENT #1 (EARLIEST)

Cultural Affiliation: Anasazi Prehistoric

Depression

Midden

Hearth

Yes

Yes

Yes

2

1

1

2,3

4

5

Kiva depressions measuring 6m in diameter. Feature 2 has been disturbed by illegal potting activities which have left an excavated pit in the

Midden measuring 16 x 10m with a scattering of associated ceramics.

Collapsed hearth measuring 1m in

diameter consisting of ash-stained soil ringed by oxidized sandstone

middle of the feature.

fragments.

Basis for Temporal Affiliation	is (choose one) at or feature typ	es ⊠l	pplicable based on analy	based on association based on association based on association based on the second second based on the sec	ted chronometric blage data or arcl	data or historic records heological experience
*Period of Occupation: (*se	e NMCRIS Gui	delines for valid	l periods, defa	ult occupation dates,	and phase/compl	ex names)
	Perio	od Name			Begin Date	Enu Date
Earliest Period:	Pueb	lo I		16	700 AD	1100 AD
Latest Period (if any): <u>Pueb</u>	lo II				
Dating Status: 🗌 radioc	arbon 🗌	dendrochronol	ogy 🗌 ai	chaeomagnetism	🔲 obsidian hy	dration
I relative techniques	(e.g. seriation,	diagnostics, et	c.) 🗌 otl	ner methods (specify)		543
Basis for Cultural/Temporal A	ffiliation: Hab	itation sit	e with temp	orally diagnosti	c features a	nd artifacts.
Component Type: <u>Mu</u>	ltiple resi	dence	-			
Remarks: Habitatio	on site with	n residentia	al structur	e and associated	features.	
*Associated Phase/Complex	Name(s):	-				
					8	
COMPONENT #2			<u> </u>			
Cultural Affiliation:		·				
Basis for Temporal Affiliation	s (choose one)	: 🛄 nota	pplicable	based on associat	ed chronometric	data or historic records
associated diagnostic artifac	t or feature type	es 🗌 t	ased on analy	tically derived assemi	blage data or arch	neological experience
*Period of Occupation: (*se	e NMCRIS Guid	felines for valic	l periods, defa	ult occupation dates, a	and phase/comple	ex names)
	Perio	d Name		6) 	Begin Date	End Date
Earliest Period:	1. L. V. V.				-	
Latest Period (if any):	-				
Dating Status:	arbon 🗌 🤅	dendrochronolo	ogy 🗌 ar	chaeomagnetism	🗌 obsidian hyd	dration
relative techniques (e.g. seri	ation, diagnosti	cs, etc.) [dther metho	ds (specify):	2 2	
Basis for Cultural/Temporal A	ffiliation:					
Component Type :	17					
Remarks:					—	
*Associated Phase/Complex I	Name(s):		1			
	66 2027 5		5			
IU. LEATORE DATA	2)		1			
(see NMCRIS User's guide for a	a list of valid fea	iture types)				
	Reliable	#	Assoc.		×.	
Feature Type	ID ?	Observed	Comp. #s	Feature ID, Notes	•	
Roomblock	Yes	1	1	Unit pueblo mea consisting of a buried rooms.	asuring 19 x at least ten	14m to twelve

NMCRIS 2000 vers. 1/00

Feature Remarks:

11. REFERENCES

Written Sources of Information: DCRM 2013-55: A Cultural Resources Inventory of Five Proposed Borrow Pits for <u>MWH Global in the NECR Mine Area, McKinley County, New Mexico. Dinetahdoo Cultural Resources</u> <u>Management, Huerfano, NM.</u>

Additional Sources of Information:

12. NARRATIVE DESCRIPTION

LA177468 is an Anasazi PI-PII habitation with five recorded features.

Feature 1 is a collapsed unit pueblo measuring 19 x 14m and consisting of scattered sandstone blocks and slabs covering at least ten to twelve rooms. No wall alignments were visible; however, the rubble mound covers a considerable amount of the ridge spur.

