# PROGRAMMATIC AGREEMENT
# AMONG
# THE UNITED STATES DEPARTMENT OF ENERGY
# OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT,
# THE NEVADA STATE HISTORIC PRESERVATION OFFICE,
# AND
# THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
# FOR
# LICENSING AND DEVELOPMENT OF A NUCLEAR WASTE REPOSITORY
# AT YUCCA MOUNTAIN, NYE COUNTY, NEVADA

WHEREAS, Congress directed the U.S. Department of Energy (DOE) to characterize and evaluate the suitability of Yucca Mountain as a potential site for a repository for the disposal of spent nuclear fuel and high-level radioactive waste, and, if appropriate, construct and operate the facility; and

WHEREAS, on July 23, 2002, the President signed into law (Public Law 107-200) a joint resolution of the U.S. House of Representatives and the U.S. Senate designating the Yucca Mountain site in Nye County, Nevada, for development as a repository for the disposal of spent nuclear fuel and high-level radioactive waste; and

WHEREAS, the DOE Office of Civilian Radioactive Waste Management (OCRWM) has submitted the application to the U.S. Nuclear Regulatory Commission (NRC) for authorization to construct a repository at Yucca Mountain, and the NRC has issued a notice of acceptance for docketing this license application (73 FR 53284; September 15, 2008); and

WHEREAS, should the NRC grant a construction authorization for the proposed repository, the NRC may use this Agreement to fulfill its Section 106 obligations. If the NRC determines that it wants to become a party to this Agreement, it shall sign the agreement as an invited signatory and DOE shall be the lead Federal agency and act on the NRC's behalf, pursuant to 36 CFR Part 800.2(a)(2) of the Advisory Council on Historic Preservation's (ACHP) regulations implementing Section 106 of the National Historic Preservation Act (NHPA).

WHEREAS, OCRWM will continue to perform certain studies and activities at the Yucca Mountain site, including, but not limited to, studies and activities related to performance confirmation, as well as the conduct of environmental monitoring activities during the NRC's review of the license application and consideration of construction authorization; and

WHEREAS, the Consulting Parties to this Agreement recognize that the development of the repository potentially could have effects upon historic properties in the Yucca Mountain area; and

WHEREAS, since 1978 the OCRWM and its contractors have maintained an ongoing cultural resource management program as part of OCRWM's field studies and environmental monitoring activities at Yucca Mountain; and

WHEREAS, OCRWM has consulted with the ACHP, and with the Nevada State Historic Preservation Office (SHPO), pursuant to the ACHP's regulations (36 CFR Part 800), and has provided information regarding their cultural resource management program to the public and other interested parties (including professional and amateur archaeology groups, historic trails organizations, etc.); and

WHEREAS, OCRWM has consulted with Native American Tribes and organizations with cultural and historic ties to the Yucca Mountain area; and

WHEREAS, OCRWM has identified those Tribes and groups to include: Las Vegas Paiute Tribe, Moapa Band of Paiutes, Paiute Indian Tribes of Utah, Kaibab Paiute Tribe, Pahrump Indian Tribe, Colorado River Indian Tribes, Chemehuevi Indian Tribe, Timbisha Shoshone Tribe, Duckwater Shoshone Tribe, Ely Shoshone Tribe, Yomba Shoshone Tribe, Lone Pine Paiute-Shoshone Tribe, Bishop Paiute Tribe, Fort Independence Tribe, Big Pine Paiute Tribe, Benton Paiute Tribe, and the Las Vegas Indian Center, Inc.; and

WHEREAS, pursuant to 36 CFR Part 800.14, OCRWM has requested the development of a Programmatic Agreement to fulfill its statutory responsibilities under Sections 106 and 110 of 16 U.S.C. 470, the NHPA, and related obligations under the Archaeological Resources Protection Act (ARPA), and Executive Orders; and

NOW, THEREFORE, it is mutually agreed among the OCRWM, the ACHP, and the SHPO (and the NRC, should it become a signatory to this agreement) that implementation of the undertaking, as defined below, in accordance with the following stipulations will fulfill OCRWM's responsibilities under Sections 106 and 110 of the NHPA, ARPA, and Executive Orders.

## STIPULATIONS

### A. UNDERTAKING

1. The undertaking covered by this Agreement includes all site activities conducted by the OCRWM and its contractors for the licensing and development of Yucca Mountain as a repository for disposal of spent nuclear fuel and high-level radioactive waste that have the potential to affect historic properties, and that are located within the boundaries of the Yucca Mountain Project Operator-Controlled Area (YMP OCA; see Figure 1). In the event the DOE is granted the proposed land withdrawal area depicted in Figure 1, this Agreement will be amended to expand the YMP OCA. The proposed land withdrawal area excludes Patent Number 27-83-0002 and that portion south of the northern boundary of U.S. Highway 95 Right-of-Way.

2. Activities supporting the YMP, such as the Nevada Rail Project, which occur outside of the YMP OCA are outside the scope of this Agreement. The consulting parties recognize that activities associated with the development of the repository and associated facilities may have effects on historic properties beyond the boundaries of the YMP OCA, but these effects will be considered by other means (e.g., 36 CFR Part 800 or other Agreements). OCRWM's responsibilities pursuant to Section 106 of

the NHPA at those areas of potential effects (APE) located on public lands outside the YMP OCA will be conducted in accordance with the policies and procedures of the Federal agency with control and jurisdiction over the affected lands. For any work to be conducted on State or private land, OCRWM will consult with the SHPO and appropriate State agency, as necessary, regarding compliance with any applicable State and Federal laws and regulations.

3. Activities regarding the Nevada Rail Project are managed under the *Programmatic Agreement Among the U.S. Department of Interior Bureau of Land Management, Nevada; the DOE; Surface Transportation Board; and the SHPO Regarding the Nevada Rail Project*, dated February 8, 2006.

## B. ROLES AND RESPONSIBILITIES

1. As the lead Federal agency, OCRWM maintains responsibility for implementing the management and protection measures outlined in this Agreement. OCRWM will be responsible for coordination among the SHPO, the ACHP, culturally affiliated tribes, interested parties, and other Federal agencies (e.g., DOE National Nuclear Security Administration--Nevada Site Office, and the U.S. Bureau of Land Management) pursuant to this Agreement.

2. The terms of this Agreement apply to all OCRWM employees and its contractors supporting the undertaking.

3. OCRWM will maintain a historic property management capability with a qualified Cultural Resource Management Designee (CRMD) who will act as subject matter expert and point of contact for all historic property management actions related to this undertaking. The CRMD will meet the requirements of the Secretary of the Interior's "Professional Qualifications Standards," and will maintain the specialized professional qualifications and training to provide appropriate decision-making services, information, judgment, guidance, and recommendations through the duration of this Agreement. OCRWM will involve the CRMD in planning and review to ensure that potential effects to historic properties are considered prior to and during implementation. Historic property management activities conducted under this Agreement will be carried out by, or under the direct supervision of, professional archaeologists, anthropologists, historians, or architectural historians who meet the requirements of the Secretary of the Interior's "Professional Qualifications Standards."

4. OCRWM will ensure during the course of ongoing work relevant to this Programmatic Agreement that data, materials, and reports will be made available in a timely manner as appropriate to the SHPO, the ACHP, culturally affiliated tribes, other interested parties, and other Federal or State agencies.

5. OCRWM will prepare an Annual Report on the implementation of this Agreement, which will describe cultural resources management efforts conducted. This report will be submitted by June 30th of each year; address activities conducted in the previous calendar year; and summarize the following:

   - Proposed activities subject to historic property investigations
   - Findings of "no historic properties affected," as defined in Stipulation D and Appendix A of this Agreement
   - Inventories conducted during the year and their results
   - Historic properties identified and evaluated
   - Periodic assessment (monitoring) reports
   - Situations involving affected historic properties (if any), including a summary of treatment plans (if any)
   - Consultations with the SHPO, the ACHP, culturally affiliated tribes, and other interested parties
   - Effectiveness of protective actions employed to ensure that activities did not affect historic properties (see Stipulation D.10)
   - Other actions pertaining to implementation of this Agreement.

6. The SHPO may monitor activities carried out under this Agreement, and provide cooperative support and guidance to help the OCRWM meet its obligations under this Agreement. The ACHP may review such activities, if requested.

## C. PARTICIPATION OF NATIVE AMERICAN TRIBES AND OTHER INTERESTED PARTIES

1. OCRWM will identify any additional Tribes (in addition to those set forth in the WHEREAS clause) that have traditional ties to the YMP OCA and request that they assist OCRWM in meeting its obligations under this Programmatic Agreement by helping to identify properties to which they attach religious and cultural significance; assess effects to them; and discuss actions to resolve adverse effects to those properties.

2. OCRWM will provide the opportunity for Native American monitors to participate in large-scale mitigative data recovery programs, as appropriate, and as feasible.

3. OCRWM will provide the opportunity for Native Americans to periodically access properties of religious and cultural significance within the YMP OCA upon written request, and as practicable.

4. OCRWM will ensure that reports are made available in a timely manner during the course of ongoing work relevant to this Agreement to those Tribes and organizations with current or historic ties to the YMP OCA.

5 In consultation with the SHPO, OCRWM will identify other interested parties having concerns with the undertaking's effects on historic properties. OCRWM will invite their views and those of the public regarding potential effects of the undertaking on historic properties.

## D. IDENTIFICATION, EVALUATION AND ASSESSMENT OF EFFECTS TO HISTORIC PROPERTIES PRIOR TO YUCCA MOUNTAIN PROJECT ACTIVITIES

Prior to implementing activities that could affect historic properties, OCRWM will ensure historic properties are identified, evaluated, and any effects are assessed and either avoided or mitigated. A report is included in Appendix C that summarizes historic property inventory surveys and consultations with culturally affiliated tribes regarding properties of religious and cultural significance conducted to date within the YMP Area, which includes the YMP OCA.

Identification, evaluation, and assessment of effects will be carried out in accordance with the following steps (see also Figure 2).

1. OCRWM will determine if the activity has no potential to affect historic properties, or if the activity is categorically exempt from consideration as agreed to by OCRWM and the SHPO (Appendix A). If either of these conditions applies, the CRMD will determine "no historic properties affected" and may then authorize activities to proceed without further consultation. This finding will be documented in the Annual Report to the SHPO and the ACHP.

2. If an activity is not exempt from consideration under paragraph D.1 above, the CRMD will define an APE of the activity in accordance with 36 CFR Parts 800.4 and 800.6. This APE will consist of the area of proposed disturbance plus a surrounding buffer zone to ensure that adjacent historic properties are considered in planning the activity. This APE may be subsequently revised subject to changes in the activity plan, on-the-ground investigations, and assessment of potential effects.

