



APPENDIX I

CULTURAL RESOURCES

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1 I.1 CULTURAL RESOURCES

2 I.1.1 Cultural Resource Surveys

3 In addition to previously identified resources, an archeological survey and ethnographic
4 field study for the Alternative 3A/3A-1 and 3B areas was conducted in the summer of
5 2017 to further characterize the archeological and ethnographic record and identify
6 resources. The ethnographic study included areas associated with Alternative 3C as
7 well. As a cooperating agency, for the purposes of complying with National Historic
8 Preservation Act (NHPA) Section 106, 36 Code of Federal Regulations (CFR) 800.4,
9 the U.S. Fish and Wildlife Service (USFWS) felt that the existing archaeological record
10 was sufficient to characterize the potential archaeological historic properties within in
11 the area of potential effects (APE) and, therefore, no archaeological surveys were
12 conducted for the Alternative 3C area. Results of the study are expected to be reported
13 during the fall of 2017.

14 I.1.2 Cultural Resources Regulations

15 Attention to cultural resources is necessary for the Air Force to comply with a host of
16 federal laws and regulations, and Executive Orders (EOs), including:

- 17 • The NHPA of 1966, as amended. Under NHPA (Public Law 89-665; 54 United
18 States Code [USC] 300101 et seq.), the Air Force is required to consider the
19 effects of its undertakings on historic properties listed or eligible for listing on the
20 NRHP and to consult with interested parties regarding potential impacts. The
21 regulatory NHPA Section 106 compliance process consists of four primary
22 stages. These include initiation of the Section 106 process (36 CFR 800.3);
23 identification of historic properties (36 CFR 800.4), which includes a reasonable
24 and good faith effort to identify historic properties potentially affected by a
25 proposed action; assessment of adverse effects (36 CFR 800.5), which
26 determines whether the action would affect historic properties and if effects to
27 those properties might be adverse; and resolution of adverse effects (36 CFR
28 800.6) between affected and consulting parties such as the State Historic
29 Preservation Officer (SHPO), the Advisory Council on Historic Preservation,
30 Indian tribes, and interested individuals. Additional stipulations are provided for in
31 the NHPA should efforts fail to resolve adverse effects during this process (36
32 CFR 800.7).
- 33 • The Department of Defense's (DoD's) Native American and Alaska Native Policy,
34 20 October 1998. DoD frames this policy in terms that emphasize the
35 responsibility of DoD personnel to consult with tribal governments on a
36 government to government basis very early in the decision-making process. This
37 policy memorandum requires an effort to increase understanding between tribes
38 and DoD personnel and to assess tribal positions on issues with the potential to
39 significantly affect protected tribal resources, tribal rights, and Native American

1 lands (1998). Also applicable is DoD Instruction (DODI) 4710.02, DoD
2 Interactions with Federally Recognized Tribes, September 14, 2006. This DODI
3 strengthens and elaborates on the 1998 policy. Air Force Instruction (AFI) 90-
4 2002, Air Force Interactions with Federally Recognized Tribes, implements DODI
5 4710.02. It directs Air Force installations to build relationships and conduct
6 consultation with federally recognized Native American/Alaska Native tribes,
7 bands, nations, pueblos, or communities as required by federal laws and
8 regulations,

- 9 • The Native American Graves Protection and Repatriation Act of 1990 (25 USC
10 3001 et seq., as amended). This law addresses the protection of Native
11 American burial sites and regulates the removal and study of human remains,
12 funerary objects, sacred objects, and items of cultural patrimony on federal and
13 tribal lands or by institutions receiving federal funding.
- 14 • DODI 4715.03, Environmental Conservation Program, DoD Instruction 4715.16,
15 Cultural Resources Management, and AFI 32-7065, Cultural Resources
16 Management, outline and specify procedures for Air Force cultural resource
17 management programs.