Located in the northern portion of feature 1 is feature 2, a kiva depression measuring 6m in diameter. Feature 2 is 1m deep and has been disturbed by illegal potting activities which have left an excavated pit in the middle of the feature. Feature 2 is composed of scattered sandstone blocks and slabs.

Feature 3 is a kiva depression measuring 6m in diameter, also consisting of scattered sandstone blocks and slabs. Feature 3 has not been disturbed by illegal activities.

Feature 4 is a midden in the east site area measuring 16 x 10m which contains 5,000+ ceramic sherds, including Kiatuthlanna, Red Mesa, Gallup, Escavada, and Puerco Black-on-whites, Kana-a grey, Chaco and Coolidge corrugated, Puerco Black-on-red, and numerous unidentified white, grey, and red ware sherds too small to type. Lithic artifacts numbered 500+ and included flakes representing all stages of reduction, tested and exhausted cores, hammerstones, and uniface and biface tools. Materials include petrified wood; Zuni spotted, grey, brown, tan, and black chert; and rose, brown, grey, and white quartz. DCRM archaeologists also identified several one-hand and two-hand sandstone mano fragments and 100+ fire-cracked and -altered sandstone rock fragments. Many of the artifacts being redeposited down gradient to the south by natural erosional processes. A trench measuring 13 x 2m has been excavated into the eastern side of the feature. The trench is most likely associated with illegal potting activities.

Feature 5 is a concentration of fire-cracked and -altered sandstone blocks and slabs measuring 1m in diameter. It may be the remains of a hearth.

No other features were observed or recorded. A bladed road on the eastern side of a fence line, outside the MWH property boundary, may have obliterated a portion of the site. An in-field, non-intrusive assessment determined that LA177468 may contain subsurface cultural materials up to 4m in depth...

13. SITE RECORD ATTACHMENTS

Site location map (USGS 7.5' topo; required) ⊠ sketch map or site plan (required) □ continuation forms? □ other materials (itemize):

LABORATORY OF ANTHROPOLOGY SITE RECORD

1. IDENTIFICATION & OWNERSHIP
LA Number: <u>177469</u> (contact ARMS for site registration) Site Name(s): <u>MWH4</u> Other Site Number(s): Agency Assigning Number:
NM-Q-20-61 Navajo Nation
Current Site Owner(s): <u>Private</u> Site Type: <u>Structural</u> Occupation Type: <u>Prehistoric</u>
2. RECORDING INFORMATION
NMCRIS Activity No.: <u>128978</u> Field Site Number: <u>MWH4</u> Site Marker? ⊠ (specify ID#): <u>IA177469</u> Recorder(s): <u>J. Begay</u>
Agency: Dinetahdoo CRM Recording Date (dd-MMM-yyyy): 24-Oct-2013
Site Accessibility (choose one): 🖾 accessible 🗋 buried (sterile overburden) 🗍 flooded 🗍 urbanized 🗍 not accessible Surface Visibility (% visible; choose one): 🗋 0% 🗍 1-25% 🗍 26-50% 🗍 51-75% 🖾 76-99% 🗍 100% Remarks:
Recording Activities: Sketch mapping
instrument mapping (e.g., total station mapping)
surface collection (controlled or uncontrolled)
in-field artifact analysis
L other activities (specify):
Description of Analysis or Excavation Activities: Feature measurement and identification, ceramic identification, lithic artifact and materials analyzed in field; no excavation.
Photographic Documentation: color digital images 2 site overviews
Surface Collections (choose one):
uncontrolled surface collection
□ controlled (sample: <100%) □ controlled (complete: 100%)
other method (describe):
Records Inventory: Image: Site location map Image: Site location
Repository for Original Records: Dinetahdoo CRM
Repository for Collected Artifacts:
3. CONDITION
Archaeological Status: 🔲 surface collection 🗍 test excavation 📄 partial excavation 📄 complete excavation
Disturbance Sources: 🔲 wind erosion 🛛 water erosion 🖾 bioturbation 🖾 vandalism 🔲 construction/land development
C other source (specify):
Vandalism: 🔲 defaced glyphs 🔲 damaged/defaced building 🖾 surface disturbance 🖾 manual excavation 🖾 mechanical excavation 🗌 other vandalism (specify):
Percentage of Site Intact (choose one): 🔲 0% 🛄 1-25% 🛄 26-50% 🖾 51-75% 🛄 76-99% 🔲 100%
Observations on Site Condition: Site has been heavily impacted by a large bulldozer out that has removed
portions of features 1 and 2.

