MEMORANDUM OF AGREEMENT
BETWEEN
THE BUREAU OF LAND MANAGEMENT AND
THE NEVADA STATE HISTORIC PRESERVATION OFFICER
REGARDING TWO UNDERTAKINGS AT
THE ANACONDA COPPER MINE SITE IN LYON COUNTY, NEVADA

WHEREAS, the Anaconda Copper Mine Site (ACMS) is a non-operational open-pit copper mine site in Lyon County, Nevada, that the Environmental Protection Agency (EPA) has determined needs extensive investigative and remedial action to address actual or threatened releases of hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA, 42 USC §§ 9601 *et seq.*); and

WHEREAS, the EPA deferred the lead regulatory oversight role to the Nevada Division of Environmental Protection (NDEP) on February 5, 2018 via the *U.S. EPA and NDEP National Priorities List Deferral Agreement Anaconda Copper Mine Site, Lyon County, Nevada*; and

WHEREAS, approximately 1,367 acres within the ACMS boundary are public lands managed by the Bureau of Land Management (BLM) Carson City District; and

WHEREAS, the BLM is considering authorization of two separate undertakings located in and immediately adjacent to the ACMS: one undertaking is mine remediation on public land within the ACMS, and the other undertaking is disposal of public lands in and near the ACMS; and

WHEREAS, BLM is the regulatory agency under CERCLA on the public lands at the ACMS; and

WHEREAS, pursuant to a Memorandum of Understanding between NDEP and BLM, NDEP is the lead agency for purposes of day-to-day coordination at the ACMS; and

WHEREAS, the Atlantic Richfield Company (ARC) plans to conduct remedial design/remedial action (RD/RA) and other response actions under State authority, which NDEP has agreed to implement in a CERCLA-protective manner under the Deferral Agreement (hereinafter referred to as the "Remediation"); and

WHEREAS, the BLM Carson City District has received a request to convey 2,062 acres of public lands in and near the ACMS to ARC in a lands disposal (hereinafter referred to as the "Disposal") under the Federal Land Policy and Management Act of 1976, as amended (43 USC § 1761); and

WHEREAS, the BLM has determined that the Disposal and the Remediation are both undertakings as defined in 36 CFR § 800.16(y); and

WHEREAS, the BLM has determined the Area of Potential Effects (APE) for the Disposal is 2,062 acres of public land that would be conveyed (Attachment 1, APE maps); and

WHEREAS, the BLM has determined the Remediation APE for physical effects is the area within the boundary of the ACMS (3,017 acres) and the APE for visual, atmospheric, and auditory effects is 3,885 acres (Attachment 1, APE maps); and

WHEREAS, Class I and Class III cultural resources inventories have been completed within the entire Disposal APE and about 90 percent of the Remediation APE and resources eligible for inclusion on the National Register of Historic Places (NRHP), (hereinafter referred to as "historic properties"), are present within these APEs; and

WHEREAS, the BLM, in consultation with the Nevada State Historic Preservation Officer (SHPO) under Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA; Title 54 USC § 306108), has identified the following historic properties within the Disposal APE:

- CrNV-03-11759/26LY2886 (D358) – The Anaconda Copper Mine Site historic district, eligible under criteria A, C, and D; unevaluated under criterion B; includes 21 buildings, 23 structures, and 29 features that are contributing elements of D358.

- CrNV-03-11841/26LY2887 (D357) – The Sagecrest Drive-In historic district, eligible under criteria A, C, and D; includes two structures, two buildings, and an archaeological component that are contributing elements of D357.

- CrNV-03-10012/26LY2588 – Ethno-historic site, eligible under criterion D.

WHEREAS, the BLM, in consultation with SHPO under Section 106 of the NHPA, has identified the following historic properties within the Remediation APE:

- CrNV-03-11759/26LY2886 (D358) – The Anaconda Copper Mine Site, described above.

- D199 – Weed Heights Historic District, a contributing element of D358.