3. The CRMD will determine if the APE (a) has been surveyed for historic properties within the last 10 years and no historic properties have been found, or (b) is in an area of prior disturbance, as agreed upon by the consulting parties to this Agreement.[1] If conditions (a) or (b) apply, the CRMD will authorize the activity to proceed, and document this determination of "no historic properties affected" in the annual report to the SHPO and the ACHP.

[1] Figure 3 of this Agreement contains a map of prior land disturbance. This map will be updated to reflect current conditions and input from both Consulting and Concurring Parties to this Agreement, as appropriate, prior to survey and within the Annual Report specified in Part B.5 of this Agreement.

4. If an APE has not been surveyed during the last 10 years, the CRMD will assess the findings and determine any additional efforts that may be needed to identify historic properties, including consultation with culturally affiliated tribes, interested parties, and additional historic and ethnographic research. If previous surveys have resulted in the discovery of historic properties, or potentially historic properties, the CRMD will ensure they are re-recorded and re-evaluated in consultation with the SHPO. Sites that were evaluated for National Register eligibility more than 10 years ago will be re-evaluated. Should these efforts result in the identification of historic properties that might be affected by a proposed activity, OCRWM will consult with the SHPO as per Stipulation E.

5. If the APE was not previously surveyed for historic properties, or if the CRMD determines a new inventory survey is warranted, OCRWM will ensure that an inventory survey of the APE is conducted and historic properties located within it are evaluated for eligibility to the National Register of Historic Places (NRHP). Identified historic properties will be recorded on Nevada Inter-Mountain Antiquities Computer Survey (IMACS) forms. If previously identified historic properties were originally recorded on forms other than Nevada IMACS forms, they will also be recorded and updated on IMACS forms. Identified historic buildings and structures will be recorded on the SHPO's Historic Resources Inventory Forms. Field collection of artifacts will not be conducted unless the artifact is determined by the CRMD to be of special intrinsic importance requiring protection. Any artifact subject to collection will be photographed in place; its location will be recorded using a geographic positioning system with sub-meter resolution.

6. If no properties are identified in the APE, the CRMD will determine "no properties," and will document the finding in the Annual Report to the SHPO and the ACHP. The CRMD may then authorize activities to proceed without further consultation. Isolated finds are not considered properties and are, therefore, not considered eligible to the NRHP, with rare exceptions. Isolated finds are defined as a single artifact, pieces from a single artifact, or unassociated feature. Isolates will be recorded sequentially and listed within the inventory report on a table with isolated find number, location, and description, and plotted on a separate isolated find map within the report.

7. If potentially historic properties are encountered, the CRMD will evaluate the historical significance of the resources to determine if they qualify for the NRHP, and assess potential effects to qualifying historic properties. Evaluations will be made with reference to appropriate historic contexts pertinent to the Yucca Mountain region, and will utilize inventory information to the extent practicable. If the information gathered in the inventory is inadequate to determine eligibility, limited subsurface testing or other evaluative techniques may be necessary. Such testing should provide only the minimum data needed to define the nature, density, and distribution of materials in potential historic properties for purposes of evaluation, or to devise treatment options responsive to the information potential of the property, and should be limited to no more than 25 percent of the surface area of the property.

8. OCRWM will report inventory results and evaluations to the SHPO for review and comment on determinations of eligibility. OCRWM will include shape files or other approved formats, as appropriate. The SHPO will have 30 days to respond upon receipt of adequate information specified in 36 CFR Part 800.11(d)-(e). If the SHPO and OCRWM disagree regarding a determination of eligibility, and through continued consultation cannot resolve the difference, OCRWM will notify all parties and seek a formal determination of eligibility from the Keeper of the National Register pursuant to 36 CFR Part 63. The Keeper's determination will be considered final.

9. OCRWM will also notify culturally affiliated tribes and the ACHP of the results of the inventory and OCRWM's determinations of eligibility. OCRWM will consult with culturally affiliated tribes to identify whether historic properties in the YMP OCA may hold traditional, religious, or cultural significance. Upon receipt of adequate information specified in 36 CFR Part 800.11(d)-(e), the Tribes will have 30 days to respond regarding their views about the traditional religious and cultural significance of historic properties in the APE, and their concerns on the activity's effects to those historic properties. If a tribe that attaches traditional religious and cultural significance to a property does not agree with OCRWM's determination of eligibility, it may ask the ACHP to request OCRWM to obtain a determination of eligibility from the Keeper of the National Register.

10. Following SHPO and tribal review and comment, if the CRMD determines that an activity will not affect historic properties, then OCRWM will document the finding of "no historic properties affected." The CRMD may then authorize activities to proceed. Protective actions may be necessary at times to ensure an activity will not cause effects to nearby historic properties. The CRMD will determine what protective actions may be necessary, and will ensure that these are carried out. Protective actions may include modification of the APE, the establishment of buffer zones between the work area and an historic property, physical barriers (e.g., using flagging tape, painting, barriers, and other forms), the deployment of monitors during conduct of the activity to assure site avoidance, stabilization efforts, post-activity assessment, or other measures.

11. If the CRMD determines that an activity will have adverse effects to historic properties that cannot practically be avoided, then the CRMD will develop and implement measures to resolve those adverse effects, as described in Stipulation E that follows.

## E. RESOLUTION OF ADVERSE EFFECTS

1. To the extent practicable, OCRWM will avoid adverse effects to historic properties through design, modification of the activity's APE, or relocation of facilities. If avoidance of adverse effects to an historic property is not practical, the CRMD will develop a treatment plan to resolve effects to the historic property. If the treatment plan proposes archaeological data recovery, the CRMD will ensure that such a treatment plan is developed and implemented consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-37), Treatment of Historic Properties: A Handbook (Advisory Council on Historic Preservation 1980), and Advisory Council guidance of 1999 entitled

"Consultation in Recovery of Significant Information from Archaeological Sites." Mitigation other than data recovery may be considered in the treatment plan (e.g., Historic American Buildings Survey/Historic American Engineering recordation, oral history, historic markers, exhibits, interpretive brochures, or publications).

2. The CRMD will afford the SHPO, ACHP, culturally affiliated tribes, and interested parties 30 days to review and comment on the draft treatment plan. If no comment is received within the 30-day period, the CRMD will consider that the party does not object to the treatment plan. The CRMD will take into consideration the consulting parties' comments in preparing a final treatment plan.

3. The CRMD will ensure that the field work portion of any final treatment plan will be implemented and completed prior to authorizing to proceed with any activities that may affect historic properties located within the area covered by the plan. The CRMD will provide the SHPO, the ACHP, and culturally affiliated tribes with the opportunity to review and provide input to a summary description of the field work to be performed and a reporting schedule for that work.

4. The CRMD will ensure that post-field analysis and report preparation are implemented as agreed upon in the treatment plan, reports of investigations are consistent with contemporary professional standards, and that shape files or other approved formats are included, as appropriate. The CRMD will ensure that final reports and publications resulting from data recovery activities will be submitted to the SHPO, the ACHP, and made available to culturally affiliated tribes and interested parties.

## F. PERIODIC ASSESSMENT OF CONDITION OF HISTORIC PROPERTIES

1. To minimize adverse effects to historic properties from unanticipated impacts, the CRMD will periodically assess the condition of historic properties within the YMP OCA. This assessment will include visits by specialists to historic properties, an assessment of its existing conditions, potential sources of adverse effects, and comparison of the condition of the property with previous assessments.

2. If an assessment reveals that adverse impacts are occurring or are likely to occur as a result of this undertaking, the CRMD will consult with the SHPO to discuss appropriate measures to avoid or mitigate adverse effects to those properties.

3. Results of these periodic assessments will be included in the Annual Report to the SHPO and the ACHP, and will include the number of properties selected for monitoring, sites visited, and measures taken if sites were inadvertently damaged or eroded.

## G. UNANTICIPATED DISCOVERY

1. If potentially historic properties are discovered after activities have commenced, activities within 30 meters of the discovery will cease immediately and the supervisor of the activity will notify the CRMD. Finds requiring notification will include any human remains; buried cultural deposits, features, and artifacts; and rock art. Activities will be halted in the vicinity of the discovery until the CRMD authorizes re-commencement of work.

2. The CRMD will notify the SHPO and will protect the find until the discovery can be investigated by a qualified specialist. If, in consultation with the SHPO, the CRMD determines that an historic property could be adversely affected, the CRMD will consult with the SHPO, culturally affiliated tribes, and other interested parties to determine measures needed to avoid or resolve those effects. If avoidance of adverse effects is not feasible, the CRMD will consult with the SHPO to develop appropriate treatment measures. The CRMD will notify the ACHP, culturally affiliated tribes, and interested parties of its mitigation plan, and ensure that such treatment actions are implemented. Any disputes or objections arising during a discovery situation will be handled per Stipulation K.

3. The CRMD will report on the progress of treatment activities to the SHPO, culturally affiliated tribes, and interested parties when field work has been completed in the discovery area. The SHPO will have seven working days from the receipt of the field work report to raise any objections or provide additional guidance regarding the status of the field treatment investigations. In the absence of any comments or objections, or upon resolution of objections, the CRMD will assume that the level of mitigative action has been sufficient, and activities can then proceed.

4. The CRMD will ensure that final reports of treatment efforts for discovery situations are completed in a timely manner and submitted to the SHPO, the ACHP, and made available to culturally affiliated tribes and interested parties.

## H. TREATMENT OF HUMAN REMAINS

1. If human remains are discovered within the YMP OCA, under any circumstances, the discoverer will avoid damaging the remains, immediately stop all potentially damaging work activities within 30 meters of the discovery, notify the Nye County Sheriff's Department, and then notify the CRMD. In cooperation with the Nye County Sheriff's Department, the CRMD will then initiate avoidance, security, and preservation measures to protect the remains until they can be treated properly and comply with the discovery procedures of the Native American Grave Protection and Repatriation Act of 1990 (NAGPRA) and 36 CFR Part 800, as appropriate and applicable.

2. The CRMD will immediately notify the Nye County coroner and a qualified historic property specialist after the discovery of human remains. The age, affiliation, and circumstances of the remains will be assessed, if possible. If the human remains are Native American, the CRMD will consult with culturally affiliated tribes to determine cultural identity and discuss appropriate disposition to the appropriate tribe or family in accordance with NAGPRA and its implementing regulations 43 CFR Part 10.

## I. RECORDS AND CURATION

1. OCRWM will ensure that records from archaeological survey, data recovery, and monitoring activities conducted as a result of undertakings, are maintained at a qualified curation facility meeting the guidelines of 36 CFR Part 79. OCRWM will provide copies of appropriate records, including shape files or other formats, as appropriate, for inclusion in the Nevada Cultural Resources Information System.

2. OCRWM will ensure that any Native American human remains, grave goods, items of cultural patrimony, and sacred objects encountered during the undertaking are handled according to the provisions of 43 CFR Part 10.