1

4. RECOMMENDATIONS (for Performer/Reco	order use only	y)		
National Register Eligibility (choose one): ⊠ eligi Applicable Criteria: □ (a) □ (c) □ (b) ☑ (d)	ble 🗌] not eligible	not sure	
Basis for Recommendation: Site can provide data re	garding the	prehistoric A	nasazi PI-PII occup	pation,
settlement patterns, subsistence strategies, an Assessment of Project Impact: Site will be extensive	ev marked to	avoid distur	t the greater Pineo pance, no impact.	late region.
Treatment Recommendations: Avoidance				
5. SHPO CONSULTATIONS (for SHPO and St	onsor use o	nlv)		
Sponsor NR Determination:	ot determined	Applicable Crite	oria:□(a)□(b)□] (c) [] (d)
Sponsor Staff: Date (dd-MMM-yyyy):				
Sponsor Remarks	day mo	ntn yea	r	
		1.		125
	E.			
·				
			2 	
SHPO NR Concurrence: 🗌 eligible 🗌 not eligible 🗋 not	determined	Applicable Crite	erla: 🗌 (a) 🗌 (b) 🗖] (c) 🗌 (d)
HPD Staff: Date (dd-MMM-yyyy):		nh ¹ J La J yea	HPD Log No:	6 1 5 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Register Status: 🗌 listed on National Register 🔲 listed on St	tate Register 🔲	formal determinati	on of eligibility	
State Register No.:				
SHPO Remarks:		C (1)		1.
a				
				······
C LOCATION				
6. LOCATION				
Source Graphics:	Tractified period	nhoton (Coolor	1	
Cooler tens mans (Scaler 1 Durrot	recimed aerial	priotos [Scale:		
			100 m	
Crostinit Groatculacy (choose one)	, <u> </u>			
UTIM Coordinates (@ center of site; at least one set of coordinates Datum; NAD93 Zone;	ites required):			
3PS-based Coordinates Datum: NAD83 Zone:				
Directions to Site:		A		
	10.0	ignway R-O-W7 [
rown (if in city limits): State: NM County: McKinley	140 - P			
JSGS Quadrangle Name	Dat	e (JSGS Code	·
	2			

PLSS Meridian	Unplatted	Township	Range	Section	1/4 Sections	Protracted?
New Mexico						
New Mexico		т	R	10		
New Mexico		т	R			
New Mexico		т	R	_		
7. PHYS	ICAL DESCI	RIPTION			2	а 1944
Site Dimension Site Area: <u>1,3</u> Site Boundarie Basis for Site I	ns: <u>43</u> x <u>31</u> m <u>33</u> sq m Basis is Complete? (o Boundaries: perty lines rosional Enviro er process (desc Depth of Arche subsurface depo th of Deposits: Determination d or arroyo cuts on Subsurface d	neters Basis for Differ Area (choose one): for Area (choose one): Yes ishoose one): Ishoose one): ishoose one one one one one one one one one on	mensions (choo Comparison (ch	se one): se one	stimated I measured Elevation: <u>6973</u> feet odern features or ground o ual I no deposition (on termined tratified subsurface deposition tratified subsurface deposition tratified subsurface deposition for the features I excavations filegal excavation for	listurbance bedrock) ts present pits
Local vegetatio	on (list species li	n decreasing order or d	ominance):			
Unders Unders Vegetation Cor	ntory: <u>pinyon p</u> ntory: <u>sagebrus</u> n munity (choos er community (sp	sh, snakeweed, gra e one or two): [] forest pecify):	ama grass, ra 🛛 woodland	bbitbrush, p grassland	rickly pear cacti.] scrubland 🗌 desert scr	ubland 🔲 marshland
Topographic Lo allur arro bad base base	ocation: vial fan yo/wash lands e of cliff e of talus slope	 □ bench □ blowout □ canyon rim □ cave □ cliff/scarp/bluff □ constricted cany 	☐ dune ☐ flood ☐ foothi ⊠ hill slo ☐ hill to ron ☐ lava f	plain/valley Il/mountain front ope p low (malpais)	 ☐ low rise ☐ mesa/butte ☐ mountain ☐ open canyon floor ☐ plain/flat ☐ playa 	 ☑ ridge ☐ rockshelter ☐ saddle ☐ talus slope ☐ terrace
L othe	r location (desci	ribe):			â	