WHEREAS, the BLM, in consultation with the SHPO, has determined that the Disposal would constitute an adverse effect to historic properties as defined in 36 CFR § 800.5(a)(2)(vii); and

WHEREAS, the BLM, in consultation with the SHPO, has determined that the Remediation would cause adverse physical effects within the boundary of the ACMS (D358) that would affect all aspects of the district's integrity except location; and alteration of historic ACMS components and the mine landscape would diminish the integrity of feeling, setting, and association for Weed Heights (D199) which is a contributing element of D358; and

WHEREAS, ARC, as the party planning to conduct certain portions of the Remediation, and the party proposing to acquire the Disposal lands, is assuming responsibilities under this MOA and is an Invited Signatory; and

WHEREAS, the NDEP, as the state agency with regulatory oversight of remediation conducted by ARC at the ACMS, is assuming responsibilities under this MOA and is an Invited Signatory; and

WHEREAS, long before historic mining and settlement occurred, the landscape in and around the ACMS was used and inhabited by Paiute people, whose descendants include members of the Yerington Paiute Tribe and Walker River Paiute Tribe; and

WHEREAS, the BLM has consulted with the Yerington Paiute Tribe (YPT) and the Walker River Paiute Tribe (WRPT) concerning properties of traditional cultural and religious significance for both undertakings, and has invited the YPT and the WRPT to participate in the MOA as Concurring Parties, with both the YPT and the WRPT choosing to participate; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(4) and 36 CFR § 800.14(b)(2)(ii), the BLM has notified the public of the undertakings through public notices and has provided an opportunity for the public to express their views on the Disposal, the Remediation, the development of the MOA, and the Section 106 process; and

WHEREAS, the Signatories, Invited Signatories, and Concurring Parties (hereinafter collectively referred to as the Parties and individually by name) agree that this MOA may be signed in counterparts and the executed MOA, and each signature, will be effective and binding as if all Parties had signed the same document;

NOW, THEREFORE, the BLM and the SHPO agree that the Disposal and Remediation shall be implemented in accordance with the following stipulations in order to resolve adverse effects of these undertakings on historic properties.

STIPULATIONS

BLM shall ensure that the following measures are carried out:

I. Roles and Responsibilities

A. The BLM:

1. The District Manager for the BLM Carson City District is the BLM Authorized Officer for the Undertakings. The District Manager, or designee (the BLM archaeologist), is the point of contact for the BLM.

2. The BLM is responsible for administering this MOA. This includes, but is not limited to, ensuring that signatories carry out their responsibilities; overseeing cultural resource work; assembling submissions to the SHPO, WRPT and YPT, including reports, determinations of eligibility and effect, and treatment plans; and for seeking SHPO concurrence with BLM determinations under the NHPA.

3. The BLM shall ensure that ethnographic, historic, architectural, or archaeological work conducted pursuant to this MOA is carried out by, or under the direct supervision of, persons meeting qualifications set forth in the Secretary of the Interior's Professional Qualifications Standards and who have been permitted for such work, as necessary, by the BLM Nevada.

4. The curation of all cultural materials recovered during controlled archaeological collection and excavation prior to Disposal is the responsibility of the BLM (36 CFR § 79) and curation would be at the Nevada State Museum. Curation of cultural materials recovered from private lands would comply with according to NRS 383: Historic Preservation and Archaeology. ARC and NDEP shall cooperate with the BLM to ensure compliance with the Archaeological Resources Protection Act of 1979 (ARPA, 16 USC § 470) on Federal lands and shall cooperate with the SHPO to ensure compliance with NRS 383 on private lands.

B. The SHPO:

1. The State Historic Preservation Officer, or designee (Deputy State Historic Preservation Officer), is the point of contact for the SHPO.

C. ARC:

1. The Project Manager is the point of contact for ARC.

2. ARC shall be responsible for all expenses associated with carrying out the provisions of this MOA, except for costs incurred by the Parties during fulfillment of the responsibilities assigned to them in this MOA. ARC is responsible for costs incurred by the BLM in accordance with the cost recovery agreement between ARC and the BLM. ARC is responsible for costs incurred by NDEP in accordance with the Interim Administrative Settlement Agreement and Order on Consent between ARC and NDEP.

3. ARC is responsible for all expenses associated with the analysis and curation of cultural materials.

4. ARC shall ensure compliance with the Post-Review Discovery Plan (Attachment 2).

D. NDEP:

1. The Bureau of Corrective Actions, Chief, or designee, is the point of contact for NDEP.

2. NDEP shall ensure compliance with the Post-Review Discovery Plan (Attachment 2) in coordination with ARC for Remediation actions.