## J. EDUCATION AND OUTREACH

1. OCRWM will continue to implement a worker education program for historic properties. The program distributes information to workers associated with the YMP, informing them of the laws and regulations governing historic property protection and preservation, in addition to Native American issues relevant to this Agreement. The worker education program also provides contact information for unanticipated discoveries.

2. OCRWM recognizes that development of a repository will result in long-term controlled access to the YMP OCA, which may affect the potential of historic properties providing information on regional history and prehistory (both positive and negative effects). OCRWM will support archaeological, historic, and cultural investigations to characterize the history and prehistory of the YMP OCA using data obtained prior to the termination of this Agreement, with appropriate distribution of their results to public and professional audiences through publications, exhibits, technical reports, presentations, displays, video/film/internet, and other media.

3. OCRWM will, upon written request, provide reports and publications to the public pertaining to historic properties at Yucca Mountain, except where such dissemination violates confidentiality, security, or sensitivity concerns in accordance with Section 304 of the NHPA and Section 9 of the ARPA.

## K. DISPUTE RESOLUTION

1. Should any Consulting Party or Concurring Party to this Agreement object in writing to OCRWM regarding any action carried out or proposed with respect to the undertaking; or regarding interpretation or implementation of this Agreement; OCRWM will consult with the SHPO to resolve the objection. If after initiating such consultation OCRWM determines that the objection cannot be resolved through consultation, OCRWM will forward to the ACHP all documentation and information relevant to the objection, including OCRWM's proposed response to the objection that will allow the ACHP to comment pursuant to its responsibilities under 36 CFR Part 800.9.

2. Should the ACHP not exercise one of the above options within 30 calendar days after receipt of all pertinent documentation, OCRWM will consider that the ACHP does not object to OCRWM's proposed response.

3. OCRWM will consider any ACHP recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection. OCRWM's responsibility to carry out all actions under this Agreement, not the subject of this objection, will remain unchanged.

## L. PRIORITY OF SHPO/ACHP COMMENT

1. If OCRWM is unable to carry out the terms of the Programmatic Agreement, OCRWM will not take or sanction any action, or make any irreversible commitment that would result in an effect on historic properties within the scope of this Programmatic Agreement, or would foreclose the SHPO or ACHP consideration of avoidance or mitigation alternatives until it has obtained the SHPO or ACHP comments, pursuant to the ACHP regulations for the individual action carried out as part of the undertaking.

2. If the Agreement is terminated, OCRWM will comply with 36 CFR Part 800 with regard to individual activities associated with the undertaking.

## M. AGREEMENT MODIFICATION, WITHDRAWAL OF A SIGNATORY, DURATION AND TERMINATION OF THE AGREEMENT

1. Consulting parties to this Agreement may request that it be amended, whereupon the parties will consult in accordance with 36 CFR Part 800 to consider such amendment.

2. Any consulting party to this Agreement may withdraw its involvement by providing 30 calendar days advance written notice (with cause) to the other consulting parties, provided that the consulting parties will consult during the period prior to termination to seek agreement on amendment or other actions that would avoid termination. If either the SHPO or the ACHP withdraws as a consulting party, the Agreement shall continue between OCRWM and the remaining consulting party.

3. If OCRWM withdraws from this Agreement, or if both the SHPO and ACHP withdraw from this Agreement, then the Agreement will be considered terminated.

4. This Agreement shall become effective on February 27, 2009, and shall remain in effect until terminated, per Stipulations M.2 and M.3, or a maximum of 10 years from the effective date.

5. This Agreement may be extended provided all signatory parties agree to the extension in writing.

**CONSULTING PARTIES:**

**U.S. DEPARTMENT OF ENERGY**
**OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

By: _____ Date: 2/20/09
James W. Hollrith

Title: Director, Office of Construction and Site Management

**CONSULTING PARTIES (cont.):**

**NEVADA STATE HISTORIC PRESERVATION OFFICE**

By: Alan M. Baldrica Date: 3/5/09

Title: Deputy SHPO

**CONSULTING PARTIES (cont.):**

**ADVISORY COUNCIL ON HISTORIC PRESERVATION**

By: _____ Date: 3/23/09

Title: EXECUTIVE DIRECTOR

## ATTACHMENTS

### Figures

1. Location of the Proposed Yucca Mountain Project Operator-Controlled Area

2. Flowchart of Steps for Identification, Evaluation, and Assessment of Effects to Historic Properties

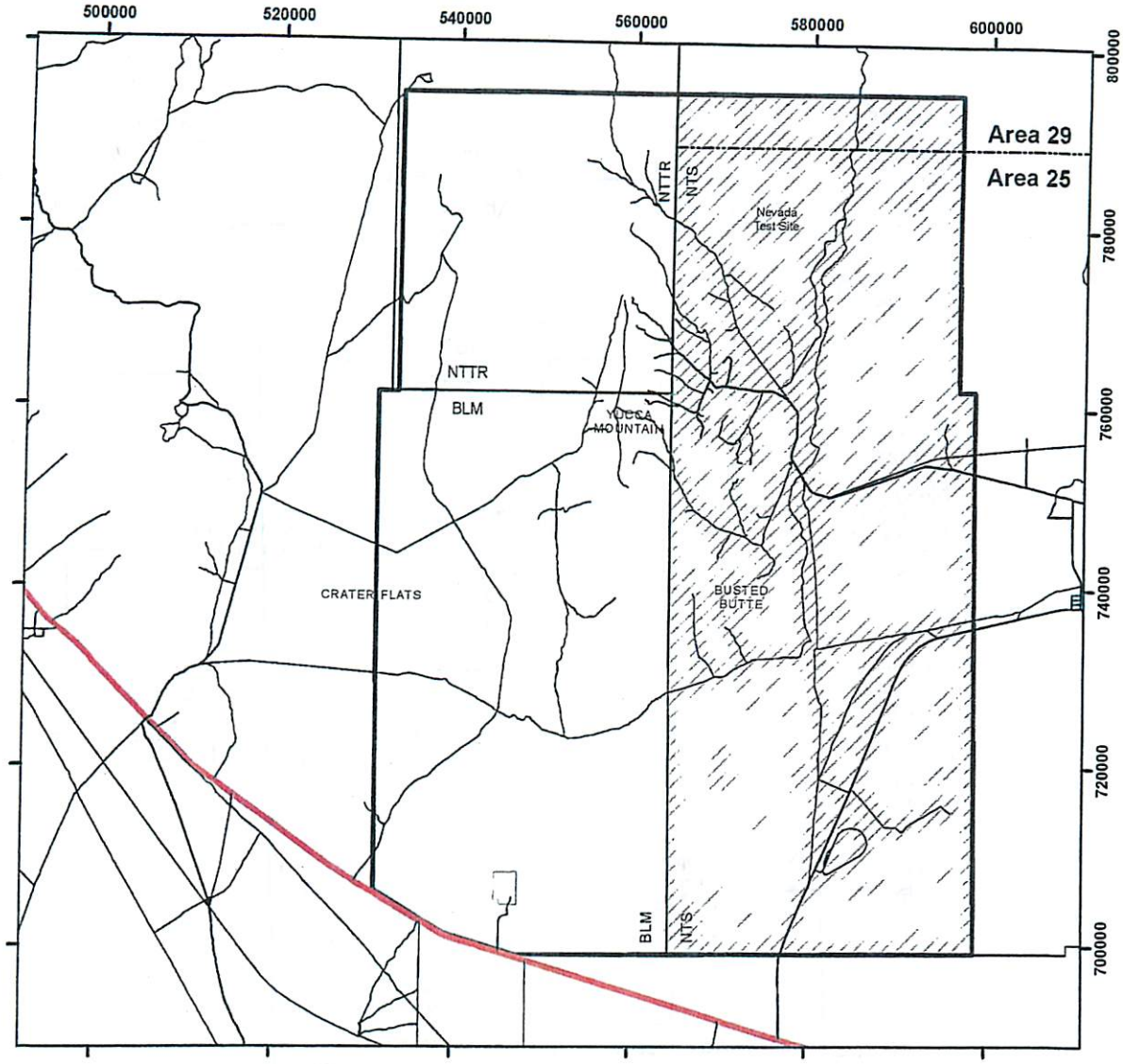
3. Map of Areas Subject to Extensive Ground Disturbance within the Yucca Mountain Project Operator-Controlled Area, Exempt from Further Historic Property Inventory Survey

### Appendices

Appendix A Activities Categorically Exempt from Consideration

Appendix B Acronyms, Laws and Regulations, and Definitions of Technical Terms

Appendix C Historic Property Inventory Surveys, and Consultations with Culturally Affiliated Tribes Regarding Properties of Religious and Cultural Significance Conducted To Date within the Yucca Mountain Project Operator-Controlled Area




# Yucca Mountain Project Operator-Controlled Area

N
W E
S

0 2.5 5
Miles

0 2 4 6
Kilometers

**Roads**
- Unimproved Road
- Paved Road
- U.S. Highway
- State Highway

**Boundaries**
- Nevada Test Site (NTS) Area Boundary
- NTS/Nevada Test & Training Range Boundary
- Proposed Land Withdrawal
- Operator-Controlled Area
- Patent #27-83-0002

September 9, 2008 | Projected Coordinate System: NAD27 State Plane Nevada Central FIPS 2702 | YMP-06-047_3 T08-00109