18 Other federal laws and regulations governing cultural resources include:

- 19 • Antiquities Act of 1906
- 20 • Historic Sites Act of 1935
- 21 • Archaeological and Historic Preservation Act of 1974
- 22 • Archaeological Resources Protection Act of 1979
- 23 • American Indian Religious Freedom Act of 1978
- 24 • 36 CFR 79, Curation of Federally Owned and Administered Archaeological
25 Collections
- 26 • 43 CFR 7, Protection of Archaeological Resources
- 27 • 36 CFR 60, National Register of Historic Places
- 28 • 36 CFR 63, Determinations of Eligibility for Inclusion in the National Register

29 Cultural resource-related EOs that may govern the Proposed Actions include:

- 30 • EO 11593, Protection and Enhancement of the Cultural Environment
- 31 • EO 13007, Indian Sacred Sites
- 32 • EO 13175, Consultation and Coordination with Indian Tribal Governments
- 33 • EO 13287, Preserve America

34 **I.1.3 Cultural Resource Studies and Sites**

35 The following tables show cultural resource studies and sites identified within the NTTR
36 Land Withdrawal expansion areas.

Table I-1. Previous Studies Conducted Within the Alternative 3A and 3A-1 – Range 77 – EC South Withdrawal Area

Year	Author	Document Title
2016	Edwards, Susan R., and Jeffrey R. Wedding	A Class III Cultural Resource Inventory of Temporary Work Space and a New Communications Shelter at the Tolicha Peak Access Gate on the Nevada Test and Training Range (NTTR) in Nye County, Nevada
2011	Baker, Jeffrey I., and Annette J. Thompson	A Class III Cultural Resources Survey of Valley Electric Distribution Lines from Beatty to Tolicha Peak, Nye County, Nevada
2009	Stadler, Scott	Weather Station Near Beatty, Nye County, Nevada
1998	Blair, Linda M.	A Cultural Resource Investigation for Great Basin Water Company, Clark County, Nevada
1997	Holz, Barbara	A Class III Cultural Resources Reconnaissance of the Proposed Underground Test Area ER-EC-5 Pad, Borrow Pit and Access Road on the Nellis Air Force Range EC South and Lands Administered by the Bureau of Land Management, Nye County, Nevada
1992	Buck, Paul E.	A Class III Cultural Resources Reconnaissance of Four Proposed USGS Seismic Stations on BLM Tonopah Resource Area Lands, Nye County, Nevada
1991	Buck, Paul E., Hal Rager, Diane Winslow, and Scott Ferguson	A Class III Cultural Resources Reconnaissance of 11 Proposed USGS Seismic Stations in Southern Nevada, in Support of the Yucca Mountain Site Characterization Activities
1990	Blair, Linda M.	A Cultural Resource Investigation of a Proposed Oil Well Location for Myjo Oil Corporation in Nye County, Nevada
1987	Waski, Margaret, and Diane Ross	USAF Road Right-of-Way to Tolicha Peak
1984	Burke, Tom	West Transvaal Well (N6-4-4796)
-	-	Unknown; per BLM, USFWS, and Nellis AFB

Table I-2. Identified Archeological Sites Within the Alternative 3A and 3A-1 Range 77 – EC South Withdrawal Area

State No.	Age	Site Description	NRHP Eligibility
26NY10971	Historic	Historic mine shaft, prospect pits, and associated ca. 1900-1945 debris	Not eligible

Table I-3. Previous Studies Conducted Within the Alternative 3B Range 64C/D and 65D and Administrative Incorporation Withdrawal Area

Year	Author	Document Title	Associated Expansion Lands
2013	Riddle, Jennifer E.	A Class III Cultural Resource Investigation of Material Pit NY 07-04 and the NDOT Right-of-Way on US-95 from Milepost NY 8.14 to Milepost CL 120.44 in Nye and Clark Counties, Nevada	Alt 3B

Table I-3. Previous Studies Conducted Within the Alternative 3B Range 64C/D and 65D and Administrative Incorporation Withdrawal Area