8. ASSEMBLAGE DATA

Particular and a second s								
Assemblage Content (all components):	oric Ceram	Ceramics Oth			Other Artifac	other Artifacts and Materials:		
Lithics:		whole	ceramic	vessels	bone tools			
Iithic debitage	Iithic debitage			mics		faunal remains		
chipped-stone tools		🛛 other i	orehistor	ic ceramic	cs	macrobotanical remains		
diagnostic projectile points	Historic Artifacts:						perishable artifacts	
non-local lithic material	thic material						ornaments	
Stone-tool manufacturing items		l other o	alass arti	facts		☐ figurines		
(cores, hammerstones, etc.)		□ diagno	ostic met	al artifacts	S	mineral specimens		
around-stone tools	-	□ other r	netal arti	ifacts			architectural stone	
\square other stone tools		T whole	ceramic	vessel			burned adobe	
			stic cera	mics			fire-cracked rock/burned caliche	
			nistoric c	eramics				
			notorio o	orannoo				
Assemblage Size (all components):	<u>.</u>		- estima	ted freque	ency —		а	
artifact class	0	1s	10s	100s	1000s	>10,000	*Counts (if <100)	
lithic artifacts (choose one) (include debitage)								
prehistoric ceramics (choose one)	: 🗆			\boxtimes				
historic artifacts (choose one)				· 🔲			<u>0</u>	
total assemblage size (choose one):				\boxtimes				
Dating Potential:	den den	drochronolo	ogy	🛛 arch	neomagnet	ism 🗌	obsidian hydration	
relative techniques (e.g. seriation, o	liagnosti	cs, etc.)] ot	her meth	ods (specit	ý):	2	
Assemblage Remarks: 200+ ceramic she	rds, in	ncluding	Red Me	sa, Gal	llup, Es	cavada, an	d Puerco Black-on-	
red ware sherds too small to	type.	Lithic a	artifac	ts numb	pered 50	+ and incl	uded flakes	
representing all stages of re Zuni Spotted grey and white	eductio	on, teste	ad core	s, and	hammers	tones. Mat	erials consisted of grev guartz Four mano	
fragments were also observed	within	n the mic	den as	well a	as 100+ :	fragments	of fire-cracked and	
altered rock.				6				
9. CULTURAL/TEMPORAL AFFI	IATIO	NS			- 14480 - P. 167			
TOTAL NUMBER OF COMPONENTS DEFINE	D: <u>1</u>							
COMPONENT #1 (EARLIEST)						ī.		
Cultural Affiliation: Anasazi Prehistoric						<i>4</i> (
Basis for Temporal Affiliations (choose one):		not applica	able	based	d on assoc	iated chronor	netric data or historic records	
associated diagnostic artifact or feature type	s 	⊠ based	on analy	tically de	rived asse	mblage data	or archeological experience	
"Period of Occupation: (*see NMCRIS Guide	elines to	r valid perio	ods, deta	ult occup	ation dates	s, and phase/	complex names)	
Perioc	I Name					Begin Da	te End Date	
Earliest Period: <u>Puebl</u>	<u>0 I</u>					700 AI) 1100 AD	
Latest Period (if any): Puebl	<u>o II</u>						• •	
Dating Status: 🗋 radiocarbon 📋 d	endroch	ronology	🗌 ai	rchaeoma	agnetism	Dobsidi 🗋	an hydration	
Interative techniques (e.g. seriation, d	tation	site wit	LI Ou		diamon	y) tic feature	es and artifacte	
Busis for outdraw temporal Attination. Addr	LACION	STCG MT	orr coult	OTATTA	aragnos	LIG LEACUL	AIMODIC 2000 Hore 4/00	
							NUNOTNO ZUDU VEIS, 1/00	