Figure 1. Location of the Yucca Mountain Project Operator-Controlled Area

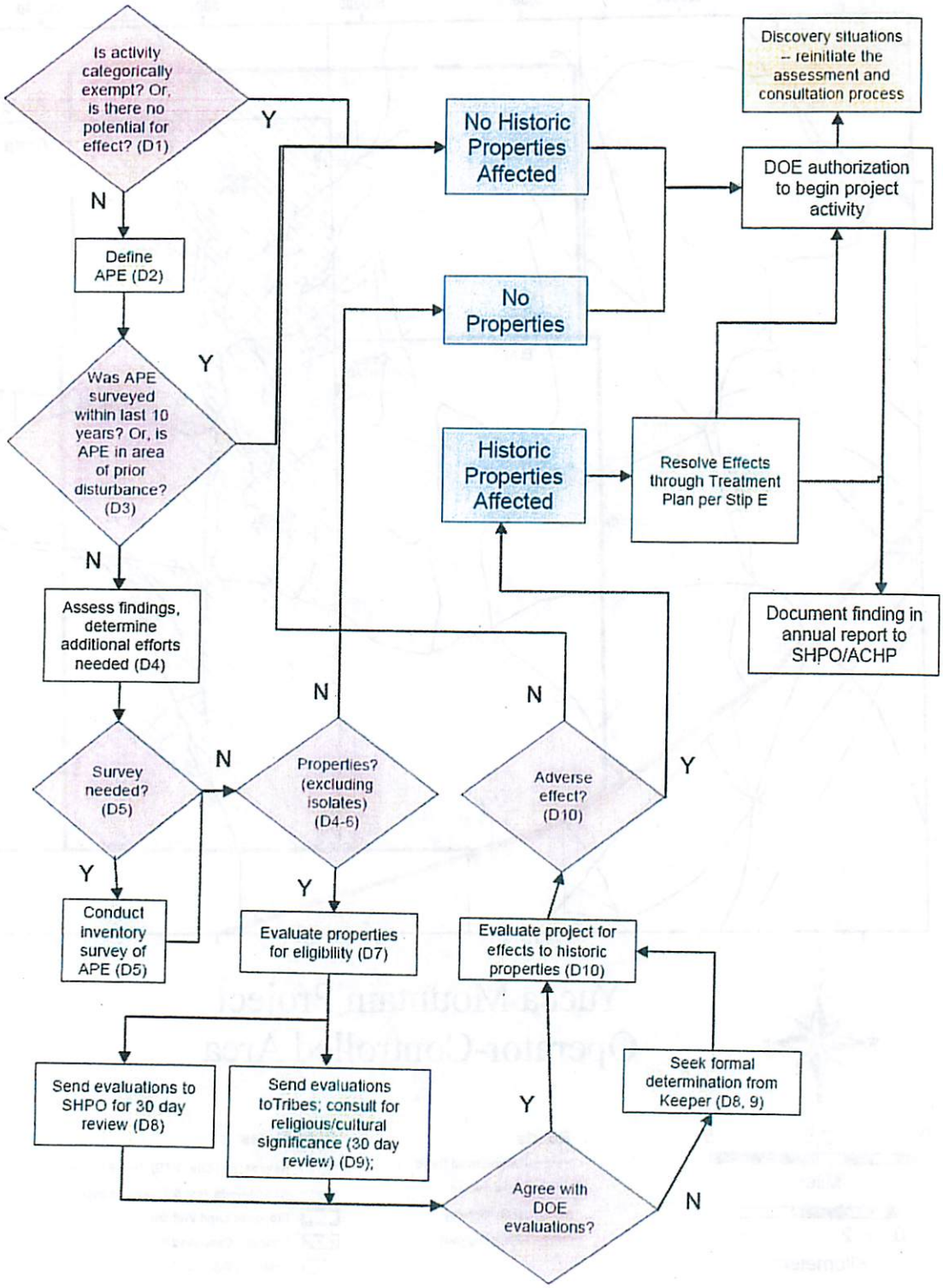



Figure 2. Flowchart of Steps for Identification, Evaluation, and Assessment of Effects to Historic Properties

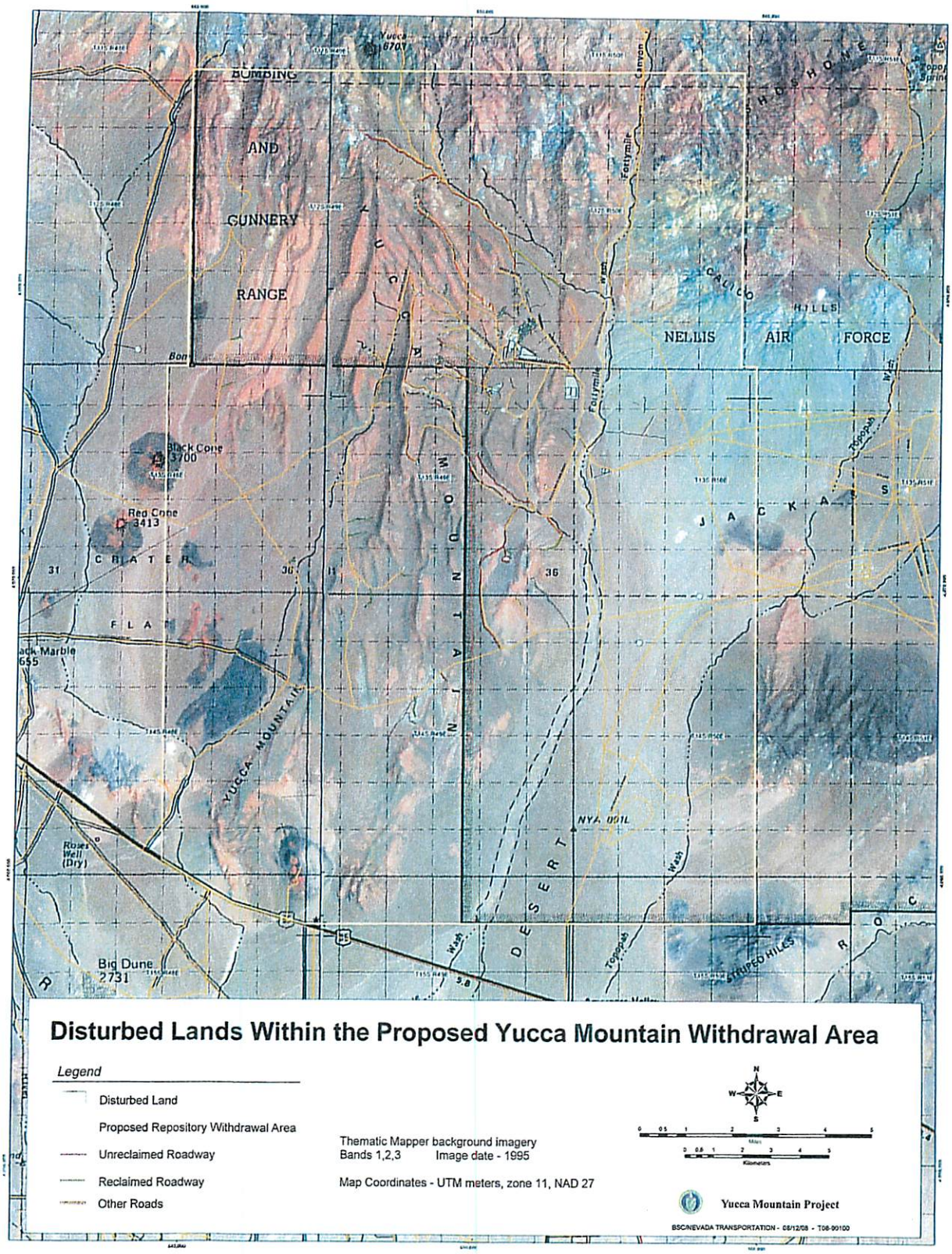



Figure 3. Map of Areas Subject to Extensive Ground Disturbance within the Yucca Mountain Project Operator-Controlled Area, Exempt from Further Historic Property Inventory Survey

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## APPENDIX A

## ACTIVITIES CATEGORICALLY EXEMPT FROM CONSIDERATION

1. Hazard abatement activities (including eliminating isolated toxic waste sites).

2. Maintenance, replacement, or modification of existing facilities, routes, or equipment that does not disturb additional surface area (including previously reclaimed areas) or historic properties; or where the ground has been previously disturbed to the extent that historic properties could not exist; or where the ground surface has been previously disturbed and the potential for buried intact historic properties is negligible; or where the facility itself is not a historic property.

3. Removal of structures, machines, or materials less than 50 years old (e.g., abandoned vehicles, trash dumps, buildings) that are not likely to become historic properties if they were to become 50 years old.

4. Reclamation of disturbed sites or areas (e.g., bladed areas, trenches, roadways, drill pads) may be conducted without additional SHPO consultation as long as the reclamation activities (including movement of reclamation vehicles and equipment to and around the reclamation site) are restricted to areas of previous surface disturbance; and if the disturbed site does not border or is not within an historic property. All reclamation areas and access routes must be flagged to identify the boundaries of the disturbed area. Areas not previously disturbed that may be subject to potential effects by reclamation activities (e.g., access routes) must be considered as APEs, and treated accordingly.

5. Activities that may incur no more than minor surface or subsurface disturbance (< two square meters per activity area), provided such activities are accompanied by a professionally qualified archaeological monitor to ensure that no historic properties are disturbed or damaged.

6. Installing facilities such as signs, cattle guards, gates, road improvements, fences, or portable sanitation devices that are placed on previously disturbed areas outside of known historic properties that will not result in alterations to undisturbed areas nearby.

7. Routine maintenance of roads, structures, wells, and pipelines that does not involve additional land disturbance; and if the site does not border or is not within an historic property.

8. Geophysical exploration activities that have minimal land disturbance potential, such as vibrosis and conventional truck-mounted shothole drill routes and operations located on constructed roads, well-defined existing roads and trails, or existing drill pads; or pedestrian routes and placement sites for hand-carried geophone, cables, or similar equipment; or routine surveying and mapping where vehicles are restricted to well-defined roads and trails and any equipment is hand-carried off road.

## APPENDIX A

## ACTIVITIES CATEGORICALLY EXEMPT FROM CONSIDERATION (CONTINUED)

9. Issuing permits, regulations, orders, notices, field rules, or other authorizations where no surface disturbance is involved.

10. Any other activity determined to have no effect on historic properties with written agreement among OCRWM, the SHPO, and the ACHP.

# APPENDIX B

## ACRONYMS, LAWS AND REGULATIONS, AND DEFINITIONS OF TECHNICAL TERMS

### Acronyms

| | |
|---|---|
| ACHP | Advisory Council on Historic Preservation |
| AIRFA | American Indian Religious Freedom Act |
| APE | Area of Potential Effects |
| ARPA | Archaeological Resources Protection Act |
| CGTO | Consolidate Group of Tribes and Organizations |
| CRMD | Cultural Resource Management Designee |
| DOE | U.S. Department of Energy |
| IMACS | Inter-Mountain Antiquities Computer Survey |
| NAGPRA | Native American Grave Protection and Repatriation Act |
| NAIP | Native American Interaction Program |
| NHPA | National Historic Preservation Site |
| NRC | U.S. Nuclear Regulatory Commission |
| NRHP | National Register of Historic Places |
| OCRWM | Office of Civilian Radioactive Waste Management |
| SHPO | State Historic Preservation Office |
| YMP | Yucca Mountain Project |
| YMP OCA | Yucca Mountain Project Operator-Controlled Area |

## APPENDIX B

## ACRONYMS, LAWS AND REGULATIONS, AND DEFINITIONS OF TECHNICAL TERMS (CONTINUED)

### Applicable Laws and Regulations

| | |
|---|---|
| 36 CFR Part 60 | National Register of Historic Places |
| 36 CFR Part 63 | Determinations of Eligibility for Inclusion in the National Register of Historic Places |
| 36 CFR Part 79 | Curation of Federally-Owned and Administered Archeological Collections |
| 36 CFR Part 800 | Protection of Historic Properties |
| 43 CFR Part 10 | Native American Graves Protection and Repatriation Act Regulations |

Archaeological Resources Protection Act of 1979, as amended

Native American Graves Protection and Repatriation Act of 1990

National Historic Preservation Act of 1966, as amended

### Definitions

(See also definitions in NHPA, ARPA, NAGPRA, and promulgating regulations.)