E. YPT:

1. The Chairman is the point of contact for Yerington Paiute Tribe.

F. WRPT:

1. The Chairman, or designee, is the point of contact for Walker River Paiute Tribe.

G. The Signatories:

1. The Signatories agree that the *State Protocol Agreement Between the Bureau of Land Management, Nevada and The Nevada State Historic Preservation Office for Implementing the National Historic Preservation Act, Revised December 2014* (Protocol), except as amended here, will be used as guidance for this MOA. The Protocol is incorporated by reference. Subsequent editions of the Protocol may also be used for guidance for this MOA.

II. Treatment of Adverse Effects to Historic Properties

A. ARC shall direct its cultural resource management consultant (CRM) to conduct mitigation work as defined in the Historic Properties Treatment Plan (HPTP) (Attachment 3) for all historic properties in the APEs for the Disposal and the Remediation, consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 CFR 44716-37) and the guidance provided in the ACHP's *Section 106 Archaeology Guidance* at: https://www.achp.gov/protecting-historic-properties/Section_106_Archaeology_Guidance and the *Mitigation Standards for Historical Resources of Local and State Significance* (BLM, 2014).

B. ARC shall ensure that all fieldwork within the ACMS (D358) and Weed Heights (D199) is completed, and that the BLM and the SHPO have a minimum of fifteen (15) calendar days from receipt to concurrently review

the draft products of fieldwork, especially photographs, prior to initiating Remediation actions on public lands.

C. Within thirty (30) calendar days of completion of fieldwork as defined in the specific HPTP, ARC, through its CRM, shall provide the BLM, the SHPO, and NDEP with electronic submission of a fieldwork summary report outlining fieldwork activities and preliminary findings. All parties listed here shall have a minimum of fifteen (15) calendar days from receipt to concurrently review the draft products of fieldwork, especially photographs, prior to initiating Remediation actions on public lands.

III. Mitigation Measures

Detailed mitigation measures are provided in the HPTP (Attachment 3).

IV. Duration

This MOA will expire if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, the BLM may consult with the Parties to reconsider the terms of the MOA and amend it in accordance with Stipulation X below.

V. Post-Review Discoveries

Stipulations of this MOA are intended to identify and mitigate adverse effects to historic properties. Unplanned discoveries of buried cultural resources are not anticipated; however, if there is an unplanned discovery, the BLM will ensure that the provisions in Attachment 2 are met.

VI. Observing and Reporting

A. Any Party to this MOA may observe actions carried out pursuant to this MOA. To the extent practicable, observation activities should minimize the number of participants involved in the undertaking. Observers would need to have the appropriate safety training and comply with all applicable rules for observation conducting an active worksite.

B. Reporting

1. A draft report of treatment or other mitigation activities will be due to the BLM from ARC's CRM within twelve (12) months after the completion of the fieldwork associated with the activity, unless otherwise negotiated.

2. BLM should review and comment on any report submitted within sixty (60) calendar days of receipt.

3. The BLM shall submit the results of treatment efforts, including discovery situations, treatment plans for historic property discoveries, and treatment reports first to the YPT and the WRPT for a thirty (30) calendar day from receipt review and comment period.

4. Following the review period in VI.B.3 above, the BLM shall submit the results of treatment efforts, including discovery situations, treatment plans for historic property discoveries, and treatment reports, as well as any comments on these documents from YPT and WRPT, to the SHPO for a thirty (30) calendar day from receipt review and comment period.

5. If the Parties in Stipulation VI.B.3 and VI.B.4 above fail to respond to the BLM within thirty (30) calendar days of the receipt of a submission, the BLM shall finalize the report accordingly.

6. The BLM shall ensure that all final archaeological reports resulting from actions pursuant to this MOA will be provided to the SHPO. The BLM will also ensure that these reports will be provided to the YPT and WRPT under the applicable data-sharing agreements. All such reports shall be consistent with contemporary professional standards and the *Department of Interior's Formal Standards for Final Reports of Data Recovery Programs* (48 Federal Register 44716-44740).