Component Type: Multiple residence						
Remarks: Habitation site with residential structure and associated features.						
*Associated Phase/Complex Name(s):						
	2					
COMPONENT #2						
Cultural Affiliation:						
Basis for Temporal Affiliations (choose one):	ated chronometric data or historic records					
associated diagnostic artifact or feature types	nblage data or archeological experience					
*Period of Occupation: (*see NMCRIS Guidelines for valid periods, default occupation dates	, and phase/complex names)					
Period Name	Begin Date End Date					
Earliest Period:						
Latest Period (if any):	······································					
Dating Status: I radiocarbon I dendrochronology I archaeomagnetism	obsidian hydration					
🗌 relative techniques (e.g. seriation, diagnostics, etc.)	- 					
Basis for Cultural/Temporal Affiliation:						
Component Type:						
Remarks:						
*Associated Phase/Complex Name(s):						

10. FEATURE DATA

(see NMCRIS User's guide for a list of valid feature types)

Feature Type	Reliable ID ?	# Observed	Assoc. Comp. #s	Feature ID, Notes
Roomblock	Yes	1	1	A disturbed roomblock measuring 19 x 11m with two walls exposed in a bulldozer cut.
Midden	Yes	1.	2	A midden measuring 9 x 5m that has also been impacted by the bulldozer cut
			,	
· · · · · · · · · · · · · · · · · · ·				······································

Feature Remarks:

11. REFERENCES

Written Sources of Information: DCRM 2013-55: A Cultural Resources Inventory of Five Proposed Borrow Fits for MWH Global in the NECR Mine Area, McKinley County, New Mexico. Dinetahdoo Cultural Resources Management, Huerfano, NM.

Additional Sources of Information:

LA 177,469

12. NARRATIVE DESCRIPTION

LA177469/NM-Q-20-61 is an Anasazi PI-PII habitation with two recorded features.

Feature 1 is a disturbed roomblock measuring 19 x 11m and consisting of scattered sandstone slabs and blocks and two walls exposed in a bulldozer cut. Both walls consist of unshaped sandstone slabs and blocks set in mud mortar, three courses high. The cut extends 1.5m below the surface at its deepest point. Feature 1 contained a minimum of six rooms before the feature was vandalized.

Feature 2 is a midden measuring 9 x 5m that has also been impacted by the bulldozer cut. It contains 200+ sherds, including Red Mesa, Gallup, Escavada, and Puerco Black-on-whites, Chaco and Coolidge corrugated, Puerco Black-on-red, and unidentified white, grey, and red ware sherds too small to type. Lithic artifacts numbered 50+ and included flakes representing all stages of reduction, tested cores, and hammerstones of Zuni spotted, grey, and white chert; petrified wood; and rose, brown, and grey quartz. Four mano fragments were also observed within the midden as well as 100+ fragments of firecracked and -altered rock. Feature 2 has been disturbed on the southeast side by the bulldozer cut that impacted feature 1. As a result of the disturbance, a thin lens of ash-stained soil was exposed in the north wall of the cut.

No other features were identified or recorded. DCRM archaeologists were unable to determine when the impact to the site occurred, although it is believed that 50% of the site remains undisturbed. An in-field, non-intrusive assessment determined that LA177469/NM-Q-20-61 does retain subsurface cultural materials possibly up to 4m in depth.

13. SITE RECORD ATTACHMENTS

i site location map (USGS 7.5' topo; required) is sketch map or site plan (required) in continuation forms? ☐ other materials (itemize): _____



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LA 177466 Looking South

LA 177466 Looking East

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LA 177467 Looking North

LA 177467 Looking West





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LA 177468 Looking North

LA 177468 Looking West



LA 177469 Looking North



LA 177469 Looking West