***Data Recovery***–The professional application of scientific techniques of controlled observation, contextual measurement, controlled collection, excavation, or removal of physical remains, including the analysis, interpretation, explanation, and curatorial safeguarding of recovered remains, and associated records, in an appropriate repository.

***Inventory Survey***–A professionally conducted pedestrian survey of the entire APE, with survey transects spaced no more than 30 meters apart. The goal of an inventory survey is to locate and record all historic properties having exposed artifacts or features in the APE. It describes the distribution of properties in an area, determines the number, location, and types and condition of properties in an area, and records the physical extent of specific properties in an area.

***Isolated Find***–Isolated finds are defined as a single artifact, pieces from a single artifact, or unassociated feature. Isolated finds are not considered properties and are, therefore, not eligible to the NRHP, with rare exceptions.

# APPENDIX C

## PART A: CULTURAL RESOURCES INVESTIGATIONS CONDUCTED IN THE YUCCA MOUNTAIN OCA, 1978-2008

Appendix C summarizes historic property inventory surveys and consultations with culturally affiliated tribes regarding properties of religious and cultural significance conducted to date within the YMP Area, which includes the YMP OCA. The YMP Native American Interaction Program is discussed further in Appendix C, Part B, of this Agreement.

Since 1978, OCRWM and its contractors have maintained an ongoing historic property management program as part of OCRWM's field studies and environmental monitoring activities at Yucca Mountain. OCRWM's program focuses on archaeology and Native American interactions, and has developed and implemented processes for identifying, evaluating, and resolving effects (if necessary) of YMP activities to historic properties. These processes meet the *Nuclear Waste Policy Act* requirement that important resources at Yucca Mountain be protected during site activities and comply with numerous Federal laws addressing Native American issues and historic properties, including the *American Indian Religious Freedom Act* and the *National Historic Preservation Act.*

Any proposed land-disturbing activity must have a pre-construction inventory survey conducted prior to the disturbance. If historic properties are discovered, they are evaluated for their importance and eligibility for inclusion in the *National Register of Historic Places.* To the extent possible, effects to these sites are avoided. When avoidance is not possible, potential effects on historic properties are minimized or mitigated through data recovery or other means in accordance with Section 106 of the National Historic Preservation Act.

Archaeological resources discovered at Yucca Mountain indicate past use by small, mobile hunter-gatherer societies. This use may have lasted for several thousand years, followed by about 150 years of sporadic and transitory occupation by people of European extraction for limited prospecting and, possibly, ranching. The region was inhabited by Native American populations for at least 12,000 years. At first, most settlement seems to have centered along major drainages, which presumably were corridors for wild game and food plants. By 7,000 years ago, a second settlement pattern is discernible with the establishment of temporary camps in the uplands of Yucca Mountain, some distance away from major drainages. A third shift in the pattern of settlement occurred about 1,500 years ago, indicated by the presence of sites, often with grinding stones, on alluvial fans or in small rock shelters in uplands. By that time, sites were no longer being established along major drainages, perhaps indicating that these waterways were dry. Instead, sites were located near small, seasonal water sources such as tanks or depressions in rock outcrops. A fourth and most recent period of settlement is associated with Euroamerican settlers and prospectors, indicated by piles of rock, tin cans, and temporary camps. At the time of the first recorded arrival of Euroamericans in 1849, the area was inhabited by Southern Paiute and Western Shoshone Indians (Stoffle et al. 1990).

Although archaeological investigations of historic and prehistoric resources had been conducted in the vicinity of Yucca Mountain prior to 1978, these were sporadic and largely ephemeral (e.g., Wheeler 1940; Worman 1969; cf. Pippin and Zerga 1981a). Systematic archaeological investigations began in 1978 when consideration for Yucca Mountain started as a potential location for geological storage of high-level nuclear waste (Pippin et al. 1981). Since then, more than 200 separate cultural resources investigations have been conducted in the Yucca Mountain area (see Table 1).

Of these investigations, 185 have been pre-activity inventory surveys of specific project areas, while six have been more general areal or sample inventory surveys (Pippin et al. 1981; Henton and Pippin 1998; Haynes 1995; Norwood 1994a; Shimer et al. 2007; Shimer and Martin 2007a). These surveys have all been conducted at the Class III inventory level or better, as defined by Bureau of Land Management standards. A total of 14,159 acres were surveyed from 1978-1988, with 6,839 acres surveyed from 1989-1998, and 5,339 acres from 1999 to present (see Figure 1). In total, 22,719 acres have been subject to inventory survey over the years. Approximately 20 percent (4,618 acres) have been subject to repeat inventory, because proposed project areas that had been surveyed in the 1970s and 1980s were re-examined to ensure that no cultural resources were missed during those earlier surveys.

These inventory surveys have resulted in the identification and recordation of 557 archaeological sites (not including all known isolated artifacts). Of these, 55 sites have been determined to be eligible for listing on the *National Register of Historic Places*; 441 have been determined not eligible for listing; and 60 sites remain unevaluated at present, pending further investigation.

A total of 29 archaeological sites were subject to test excavations (Pippin 1984; Henton and Pippin 1988). Mitigative data recovery involving extensive surface artifact collection and/or excavations were carried out at 22 sites (Reno et al. 1989; Buck et al. 1994, 1998; Varley and Rhode 2004).

Within the YMP OCA specifically (as defined in this Programmatic Agreement), the total amount of acreage subject to inventory survey is 14,083 acres, from 143 separate surveys. As a result of these surveys, 409 archaeological sites have been identified, of which 44 are considered eligible for the National Register, 317 are determined to be not eligible, and 48 have not yet been evaluated.

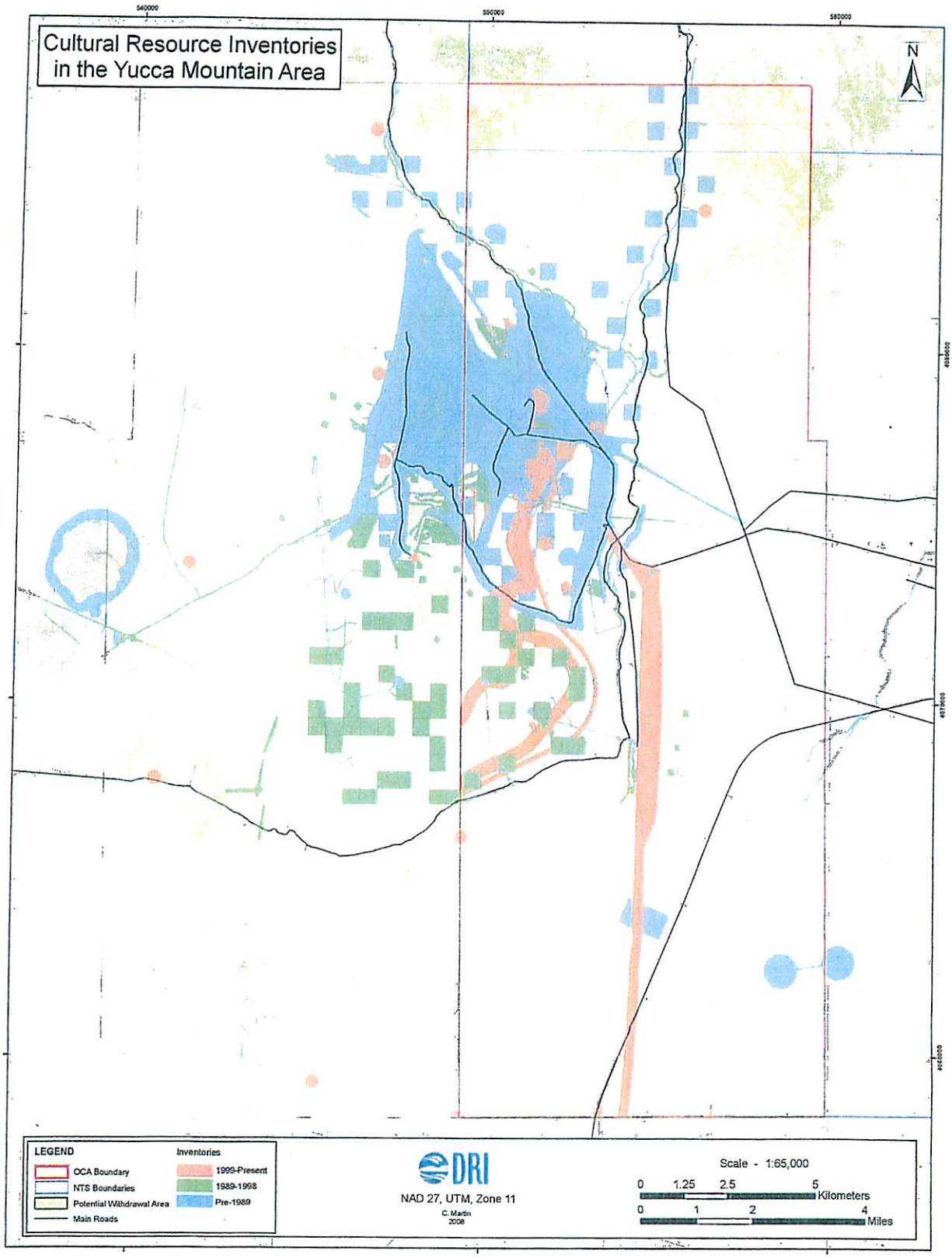


Figure C1. Areas Subject to Cultural Resources Inventory Survey within the Yucca Mountain Project Operator-Controlled Area