VII. Dispute Resolution

Should any Party to this MOA object at any time to any actions proposed, or the manner in which the terms of this MOA are implemented, the BLM shall consult with the party to resolve the objection. If the BLM determines that the objection cannot be resolved the BLM will:

A. Forward all documentation relevant to the dispute, including the BLM's proposed resolution, to the ACHP. The ACHP shall provide the BLM with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the BLM shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP and the Parties and provide them with a copy of this written response. The BLM will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, the BLM may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the

BLM shall prepare a written response that takes into account any timely comments regarding the dispute from the Parties and provide them and the ACHP with a copy of such written response.

C. BLM's responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

VIII. PARTIES IN INTEREST; NO THIRD PARTY BENEFICIARY.

The obligations of ARC created by this MOA are enforceable only by the BLM and NDEP against ARC. This MOA creates no independent right or private right of action by any person or entity, including any other Party to enforce any obligation hereunder against ARC. Nothing herein shall limit any person's or entity's rights under the NHPA or the Administrative Procedure Act.

IX. ARC RESERVATION OF RIGHTS/NO WAIVER.

Nothing in this MOA, including Section VII of this MOA, shall waive or otherwise limit any administrative or judicial remedy or right of review available to ARC under applicable law or regulation. By agreeing to this MOA, ARC does not waive any right to challenge any BLM decision under relevant law, and ARC does not admit to any liability with respect to the conditions at the ACMS or the Remediation.

X. Amendments

Any Party to this MOA may request that this MOA be amended, whereupon the Signatories and Invited Signatories will consult with all Parties to consider such amendment. The amendment will be effective on the date a copy signed by all the Signatories and Invited Signatories is filed with the ACHP.

XI. Termination

Any Signatory or Invited Signatory to this MOA may terminate the MOA by providing thirty (30) days advance written notice, with cause, to the Parties, provided that the Signatories and Invited Signatories will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.

EXECUTION of this MOA by the BLM and the SHPO and implementation of its terms evidence that the BLM has taken into account the effects of this undertaking on historic properties.