Year	Author	Document Title	Associated Expansion Lands
2010	Eskenazi, Suzanne, and Christopher Harper	Archaeological Survey for the Proposed Mercury to Indian Springs Fiber Optic Line, Clark and Nye Counties, Nevada	Alt 3B
2010	Myhrer, Keith	Silver Flag Alpha Training Range Survey Nellis Air Force Base, Nevada: Including Research for the Las Vegas and Tonopah Railroad	Alt 3B
2009	Leavitt, Robert M., and Jeffrey L. Baker	A Class III Cultural Resource Inventory of Proposed Sewage Disposal Pond and Associated Facilities on Clark County Water Reclamation District Property and Public Rights of Way Indian Springs	Alt 3B
2007	Myhrer, Keith	An Inventory of 111 Acres for a Bypass Road and Staging Area at Creech Air Force Base, Clark County, Nevada	Alt 3B
2007	Lennon, Thomas J.	A Class III Cultural Resource Inventory of Approximately 40.3 Miles for the Stirling Mountain Substation to Northwest Substation 230kV Transmission Line Project in Nye and Clark Counties, Nevada	Alt 3B
2007	Leavitt, Robert M.	A Cultural Resources Survey of A 240 Acre Parcel in Las Vegas Valley	Alt 3B
2001	Duke, Curt	(Unknown)	Alt 3B
1996	Spaulding, W. G.	Indian Springs Air Force Auxiliary Field Survey	Alt 3B
1996	Desert Research Institute	Indian Springs to Cedar Pass Fiber Optic Line	Alt 3B
1991	Bergin, Kathleen Ann	A Cultural Resource Inventory of the Indian Springs Landfill Expansion Project Area, Indian Springs Air Force Auxiliary Field, Clark County, Nevada	Alt 3B
1991	Sheets, Robert S.	Indian Springs Fiber Optic Project	Alt 3B
1989	Stornetta, Susan	Nevada Bell Fiber Optic Cable Burial Route	Alt 3B
1988	Leavitt, R., K. Knight, and T. H. Turner	Cultural Resource Report NDOT-CL030-87R	Alt 3B
1988	Dojaquez, Katherine Cheryl, and Ronald L. Reno	A Class III Cultural Resources Reconnaissance of Radiological Monitoring Stations For the Yucca Mountain Project, Clark and Nye Counties, Nevada	Alt 3B
1987	Leavitt, Robert M.	NDOT Reconnaissance Inventory of US 95 Right-of-Way	Alt 3B
1987	Myhrer, Keith, Tom Cook, and Dennis Samuelson	Material Pits Near Indian Springs	Alt 3B
1984	Knight, Kenneth C.	Improvement and Maintenance on US 95, W.O. 20726	Alt 3B

Table I-3. Previous Studies Conducted Within the Alternative 3B Range 64C/D and 65D and Administrative Incorporation Withdrawal Area

Year	Author	Document Title	Associated Expansion Lands
1984	Knight, Kenneth C., and Robert M. Leavitt	Improvements on US 95, W.O. 20726	Alt 3B
1981	Crownover, Christopher Scott	An Archaeological Survey of Targets and Support Facilities of the Nellis Air Force Bombing and Gunnery Ranges in Nye, Lincoln, and Clark Counties, Nevada	Alt 3B
1979	Myhrer, Keith	Final Report on the 1978 Archaeological Investigations of the Nellis AFB Bombing and Gunnery Ranges	Alt 3B
1978	Rolf, Stanton	Proposed Indian Springs Prison Facility	Alt 3B
1988	Rolf, Stanton	Construction of Proposed Metal Stake and Barbed Wire Western Boundary Fence for USFWS	Alt 3B & Alt 3C

Table I-4. Identified NRHP Eligible Archeological Sites Within the Alternative 3B Range 64C/D and 65D and Administrative Incorporation Withdrawal Area