Table 1. List of Reports of Cultural Resource Investigations Conducted in the Yucca Mountain Project Operator-Controlled Area

| Report No. | Citation | Within OCA | Pre-activity Survey | Areal or Sample Survey | Testing | Mitigative Data Recovery | Monitoring or Other[1] |
|---|---|---|---|---|---|---|---|
| SR070578-1 | Bath 1978 | x | x | | | | |
| SR112890-2 | Beck 1991a | x | x | | | | |
| SR113090-1 | Beck 1991b | x | x | | | | |
| SR072082-1 | Bill and Walsh 1982 | x | x | | | | |
| BLM5-2370-2 | Blair 1999 | x | x | | | | |
| SR062293-1 | Brown 1993a | x | x | | | | |
| SR071393-1 | Brown 1993b | x | x | | | | |
| SR061892-1 | Brown, Rager, Hartwell, and Buck 1992 | x | x | | | | |
| SR081391-1 | Buck 1991 | | x | | | | |
| SR091391-1 | Buck 1992a | x | x | | | | |
| SR091991-1 | Buck 1992b | x | x | | | | |
| SR100291-1 | Buck 1992c | | x | | | | |
| SR120391-1 | Buck 1992d | | x | | | | |
| YMP Topics 1 | Buck, Amick, and Hartwell 1994 | x | | | | x | |
| YMP Topics 2 | Buck, Hartwell, Haynes, and Rhode 1998 | x | | | | x | |
| SR112691-1 | Buck, Rager and Winslow 1992 | | x | | | | |
| SR110891-1 | Buck, Varley and Rager 1992 | x | x | | | | |
| SR021480-1 | Budy 1980 | | x | | | | |
| SR062491-2 | Canaday and Buck 2000 | x | x | | | | |
| SR102281-1 | Clerico 1981 | | x | | | | |
| SR010782-1 | Clerico 1982 | | x | | | | |
| SR021082-1 | Clerico et al. 1982 | x | x | | | | |
| SR050991-1 | Drollinger et al. 1991a | x | x | | | | |
| SR052891-1 | Drollinger et al. 1991b | x | x | | | | |
| SR071493-2 | Ferguson 1993a | | x | | | | |
| SR072093-1 | Ferguson 1993b | x | x | | | | |
| SR092393-1 | Ferguson 1994a | | x | | | | |
| SR012594-1 | Ferguson 1994b | x | x | | | | |
| SR042594-2 | Ferguson 1994c | | x | | | | |
| SR050394-1 | Ferguson 1994d | x | x | | | | |
| SR062094-1 | Ferguson 1994e | | x | | | | |
| SR112294-1 | Ferguson 1995a | | x | | | | |
| SR041195-1 | Ferguson 1995b | x | x | | | | |
| SR061495-1 | Ferguson 1995c | x | x | | | | |
| SR031296-1 | Ferguson 1996a | x | x | | | | |
| SR032596-1 | Ferguson 1996b | x | x | | | | |
| SR040896-1 | Ferguson 1996c | x | x | | | | |

| Report No. | Citation | Within OCA | Pre-activity Survey | Areal or Sample Survey | Testing | Mitigative Data Recovery | Monitoring or Other[1] |
|---|---|---|---|---|---|---|---|
| SR022293-1 | Ferguson and Rowland 1993a | x | x | | | | |
| SR071393-2 | Ferguson and Rowland 1993b | x | x | | | | |
| SR080593-1 | Ferguson and Rowland 1993c | | x | | | | |
| SR072795-1 | Ferguson and Rowland-Fleischmann 1996 | x | x | | | | |
| SR012793-1 | Ferguson and Varley 1993 | x | x | | | | |
| SR102192-1 | Ferguson, Rowland, and Hartwell 1992 | x | x | | | | |
| SR063094-1 | Ferguson, Rowland-Fleischmann and Hooper 1995 | x | x | | | | |
| SR102692-1 | Ferguson, Rowland-Fleischmann, Haynes, Hooper and Buck 1995 | x | x | | | | |
| SR042893-2 | Ferguson, Varley and Rowland 1993 | | x | | | | |
| SR072182-1 | Ferraro and Shortridge 1982 | | x | | | | |
| SR081982-1 | Ferraro, Shortridge, Bill, Walsh, Pippin, and Reno 1982 | x | x | | | | |
| SR100991-1 | Hartwell 1992a | | x | | | | |
| SR123191-1 | Hartwell 1992b | x | x | | | | |
| SR111391-1 | Hartwell 1993a | x | | | | | x |
| SR051892-1 | Hartwell 1993b | x | x | | | | |
| SR110492-1 | Hartwell 1993c | x | | | | | x |
| SR012593-1 | Hartwell 1993d | x | x | | | | |
| SR081392-1 | Hartwell and Buck 1992 | x | x | | | | |
| SR041299-1 | Hartwell and DuBarton 2000 | | x | | | | |
| SR061192-1 | Hartwell and Rager 1992 | x | x | | | | |
| SR100391-1 | Hartwell, Buck and Rager 1992 | x | x | | | | |
| SR121791-1 | Hartwell, Rager and Winslow 1992 | x | x | | | | |
| SR111092-1 | Hartwell, Rowland and Ferguson 1992 | x | x | | | | |
| DRI TR 32 | Hattori and McLane 1982 | | x | | | | |
| SR101492-1 | Haynes 1994 | x | | | | | x |
| SR013194-1 | Haynes 1995 | x | | x | | | |
| SR062696-1 | Haynes 1998a | x | x | | | | |
| SR102897-1 | Haynes 1998b | x | x | | | | |
| SR011298-1 | Haynes and Anderson 2000 | x | | | | | x |
| SR011195-1 | Haynes and Ferguson 1997 | x | | | | | x |
| SR012694-1 | Haynes, Ferguson, Rowland-Fleischmann, and Varley 1996 | x | | | | | x |
| SR102695-1 | Haynes, Varley, and Rowland-Fleischmann 2000 | x | | | | | x |

| Report No. | Citation | Within OCA | Pre-activity Survey | Areal or Sample Survey | Testing | Mitigative Data Recovery | Monitoring or Other[1] |
|---|---|---|---|---|---|---|---|
| SR102196-1 | Haynes, Varley, and Rowland-Fleischmann 2001 | x | | | | | x |
| SR090684-1 | Henton 1984a | x | x | | | | |
| SR101984-1 | Henton 1984b | | x | | | | |
| DRI TR 60 | Henton and Pippin 1988 | x | | x | | | |
| SR030994-1 | Holz 1994 | x | x | | | | |
| SR101894-1 | Hooper 1995 | x | x | | | | |
| SR101094-1 | Hooper 1996 | x | | | | | x |
| SR090193-2 | Hooper and Ferguson 1994 | x | x | | | | |
| SR121195-1 | Hooper and Ferguson 1996 | | x | | | | |
| SR082895-1 | Hooper and Rowland-Fleischmann 1996 | | x | | | | |
| SR061394-1 | Hooper, Rowland-Fleischmann, and Ferguson 1995 | | x | | | | |
| SR052781-1/2 | Johnson 1981 | x | x | | | | |
| SR061290-1 | Klimowicz 1990a | x | x | | | | |
| SR061490-1 | Klimowicz 1990b | x | x | | | | |
| SR061290-2 | Klimowicz 1991a | x | x | | | | |
| SR061290-3 | Klimowicz 1991b | x | x | | | | |
| SR012991-1 | Klimowicz 1991c | x | x | | | | |
| BLM5-2439N | La Fever 2002 | | x | | | | |
| SR012083-1 | Lockett 1983 | x | x | | | | |
| SR022190-1 | Lockett 1990 | x | x | | | | |
| SR080703-1 | Martin 2004 | x | x | | | | |
| YM033105-1 | Martin 2005 | x | x | | | | |
| SR051804-1 | Martin and Rowland-Fleischmann 2004 | x | x | | | | |
| YM060805-1 | Martin, Page and Rowland-Fleischmann 2005 | x | x | | | | |
| SR080503-1 | Martin, Rowland-Fleischmann, and Varley 2003 | | x | | | | |
| SR112001-1 | Martin, Rowland-Fleischmann, Page, and Varley 2001 | x | x | | | | |
| SR021997-1 | Martin, Rowland-Fleischmann, Varley, and Page 2002 | x | | | | | x |
| SR022289-1 | McLane 1989a | x | x | | | | |
| SR060689-1 | McLane 1989b | x | x | | | | |
| SR071189-1 | McLane 1989c | x | x | | | | |
| SR010489-1 | McLane 1990a | x | x | | | | |
| SR022790-1 | McLane 1990b | x | x | | | | |
| SR062491-1 | McLane 1991 | | x | | | | |

| Report No. | Citation | Within OCA | Pre-activity Survey | Areal or Sample Survey | Testing | Mitigative Data Recovery | Monitoring or Other[1] |
|---|---|---|---|---|---|---|---|
| SR011790-1 | McLane and Monteleone 1990 | x | x | | | | |
| SR052888-1 | McLane and Reno 1988 | | x | | | | |
| SR010593-1 | Norwood 1994a | x | | x | | | |
| SR042594-1 | Norwood 1994b | | x | | | | |
| SR012495-1 | Norwood and Edwards 1995 | x | x | | | | |
| SR071102-1 | Page and Rowland-Fleischmann 2002 | | x | | | | |
| YM060105-1 | Page and Rowland-Fleischmann 2005 | x | x | | | | |
| SR100101-1 | Page and Varley 2002 | x | x | | | | |
| SR101701-1 | Page, Martin, and Varley 2002a | x | x | | | | |
| SR020102-1 | Page, Martin, and Varley 2002b | x | x | | | | |
| SR100300-1 | Page, Martin, Varley and Haynes 2002 | x | | | | | x |
| SR012903-1 | Page, Rowland-Fleischmann, and Varley 2003 | x | | | | | x |
| SR111782-1 | Pippin 1982a | x | x | | | | |
| SR111882-1 | Pippin 1982b | x | x | | | | |
| SR092481-1 | Pippin and Clerico 1981 | x | x | | | | |
| SR040683-1 | Pippin and Reno 1983 | x | x | | | | |
| DRI TR 28 | Pippin, Clerico, and Reno 1982 | x | | x | | | |
| DRI TR 24 | Pippin and Zerga 1981a | x | | | | | x |
| DRI TR 30 | Pippin and Zerga 1981b | x | | | | | x |
| SR071880-1 | Pippin, Zerga, Hill, Lockett, and Walsh 1980 | | x | | | | |
| SR043092-1 | Rager 1992a | x | x | | | | |
| SR092892-1 | Rager 1992b | x | x | | | | |
| SR050891-1 | Rager 1993a | x | x | | | | |
| SR071691-1 | Rager 1993b | x | x | | | | |
| SR081792-1 | Rager 1993c | x | x | | | | |
| SR061092-1 | Rager and Hartwell 1992 | x | x | | | | |
| SR062592-1 | Rager et al. 1992 | x | x | | | | |
| SR102400-1 | Reed and Varley 2000 | x | x | | | | |
| SR081682-1 | Reno 1982a | x | x | | | | |
| SR120982-1 | Reno 1982b | x | x | | | | |
| SR061483-1 | Reno 1983 | x | x | | | | |
| SR011884-1 | Reno 1984a | x | x | | | | |
| SR030784-1 | Reno 1984b | x | x | | | | |
| SR081988-1 | Reno 1988a | x | x | | | | |
| SR102188-1 | Reno 1988b | x | x | | | | |