SIGNATORY PAGE

SIGNATORIES:
U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT

_____ Date 4/27/2020
Colleen Dulin, District Manager, Carson City District

NEVADA STATE HISTORIC PRESERVATION OFFICE

_____ Date 04/27/2020
Rebecca L. Palmer, SHPO

INVITED SIGNATORIES:
THE ATLANTIC RICHFIELD CORPORATION

_____ Date _____
Nick Peterson, Project Manager

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

_____ Date _____
Greg Lovato, Administrator

CONCURRING PARTIES:
YERINGTON PAIUTE TRIBE

_____ Date _____
Ginny Hatch, Chairman

WALKER RIVER PAIUTE TRIBE

_____ Date _____
Amber Torres, Chairman

Attachment List

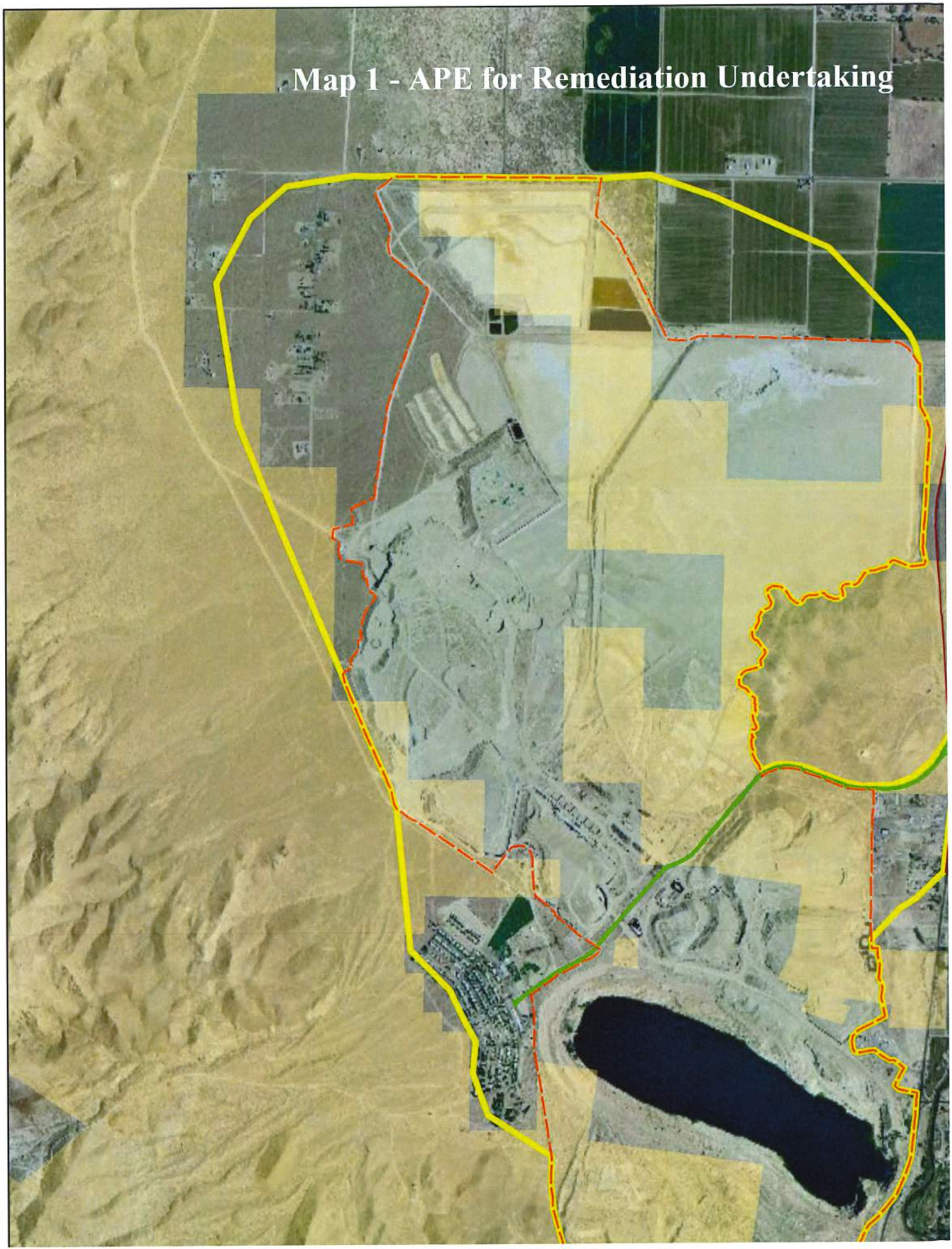
Attachment 1 – APE Maps

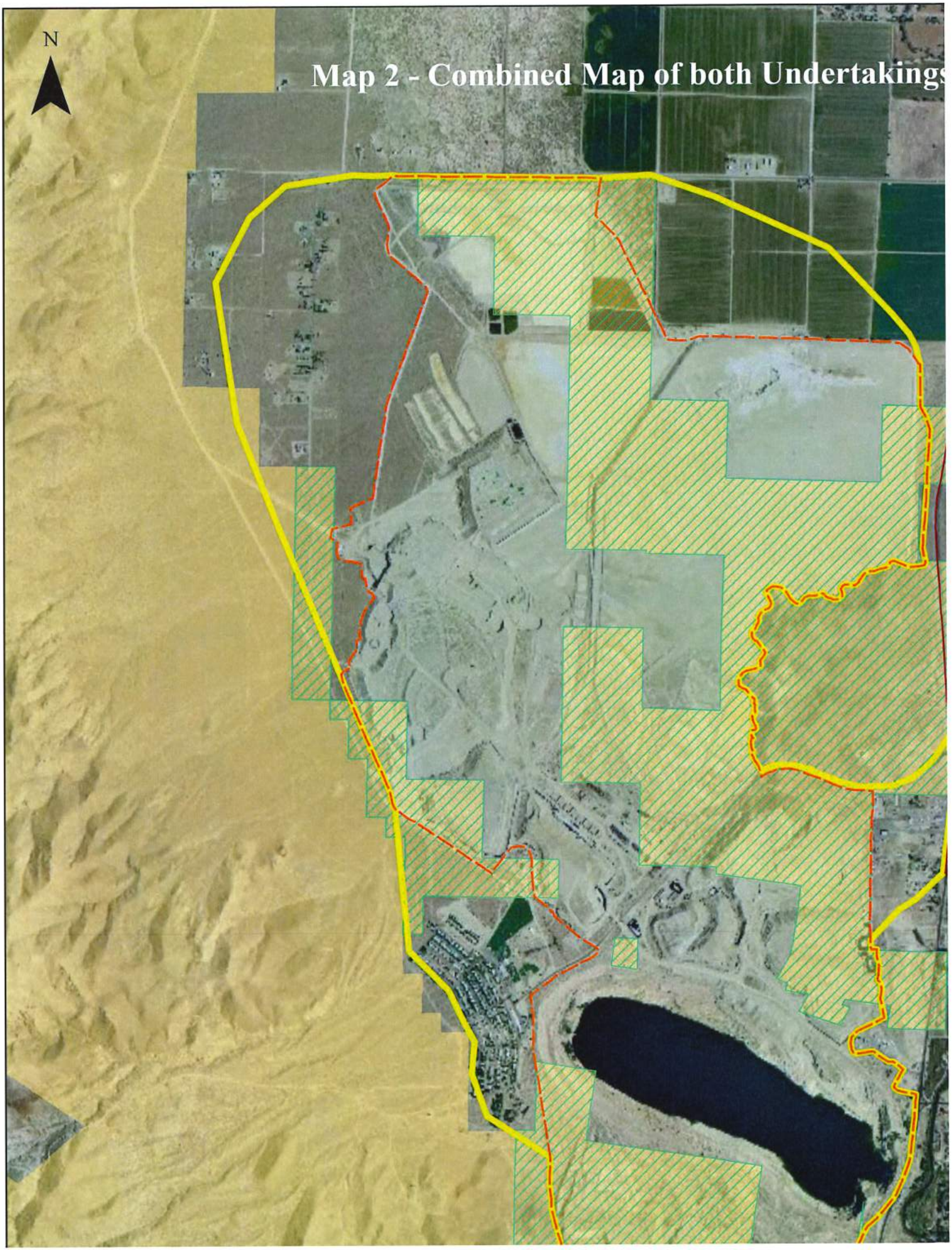
Attachment 2 – Post-Review Discovery Plan