State No.	Age	Site Description	NRHP Eligibility
26CK1649	Historic	Las Vegas and Tonopah Railroad grade ca. 1906-1919	Eligible
26CK3906	Prehistoric and Historic	Flaked and ground stone scatter and small scatter of historic domestic debris	Eligible
26CK4700	Prehistoric	Hearth feature and associated flaked stone	Unevaluated
26CK5267	Prehistoric	Lithic scatter	Undetermined
26CK5268	Prehistoric	Flaked and ground stone scatter	Undetermined

Table I-5. Previous Studies Conducted Within the Alternative 3C – Alamo Withdrawal Area

Year	Author	Document Title
2016	Lodge, Spencer	Fire on the Mountain: Roasting Pits in the Sheep Range on Desert National Wildlife Refuge
2015	Hall, Jeremy, Spencer Lodge, April VanWyke, Mary Parrish, Heidi Roberts	Remote Sensing and Evaluation of Agave Roasting Pits in the Northern Portion of the Sheep Mountain Range National Register Archaeological District, Lincoln County, Nevada
2012	Harper, Christopher	Recordation and Evaluation of 20 Archaeological Sites Within the Desert National Wildlife Refuge Complex, Clark County, Nevada

Table I-5. Previous Studies Conducted Within the Alternative 3C – Alamo Withdrawal Area

Year	Author	Document Title
2008	Sprowl, Kathleen	National Cooperative Soil Survey Southern Nevada Desert NWR
2007	Wriston, Teresa	Desert Dry Lake Archaeological and Geomorphological Survey, North of Las Vegas, Nevada
1995	Martin, William W., and Craig S. Smith	A Class III Cultural Inventory of Five Proposed Sites Associated with Nellis Air Combat Training System, Nellis Air Force Base, Nye, and Clark Counties, Nevada
1991	Botkin, Steve	A Cultural Resources Inventory of Thirteen Proposed Water Monitoring Wells on the Desert National Wildlife Refuge, Lincoln County and Clark County, Nevada
1989	Hindrickx, Louis, and Kevin Rafferty	A Cultural Resource Investigation of a Fence Line and Water Containment Facility in the Pahranaagat National Wildlife Refuge, Pahranaagat Valley, Lincoln County, Nevada
1988	Rafferty, Kevin	A Cultural Resources Inventory of Three Drill Well Areas in the Desert Lake Playa Area, Lincoln County, Nevada
1988	Rolf, Stanton	USFWS Refuge Boundary Fence 3.9 Miles Western Boundary Extension
1987	Rafferty, Kevin	A Cultural Resource Inventory of Two Well Drill Areas on the Desert National Wildlife Range, Clark County, Nevada
1986	Rolf, Stanton	USFWS Refuge Boundary Fence
1983	Holmer, Richard N.	Prehistoric and Historic Settlement in the Southeastern Great Basin: the MX Secondary Impact Survey
1988	Rolf, Stanton	Construction of Proposed Metal Stake and Barbed Wire Western Boundary Fence for USFWS

Table I-6. Identified Eligible Archeological Sites within the Alternative 3C – Alamo Withdrawal Area

State No.	Age	Site Description	NRHP Eligibility
26CK4411	Prehistoric	White Rock Canyon Petroglyphs: three petroglyph panels on three boulders, two of which exhibit grinding surfaces and one CCS flake.	Eligible
26CK7159	Prehistoric	White Rock Canyon Agave Roasting Pits Site: three agave roasting pits and two flakes.	Eligible
26CK7160	Prehistoric and historic	White Rock Canyon Cabin and Roasting Pits: Prehistoric component of the site consists of roasting pit features and associated lithic scatter; The historic component consists of a cabin, associated debris, and mining features.	Eligible
26LN2224	Prehistoric	Lithic scatter.	Eligible
26LN2225	Prehistoric	Flaked and ground stone scatter.	Eligible
26LN2227	Prehistoric	Lithic scatter.	Eligible