| Report No. | Citation | Within OCA | Pre-activity Survey | Areal or Sample Survey | Testing | Mitigative Data Recovery | Monitoring or Other[1] |
|---|---|---|---|---|---|---|---|
| SR030689-1 | Reno 1989 | x | x | | | | |
| SR062388-1 | Reno and Dojaquez 1988 | x | x | | | | |
| DRI TR 59 | Reno, Henton, Pippin, and Lockett 1989 | x | | | | x | |
| SR051589-2 | Rhode 1989 | x | x | | | | |
| SR121989-1 | Rhode 1990a | x | x | | | | |
| SR111990-1 | Rhode 1990b | | x | | | | |
| SR082990-1 | Rhode 1991a | x | x | | | | |
| SR123190-1 | Rhode 1991b | x | x | | | | |
| SR050391-1 | Rhode 1991c | x | x | | | | |
| YM062704-1 | Rhode, Kolvet, Schmitt, Varley, Martin, and Shimer 2007 | x | x | | | | |
| SR060293-1 | Rowland 1993 | | x | | | | |
| SR030493-3 | Rowland, Ferguson and Buck 1993 | | x | | | | |
| SR060992-1 | Rowland, Ferguson, Hartwell, and Buck 1992 | x | x | | | | |
| SR011193-1 | Rowland, Ferguson, Varley and Buck 1993 | x | x | | | | |
| SR070793-1 | Rowland-Fleischmann 1993 | x | x | | | | |
| SR050493-1 | Rowland-Fleischmann 1994a | x | x | | | | |
| SR102593-1 | Rowland-Fleischmann 1994b | x | x | | | | |
| SR120993-1 | Rowland-Fleischmann 1994c | x | x | | | | |
| SR032894-1 | Rowland-Fleischmann 1994d | x | x | | | | |
| SR062794-1 | Rowland-Fleischmann 1994e | x | x | | | | |
| SR112194-1 | Rowland-Fleischmann 1995a | x | x | | | | |
| SR112994-1 | Rowland-Fleischmann 1995b | x | x | | | | |
| SR011095-1 | Rowland-Fleischmann 1995c | x | x | | | | |
| SR011795-1 | Rowland-Fleischmann 1995d | x | x | | | | |
| SR041395-1 | Rowland-Fleischmann 1995e | x | x | | | | |
| SR050195-1 | Rowland-Fleischmann 1995f | x | x | | | | |
| SR120992-1 | Rowland-Fleischmann 1996a | x | x | | | | |
| SR080195-1 | Rowland-Fleischmann 1996b | x | x | | | | |
| SR032497-1 | Rowland-Fleischmann 1997 | | x | | | | |
| YM041504-1 | Rowland-Fleischmann 2005 | x | | | | | x |
| SR111693-1 | Rowland-Fleischmann and DuBarton 1994 | | x | | | | |
| SR030695-1 | Rowland-Fleischmann and Edwards 1995 | | x | | | | |
| SR051194-1 | Rowland-Fleischmann and Ferguson 1994 | | x | | | | |

| Report No. | Citation | Within OCA | Pre-activity Survey | Areal or Sample Survey | Testing | Mitigative Data Recovery | Monitoring or Other[1] |
|---|---|---|---|---|---|---|---|
| SR100202-1 | Rowland-Fleischmann and Ferguson 2002 | x | x | | | | |
| SR111303-1 | Rowland-Fleischmann and Ferguson 2004a | x | x | | | | |
| SR012004-1 | Rowland-Fleischmann and Ferguson 2004b | x | x | | | | |
| SR102193-1 | Rowland-Fleischmann and Haynes 1995 | x | | | | | x |
| SR020294-1 | Rowland-Fleischmann and Hooper 1994 | | x | | | | |
| SR080995-1 | Rowland-Fleischmann and Hooper 1996 | | x | | | | |
| SR080703-2 | Rowland-Fleischmann and Martin 2004 | x | x | | | | |
| SR090193-1 | Rowland-Fleischmann and Norwood 1994 | x | x | | | | |
| SR070199-1 | Rowland-Fleischmann and Varley 2000 | x | | | | | x |
| SR082693-1 | Rowland-Fleischmann, Hooper, and Ferguson 1993 | | x | | | | |
| YM042204-1 | Rowland-Fleischmann, Rhode, Shimer, and Varley 2005 | x | x | | | | |
| SR062001-1 | Rowland-Fleischmann, Varley and Page 2001 | | x | | | | |
| SR020502-1 | Rowland-Fleischmann, Varley and Page 2002 | x | x | | | | |
| SR060503-1 | Rowland-Fleischmann, Varley, Rhode, Martin, and Shimer 2004 | x | x | | | | |
| YM032305-1 | Rumsey, Martin, and Rowland-Fleischmann 2005 | x | x | | | | |
| YM020105-1 | Shimer and Martin 2006a | | x | | | | |
| YM110805-1 | Shimer and Martin 2006b | x | x | | | | |
| YM020706-1 | Shimer and Martin 2006c | x | x | | | | |
| YM061704-1 | Shimer and Martin 2007a | x | | x | | | |
| YM051605-1 | Shimer and Martin 2007b | x | | | | | x |
| YM110805-2 | Shimer, Martin and Kolvet 2006 | x | x | | | | |
| YM032105-1 | Shimer, Martin, and Kolvet 2005 | x | x | | | | |
| YM032006-1 | Shimer, Page and Martin 2007 | x | | x | | | |
| SR042792-1 | Varley 1992 | x | x | | | | |
| SR030393-1 | Varley 1993a | | x | | | | |
| SR030493-1 | Varley 1993b | x | x | | | | |
| SR061693-1 | Varley 1993c | x | x | | | | |
| SR070797-1 | Varley 1997 | | x | | | | |

| Report No. | Citation | Within OCA | Pre-activity Survey | Areal or Sample Survey | Testing | Mitigative Data Recovery | Monitoring or Other[1] |
|---|---|---|---|---|---|---|---|
| SR093097-1 | Varley 1998 | | x | | | | |
| SR061692-1 | Varley and Buck 1992 | x | | | | | x |
| SR010692-1 | Varley and Buck 1993 | x | x | | | | |
| YMP Topics 5 | Varley and Rhode 2004 | x | | | | x | |
| SR101598-1 | Varley and Rowland-Fleischmann 2000 | | x | | | | |
| SR110698-1 | Varley and Rowland-Fleischmann 2002 | x | x | | | | |
| SR042092-1 | Varley Buck and Hartwell 1992a | x | x | | | | |
| SR082492-1 | Varley Buck and Hartwell 1992b | | x | | | | |
| SR110498-1 | Varley, Rowland-Fleischmann, and Haynes 2000 | x | | | | | x |
| SR112001-2 | Varley, Rowland-Fleischmann, Page, and Martin 2002 | x | x | | | | |
| SR050790-1 | Walsh 1991a | x | x | | | | |
| SR012991-2 | Walsh 1991b | x | x | | | | |
| SR053079-6/7 | Zerga 1979a | x | x | | | | |
| SR060579-1 | Zerga 1979b | x | x | | | | |
| SR082980-4/5/6 | Zerga 1980 | x | x | | | | |
| SR080381-1 | Zerga 1981a | | x | | | | |
| SR081781-1 | Zerga 1981b | | x | | | | |

[1] Archaeological monitoring, recordation of resources in localities outside normal inventory surveys, other archaeological investigations.

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## APPENDIX C

## PART B
## YUCCA MOUNTAIN PROJECT
## NATIVE AMERICAN INTERACTION PROGRAM

Since 1987, DOE has conducted a Native American Interaction Program (NAIP) to consult and interact with Tribes and organizations on the characterization and possible construction and operation of a repository at Yucca Mountain, Nevada. The NAIP promotes a government-to-government relationship with American Indian tribes and organizations having traditional ties to the Yucca Mountain area, and helps DOE comply with various Federal laws and regulations including the American Indian Religious Freedom Act (AIRFA), the Archaeological Resources Protection Act (ARPA), the National Historic Preservation Act (NHPA), the Native American Graves Protection and Repatriation Act (NAGPRA), DOE Order 1230.2 (American Indian and Tribal Government Policy), and Executive Orders 13007 (Indian Sacred Sites) and 13084 (Consultation and Coordination with Indian Tribal Governments).

Specifically, in 1987, the consultation program was initiated to satisfy the provisions of AIRFA through the following activities (DOE 1990):

> "1. Identify and define, in consultation with Native American groups that have traditional ties to the Yucca Mountain site, and that have indicated a willingness to participate, traditional cultural and religious values that may be associated with geographical areas where project activities are proposed to occur;
>
> 2. Consult with native traditional leaders and Tribal Councils to determine appropriate changes in land-disturbing project activities that are deemed necessary to protect and preserve traditional and religious cultural rights and practices;
>
> 3. On the basis of consultation with Native American groups that ascribe traditional cultural and religious values to places within the YMP Area, Native Americans agreed to advise DOE on how to avoid or reduce adverse effects on cultural resources and values."

Initial consultations included 16 groups belonging to three major tribal groups located in Nevada, Utah, California, and Arizona – Southern Paiute, Western Shoshone, and Owens Valley Paiute and Shoshone – with traditional ties to the Yucca Mountain region (Stoffle 1987; Stoffle et al. 1988b; DOE 1991). During the early stages of tribal interactions, the YMP recognized the importance of documenting Native American perspectives relating to cultural, ethnobotanical, and archaeological resources found within the YMP Area. This evolved into a progressive model of interaction that is still in use today and considered an integral part to systematically examining issues important to Natives Americans. These investigations resulted in several reports that record the regional history of Native American people and contribute to the understanding of the presence of Native American people in the Yucca Mountain area (Stoffle et al. 1990c), the interpretation of Native American cultural resources in the Yucca Mountain region (Stoffle et al. 1989b), identification of properties of cultural and religious significance (Stoffle et al. 1989b, 1990b), traditional and current uses

of plants living in the Yucca Mountain area (Stoffle et al. 1989a, 1990a, 1999; Rhode 2002), and recommendations for reducing potential adverse effects to cultural resources (Stoffle et al. 1988a), as well as articles discussing the consultation process itself (Stoffle and Evans 1988, 1990; Stoffle et al. 1990b, 1991).

These investigations concluded that, according to tribal representatives, the Yucca Mountain area is part of the traditional holy lands of the Western Shoshone, Southern Paiute, and Owens Valley Paiute and Shoshone peoples, who shared them for religious ceremonies, resource uses, social events, and places meaningful in traditional narratives and spiritual beliefs. Native Americans consider cultural resources to include not only archaeological remains left by their ancestors, but also natural resources and geologic formations in the region, such as plants, animals, water sources, and minerals, natural landforms that mark important locations for keeping their history alive and for teaching their children about their culture. Native Americans used traditional sites in the Yucca Mountain area to make tools, stone artifacts, and ceremonial objects; many sites are also associated with traditional healing ceremonies and power places. Several areas in the Yucca Mountain region are recognized as traditionally or spiritually important. Fortymile Canyon was an important crossroad where trails from such distant places as Owens Valley, Death Valley, and the Avawatz Mountain came together. Black Cone, in Crater Flat, east of Yucca Mountain, is an important religious site that is considered to be an entry to the underworld. Alice Hill, east of Yucca Mountain, is also regarded as a culturally important place (AIWS 2005). Prow Pass was an important ceremonial site and, because of this religious significance, tribal representatives have recommended that DOE avoid affecting this area (Stoffle et al. 1988). Oasis Valley was another important area for trade and ceremonies. Other areas are considered important based on the abundance of artifacts, traditional-use plants and animals, rock art, and possible burial sites. Despite the current physical separation of Tribes from Yucca Mountain and neighboring lands, Native Americans continue to value and recognize the meaningful role of these lands in their culture and continued survival.