Attachment 3 - *Historic Properties Treatment Plan for Mitigation of Adverse Effects to Historic Properties in and near the Anaconda Copper Mine Site, Lyon County, Nevada (CRR 3-2831.3)*

Attachment 1 – APE maps

Map 1 - APE for Remediation Undertaking

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Map 2 - Combined Map of both Undertakings

ATTACHMENT 2: POST-REVIEW DISCOVERY PLAN

I. Discoveries

A. This discovery plan applies to remediation activities at the ACMS conducted on public lands managed by the BLM.

B. All communications described here may be conducted by email. Final versions of documentation, signed letters, and Notices to Proceed may be sent by email with hard copies to follow. Timeframes are based on receipt of electronic documents.

C. If Remediation activities result in the discovery of previously unidentified cultural resources, all ground-disturbing activities within 30 meters will temporarily cease while the archaeological and tribal monitor(s) identify the nature of the discovery.

D. For discoveries of isolated artifacts, historic debris, or common historic feature types (e.g. concrete pads, paved surfaces, fences, or other small ancillary features similar to those already documented), or prehistoric flake scatters of fewer than 10 pieces of lithic debitage without tools, the archaeological monitor will document these cultural resources on an IMACS form or isolate log in accordance with the 2019 *BLM Nevada Guidelines and Standards for Archaeological Inventory*, 6th edition (Guidelines). Following documentation by the archaeological monitor, construction activities may resume. The IMACS form or isolate log will be supplied to BLM for review within 15 days of documentation and a copy will be submitted to SHPO for their records.

E. If the cultural resource is other than described above or involves a prehistoric archaeological feature or a unique historic feature, all ground-disturbing activity will cease within a 30-meter radius of the discovery. ARC will notify the BLM Authorized Officer no later than 24 hours following the time of discovery. ARC, working with its cultural resource management consultant (CRM), will ensure that the resource is protected while the resource is documented and evaluated.

1. Protection of the discovery includes maintaining confidentiality regarding the nature of the discovery and may include restricting access to the discovery and protecting the discovery from the elements until documentation and evaluation are completed. The ACMS is a closed site and there is no public access. For the purposes of this Discovery Plan, restricting access means establishing a temporary perimeter fence around the discovery and, to the extent reasonable and without impacting or delaying critical activities (as discussed in II.A below), restricting access to those persons needed to secure the discovery, and those needed to maintain, repair or secure any portions of the remedy facilities that are located within the 30-meter radius of the discovery.