Table I-6. Identified Eligible Archeological Sites within the Alternative 3C – Alamo Withdrawal Area

State No.	Age	Site Description	NRHP Eligibility
26LN2228	Prehistoric	Flaked and ground stone scatter.	Eligible
26LN2230	Prehistoric	Three hearth features and associated flaked stone scatter.	Eligible
26LN2231	Prehistoric	Four hearth features and associated ground and flaked stone.	Eligible
26LN2232	Prehistoric	Hearth feature and associated ground and flaked stone.	Eligible
26LN2234	Prehistoric	Lithic scatter.	Eligible
26LN2235	Prehistoric	Lithic scatter.	Eligible
26LN2254	Prehistoric and historic	Prehistoric component includes ground and flaked stone artifacts and hearth features; historic component includes ranching-related and well maintenance debris dating ca. 1880-1950.	Eligible
26LN2257	Prehistoric	Lithic scatter.	Eligible
26LN2258	Prehistoric	Flaked stone, possible incised stone, ground stone, and fire-affected rock scatter.	Eligible
26LN2263	Prehistoric	Flaked and ground stone scatter.	Eligible
26LN3484	Prehistoric	Unnamed rockshelter at the base of the East Desert Range with a midden apron and associated flaked and ground stone artifacts.	Eligible
26LN4051	Prehistoric	Quartzite and CCS cobble quarry.	Eligible
26LN4680	Prehistoric	Lithic scatter.	Unevaluated
26LN4681	Prehistoric	Lithic scatter.	Unevaluated
26LN4682	Prehistoric	Lithic scatter.	Unevaluated
26LN4683	Prehistoric	Lithic scatter.	Unevaluated
26LN4684	Prehistoric	Flaked and ground stone scatter.	Unevaluated
26LN4685	Prehistoric	Flaked and ground stone scatter.	Unevaluated
26LN4686	Prehistoric	Flaked and ground stone scatter and two rock cairn features.	Unevaluated
26LN4687	Prehistoric	Lithic scatter.	Unevaluated
26LN4689	Prehistoric	Petroglyphs and associated flaked stone scatter.	Unevaluated
26LN4690	Prehistoric	Three rockshelters and associated lithic scatter.	Unevaluated
26LN4691	Prehistoric	Rockshelter with midden deposits and associated lithic scatter.	Unevaluated
26LN4692	Prehistoric	Lithic scatter.	Unevaluated
26LN4970	Prehistoric	Hearth features (associated radiocarbon dates), flaked stone, ground stone, ceramics (brownware and grayware), and fire-affected rock scatter.	Eligible
26LN4975	Historic	Pond, tanks, corrals, and associated ca. 1940s-era debris.	Unevaluated
26LN7085	Prehistoric	Roasting pit.	Unevaluated
26LN7086	Prehistoric	Roasting pit.	Unevaluated
26LN7087	Prehistoric	Roasting pit.	Unevaluated
26LN7088	Prehistoric	Roasting pits (two).	Unevaluated
26LN7089	Prehistoric	Roasting pit and artifacts.	Unevaluated
26LN7090	Prehistoric	Roasting pit.	Eligible
26LN7091	Prehistoric	Roasting pit.	Unevaluated
26LN7092	Prehistoric	Roasting pit.	Unevaluated