Following the extensive initial investigations, DOE continued the NAIP during 1990-1992, through visits with all 16 Tribes and organizations. These visits were made to update Tribes on current and planned YMP activities, and to deliver copies of documents and publications relating to cultural resources investigations, biological monitoring, and commitments made to the Tribes by DOE regarding protection of cultural resources.

In 1992, the DOE began hosting a series of tribal update meetings, to bring together tribal members for discussions, information sharing, education, and field visits to see cultural and biological resources, observe archaeological data recovery efforts, and examine DOE's artifact collections from Yucca Mountain. These visits involved officially designated representatives from each participating tribe and organization, tribal elders, and tribal youth (DOE 1993).

These meetings were so successful that all groups recommended continuing this format for consultation. Since 1992 more than 20 such meetings of all the Tribes and organizations have been convened, for a variety of purposes. Tribal representatives have participated in numerous update meetings, field visits, cultural resources monitoring and data recovery programs, and consultations regarding NAGPRA and properties of religious and cultural significance. Tribal representatives have prepared reports accompanying the Environmental

Impact Statement for the Yucca Mountain repository (AIWS 1998), the Nevada Transportation Environmental Impact Statement (AIWS 2005), and other milestone reports of the Project.

In 1994, the Tribes and organizations formally aligned themselves as the Consolidated Group of Tribes and Organizations (CGTO), which consists of officially appointed tribal representatives responsible for presenting their respective tribal concerns and perspectives to DOE. Subsequent consultation efforts have included 17 tribal groups and organizations involved in the YMP Native American and Cultural Resource studies (the Ely Shoshone Tribe was added in 1994).

Presently, the CGTO consists of the following Tribes and official Indian organizations:

- Southern Paiute

  Kaibab Paiute Tribe, Arizona
  Paiute Indian Tribe of Utah
  Moapa Band of Paiutes, Nevada
  Las Vegas Paiute Tribe, Nevada
  Pahrump Paiute Tribe, Nevada
  Chemehuevi Indian Tribe, California
  Colorado River Indian Tribes, Arizona

- Western Shoshone

  Duckwater Shoshone Tribe, Nevada
  Ely Shoshone Tribe, Nevada
  Yomba Shoshone Tribe, Nevada
  Timbisha Shoshone Tribe, California/Nevada

- Owens Valley Paiute and Shoshone

  Benton Paiute Tribe, California
  Bishop Paiute Tribe, California
  Big Pine Paiute Tribe of the Owens Valley, California
  Lone Pine Paiute-Shoshone Tribe, California
  Fort Independence Paiute Tribe, California

- Other

  Las Vegas Indian Center, Inc., Nevada

Of these groups, 15 are federally recognized Tribes. The Pahrump Paiute Indian Tribe, which consists of a group of Southern Paiutes living in Pahrump, Nevada, has applied for federal tribal recognition, but to date has not received it. In addition, the Las Vegas Indian Center is not a federally recognized tribe, but DOE included it in the Native American Interaction Program because it represents urban Native Americans residing in Las Vegas and Clark County, Nevada.

As Stoffle et al. (2001) note, one of the most enduring achievements of the YMP NAIP has been the development of a model for tribal consultation in southern Nevada, and the formation and evolution of the CGTO as a consulting body working on behalf of its tribal members. This YMP NAIP model has since been adopted and modified by the DOE on the Nevada Test Site and Nevada Test and Training Range, with considerable success. Among the key program-specific achievements of the YMP NAIP are the following:

- In keeping with a recommendation by tribal representatives, the DOE adopted a "preservation-in-place" policy whereby artifacts were avoided and left undisturbed without collection, wherever feasible.

- Throughout the past fifteen years, the DOE has supported CGTO members to attend numerous meetings and conferences, including (among others) the National Congress of American Indians, DOE Transportation External Coordination Tribal Work Group, DOE cultural resources policy meetings, the Society for American Archaeology, and cultural resources training programs including NAGPRA-related training sessions. The DOE also sponsored dozens of speaking engagements and exhibits describing the NAIP to the public.

- In 1993, based upon a CGTO recommendation, DOE initiated a program whereby Native American monitors would be employed on archaeological data recovery programs at Yucca Mountain, to ensure that Native American sensitivities are considered, especially during artifact collection. Native American monitors from the three tribal groups participated in the three main data recovery efforts conducted since 1993.

- In 1993, CGTO members visited a rockshelter site containing perishable basketry and crookneck staff on the Nevada Test Site near Yucca Mountain, and recommended that the items be left in place, with annual monitoring to assess their condition. This monitoring was conducted until custody of the site was turned over to the Nevada Nuclear Security Administration on the Nevada Test Site in 2004, which now conducts similar monitoring activities.

- In 1993, the CGTO and archaeological monitors recommended that archaeological sites in the Yucca Mountain area be blessed by a Southern Paiute spiritual leader before being further studied, or before artifacts were removed. This blessing was conducted in June 1993.

- In 1994, the DOE sponsored a special celebration, "Visions in Culture: Native Americans of Southern Nevada," during which members of Tribes with historic relationships to the Yucca Mountain area participated in traditional activities, dances, demonstrations of traditional crafts, and story-telling.

- In 1995-1996, the DOE sponsored Native American students to attend archaeological field schools conducted in conjunction with the Desert Research Institute in southern Utah. This effort provided a unique opportunity for tribal representatives to gain further insight and better understanding of the science of archaeology.

- In 1997-1999, CGTO members and knowledgeable tribal elders examined artifacts collected as part of the YMP to determine if items falling under the auspices of NAGPRA existed in the collections. Over 400 possible items from 43 sites were selected by a subgroup of the CGTO for examination by tribal elders. A total of 15 representatives from 10 Tribes examined the objects. Though members considered a number of items to be of spiritual significance, no items meeting the definitions of items protected by the law were identified by those individuals who examined them.

- In 1997-1998, as part of the YMP Environmental Impact Statement (EIS) scoping process, DOE visited many Tribes to encourage their participation. Members of the CGTO designated individuals who represented the three main tribal groups to document their viewpoints on the Yucca Mountain area. This group, the American Indian Writers Subgroup, provided Native American perspectives on the repository and recommended impact mitigation approaches for reducing potential impacts to Native American resources and other heritage values in the Yucca Mountain region (AIWS 1998). The report also provided recommendations for the conduct of appropriate consultation procedures for the repository and associated activities, and requested Native American participation in development of project resource management approaches to enable the incorporation of ethnic knowledge in long-term cultural resource protection strategies.

- In 1999, the Draft Repository EIS (YMP Draft EIS) was provided to all 17 Tribes and organizations, and a special Draft EIS scoping meeting was held in 2000. CGTO representatives were afforded the opportunity to hear presentations on the YMP Draft EIS. The meeting included presentations on the YMP site characterization studies, repository surface and subsurface design, and YMP archaeological studies. A court reporter was present to officially record the comments of the tribal representatives, which were then formally entered into public record. The DOE also invited CGTO representatives to the Yucca Mountain site to further discuss the overall project and cultural resource management plans for the YMP Area. The DOE provided all Tribes copies of the final Repository EIS upon its release in 2002.

- In 2001, the DOE sponsored tribal update meetings to discuss the Supplement to the Draft EIS, the Yucca Mountain Preliminary Site Suitability Evaluation, and the site recommendation process. A court reporter recorded comments of tribal representatives. The meetings included presentations on site characterization studies, repository surface and subsurface design, YMP archaeological studies, the site selection process, and steps toward development of a new cultural resources programmatic agreement, which expired when a formal site recommendation was made by the President.

- In 2004-2005, as part of the scoping process for the Rail Alignment EIS, DOE held a tribal interactions meeting to take comments from tribal representatives about the proposed rail line along the Caliente rail alignment. A CGTO-designated subgroup of tribal representatives participated in a field reconnaissance trip along the

alignment, followed by a meeting of the CGTO in late November 2004. A CGTO-designated subgroup also evaluated the draft Nevada Transportation Corridor Environmental Impact Statement. Based on these efforts, the American Indian Writers Subgroup prepared a resource document, *American Indian Perspectives on the Proposed Rail Alignment Environmental Impact Statement for the U.S. Department of Energy's Yucca Mountain Project* that provided insight into American Indian interests along the Caliente rail alignment (AIWS 2005). These perspectives are summarized in Chapter 3.4 of the *Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada – Nevada Rail Transportation Corridor and Final Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geologic Repository at Yucca Mountain, Nye County, Nevada* (DOE/EIS-0250F-S2 and DOE/EIS-0369).

- In 2005, the DOE held a meeting during which the CGTO received updates on the status of the project, the License Application, site activities, and the management of cultural resources at the site. Meeting attendees also had the opportunity to tour the underground Yucca Mountain Repository Site (formerly the Exploratory Studies Facility). Representatives from the DOE Office of National Transportation attended the meeting to discuss tribal involvement in national transportation-planning efforts.

- In 2007, the YMP hosted a tour of Yucca Mountain for the tribal representatives associated with the Transportation External Coordination Work Group. The meetings focus on national transportation planning and preparation. Invitees to the meetings include about 40 Tribes across the country located on or near proposed waste-transport routes. Of the 40 Tribes, four are also part of the CGTO. The Tribes located along possible waste-transportation routes had expressed an interest in visiting Yucca Mountain to learn more about the site in an effort to increase their knowledge and understanding of the plan for deep geologic disposal of waste at Yucca Mountain.

- In 2007, the DOE held a Tribal Update Meeting/EIS Scoping Meeting in Pahrump, Nevada. The meeting was held to allow the Tribes an opportunity to comment on the *Draft Supplemental Repository Environmental Impact Statement*, the *Draft Supplemental Nevada Rail Corridor EIS*, and the *Draft Rail Alignment EIS*. Presentations were made and an extensive question and answer session was held. A court reporter was present to receive comments and tribal representatives were encouraged to send comments to the DOE after conclusion of the meeting. The comments were received by the DOE and entered into the administrative record.

- In 2008, six tribal representatives visited several archaeological sites at Yucca Mountain to assess their current condition. This visit was described in the tribal representatives' monitoring report, entitled "*YMP American Indian Monitoring Report, May 27-30, 2008.*"

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