2. Documentation and evaluation of the discovery will follow the standards found in the Guidelines. ARC's CRM will provide the BLM with draft documentation and evaluation of the discovery as an addendum to CRR 3-2831. ARC's CRM will provide the BLM with the draft documentation within 5 working days of the discovery.

F. Upon receipt of the draft documentation in I.D.2 above, the BLM will provide the documentation and eligibility recommendations to WRPT and YPT for review, with comments due within 5 working days. The BLM will then provide the documentation, agency determination of eligibility, and any comments from WRPT and YPT to the SHPO. SHPO's comments shall be due within 5 working days.

G. If the discovery is determined to be eligible, ARC's CRM will prepare an addendum to the HPTP for mitigation of effects to the eligible discovery. The BLM will provide the HPTP addendum to WRPT and YPT for review, with comments due within 5 working days of receipt. Next, the BLM will provide the HPTP addendum and any comments from WRPT and YPT to the SHPO for review, with comments due within 5 working days.

H. Discoveries on public lands involving Native American human remains or funerary objects are governed by the Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001 et seq. and will follow the processes required under that law.

II. Notices to Proceed

A. A written Notice to Proceed (NTP) from the BLM to NDEP/ARC will be required for any discoveries of cultural resources meeting the characteristics described in Section I.E above. Except as provided below, Ground-disturbing activities within 30 meters of the resources will remain stopped until BLM issues the NTP. If critical activities are required within the 30-meter radius despite a discovery, within 4 hours of the discovery ARC shall inform the BLM and NDEP of the critical activities with its I.E discovery notice. In such event, the BLM and NDEP shall confirm to ARC within 4 hours of such notice whether or not it agrees that ARC activities are necessary and may continue. For the purposes of this Discovery Plan, "critical activities" include those critical to: stabilize steep slopes, prevent a release of hazardous substances, maintain safety, mitigate health risks, prevent a permit violation, maintain access to the ACMS and other areas within the ACMS, and those needed to maintain existing remedial facilities and safety structures. BLM and NDEP will confer with ARC to revise the extent and/or configuration of the stop work area based on site-specific conditions to provide for the protection of the discovery while allowing critical activities as needed.

B. Except as set forth in II.A. above, issuance of an NTP is subject to successful completion of the required steps outlined in Section I of this discovery plan.

FINAL – Historic Properties Treatment Plan for the Anaconda Copper Mine Land Disposal and Anaconda Public Lands Remediation Projects, Yerington, Nevada

Prepared by
Broadbent & Associates, Inc.

For
Wood Environment &
Infrastructure Solutions, Inc.

Broadbent Project No.
18-02-202

March 2020

BROADBENT

Creating Solutions, Building Trust

FINAL – Historic Properties Treatment Plan for the Anaconda Copper Mine Land Disposal and Anaconda Public Lands Remediation Projects, Yerington, Nevada

Prepared by
Broadbent & Associates, Inc.
Alain Pollock, Stuart Rathbone, and
Margo Memmott

With contributions by
Kaitlyn Mansfield
Jeramie Memmott

5450 Louie Ln #101
Reno, NV 89511

For

Wood Environment & Infrastructure Solutions, Inc.
9460 Double R Blvd.
Ste. 210
Reno, NV 89521

Submitted to

Alicia Jensen
Bureau of Land Management
Carson District Office
5665 Morgan Mill Road
Carson City, NV 89701

BLM Cultural Resources Report 3-2831.3
Broadbent Project No. 18-02-202

March 2020

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1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. (Wood) on behalf of the Atlantic Richfield Company (ARC) contracted Broadbent & Associates, Inc. (Broadbent) to prepare this Historic Properties Treatment Plan (HPTP) for two separate but related federal undertakings involving the Anaconda Copper Mine Site (ACMS), Yerington, Nevada. The *Anaconda Copper Mine Land Disposal Project* (Disposal) concerns the proposed disposal of lands managed by the Carson District of the Bureau of Land Management (BLM). The *Anaconda Public Lands Remediation Project* (Remediation) encompasses ongoing environmental remediation activities at and in the vicinity of the ACMS. These projects constitute federal undertakings pursuant to 36 C.F.R. § 800.16(y). As the lead federal agency on the project, the BLM is required to comply with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Per the Cultural Resources Inventory Needs Assessment (CRINA) prepared by the BLM (#CCDO-CR-19-116), Broadbent completed a Class I Reconnaissance Inventory and Class III Intensive Cultural Resources Inventory in advance of the proposed land disposal. Fieldwork was conducted between August and September of 2019. The inventories resulted in the identification of three cultural resources that were determined by the BLM to be eligible for inclusion in the National Register of Historic Places (NRHP): the ACMS Historic District (D358), the Sagecrest Drive-in Historic District (D357), and site CrNV-03-10012 (26LY2588). Because they have been determined eligible, these resources are treated as *historic properties* as defined in the NHPA. The full results of the inventories are documented in BLM CRR 3-2831.1 (Archaeological Resources) and CRR 3-2831.2 (Architectural Resources).