**Table I-6. Identified Eligible Archeological Sites within the
Alternative 3C – Alamo Withdrawal Area**

State No.	Age	Site Description	NRHP Eligibility
26LN7093	Prehistoric	Roasting pit.	Unevaluated
26LN7094	Prehistoric	Roasting pits (two).	Unevaluated
26LN7095	Prehistoric	Roasting pit.	Unevaluated
26LN7096	Prehistoric	Roasting pit, rockshelter, and artifacts.	Eligible
26LN7097	Prehistoric	Roasting pits (four) and artifacts.	Unevaluated
26LN7098	Prehistoric	Roasting pit.	Unevaluated
26LN7099	Prehistoric	Roasting pit and FAR concentration.	Eligible
26LN7100	Prehistoric	Roasting pits (three), rockshelter, and diagnostic artifacts.	Eligible
26LN7101	Prehistoric	Roasting pit.	Unevaluated
26LN7102	Prehistoric	Roasting pits (two).	Unevaluated
26LN7103	Prehistoric	Roasting pit.	Unevaluated
26LN7104	Prehistoric	Roasting pit.	Unevaluated
26LN7105	Prehistoric	Roasting pit and artifacts.	Unevaluated
26LN7106	Prehistoric	Roasting pits (two) and artifacts.	Unevaluated
26LN7107	Prehistoric	Roasting pit.	Unevaluated
26LN7108	Prehistoric	FAR concentration.	Eligible
26LN7109	Prehistoric	FAR concentration.	Eligible
26LN7110	Prehistoric	Roasting pits (three), flaked and ground stone, brownware pottery.	Unevaluated
26LN7111	Prehistoric	Roasting pit, flaked stone, and brownware pottery.	Unevaluated
26LN7112	Prehistoric	Roasting pit.	Unevaluated
26LN7113	Prehistoric	Roasting pit and flaked stone.	Unevaluated
26LN7114	Prehistoric	Roasting pit and flaked stone.	Unevaluated
26LN7115	Prehistoric	Roasting pits (four).	Unevaluated
26LN7116	Prehistoric	Roasting pit.	Unevaluated
26LN7117	Prehistoric	Roasting pit.	Unevaluated
26LN7118	Prehistoric	Roasting pit.	Unevaluated
26LN7119	Prehistoric	Roasting pit.	Unevaluated
26LN7120	Prehistoric	Roasting pit.	Unevaluated
26LN7121	Prehistoric	Roasting pit.	Unevaluated
26LN7122	Prehistoric	Roasting pit.	Unevaluated
26LN7123	Prehistoric	Roasting pit.	Unevaluated
26LN7124	Prehistoric	Roasting pit.	Unevaluated
26LN7125	Prehistoric	FAR concentration, flaked stone, and brownware pottery.	Unevaluated
26LN7126	Prehistoric	Roasting pit, flaked stone.	Unevaluated
26LN7127	Prehistoric	Roasting pit, flaked stone w/Elko point, and brownware and grayware pottery.	Unevaluated
26LN7140	Prehistoric	Roasting pits (two), flaked stone.	Unevaluated
26LN7141	Prehistoric	Roasting pit.	Unevaluated
26LN7142	Prehistoric	Roasting pits (two).	Unevaluated
26LN7149	Prehistoric	Roasting pit, brownware pottery.	Unevaluated
26LN7155	Prehistoric	Roasting pit, flaked stone.	Unevaluated
26LN7156	Prehistoric	Roasting pit.	Unevaluated

1 A recent study of roasting pits on the Sheep Range was conducted by Lodge (2016).
2 Google Earth imagery of the Sheep Range was examined for evidence of roasting pit
3 features and subsequently ground truthed. This research effort resulted in the location
4 of 193 roasting pits that were then subsequently field documented. The study noted an
5 additional 39 potential roasting pits during imagery analysis; however, these features
6 were not subject to evaluation due to time constraints. Diagnostic artifacts from these
7 features indicate that roasting pits were used from the Terminal Archaic through the
8 Post-Puebloan periods.

9 Sites discussed within this study that have been assigned a site number by the Nevada
10 SHPO are presented in Table I-6 above. A full listing of all roasting pits with their field
11 designation can be found in Lodge (2016).

12 **I.1.4 References**

13 Lodge, S. N. (2016). *Fire on the Mountain: Roasting Pits in the Sheep Range on Desert*
14 *National Wildlife Refuge*. Texas State University Masters of Arts Thesis. May.

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