Both proposed projects discussed here were determined to pose adverse effects to historic properties. The following HPTP proposes treatment protocols to resolve these effects through a combination of historical archival investigation and field data recovery. The goal of this HPTP is to address and preserve, to the extent possible, the aspects of the historic properties that contribute to their eligibility.

1.1 AREAS OF POTENTIAL EFFECTS

The Areas of Potential Effects (APEs) for the two undertakings are largely overlapping. Both project areas are located in portions of Sections 4, 5, 6, 7, 8, and 9, T13N, R25E USGS 7.5' *Yerington, NV* (1986) and Sections 16, 17, 20, 21, 28, and 29, T13N, R25E USGS 7.5' *Mason Butte, NV* (1987; Appendix A).

For the Disposal, the direct APE was determined by the BLM to consist of 2,062 acres in five parcels located in and around the ACMS. Because the BLM would not be currently authorizing any ground or surface disturbing activity with the potential to cause atmospheric, auditory, visual, or other indirect effects, there is no indirect APE for this undertaking. The Class I Reconnaissance Inventory was focused on the ACMS, which occupies a total of 3,017 acres of public and private lands. The Class III Intensive Inventory included portions of five parcels located outside the boundary of the ACMS, totaling 396 acres (Appendix A).

For the Remediation, the APE for visual, auditory, and atmospheric effects was determined to consist of 3,885 acres in and around the ACMS. This APE includes a smaller APE for physical effects, which is equivalent to the 3,017 ACMS mine property. The APE for physical effects is the same as the Class I Reconnaissance Inventory area. The APE for visual, auditory, and atmospheric effects partially overlaps the direct APE for the Disposal (see Appendix A).

For the purposes of this report, the 2,062 acres that constitute the APE for the Land Disposal are referred to as the *Disposal APE*. The *Remediation APE* is the 3,885-acre APE for visual, auditory, and atmospheric effects for the Remediation efforts. In some instances, the 3,017-acre Remediation APE for *physical effects* is differentiated from the rest of the Remediation APE. The APEs for both undertakings are referred to collectively as the "project area."

1.2 SUMMARY OF IDENTIFICATION EFFORTS

1.2.1 PREVIOUS INVESTIGATIONS

A review of previous cultural resources investigations in the vicinity of the Disposal APE was completed by the BLM and Wood prior to the initiation of the Class I and Class III Inventories undertaken by Broadbent. The record search identified 40 cultural resources inventories completed within one mile of the Disposal APE between 1975 and 2016. Of these, 19 are located within or overlap the boundaries of the Disposal APE.

In advance of fieldwork, Wood prepared a baseline *Historic Context and Mine Operations Overview* for the ACMS (CRR 3-2831). This report summarized the history of the ACMS and the Mason Valley area, compiled the results of the record search, and presented a chronological analysis of historic aerial photographs of the ACMS. While this study was focused on the ACMS, the historic maps and imagery were used to identify and date historic resources throughout the Disposal APE, including pre-ACMS mining features on the hills outside the mine boundary.

1.2.2 CLASS I RECONAISSANCE INVENTORY

The Class I Reconnaissance Inventory was completed within the ACMS. The fieldwork for this scope of work was directed by Stuart Rathbone with architectural history guidance from Corri Jimenez and project oversight provided by Margo Memmott. Supporting field crew members included Jesica Huddleston (Wood), Loren Huddleston (Wood), Kaitlyn Mansfield, Alain Pollock, and Christina Rathbone. Fieldwork was completed between August 19 and September 19, 2019.

Due to safety concerns around the former operations of the ACMS, standard pedestrian survey methods were not used. Instead, Broadbent focused inventory efforts by first reviewing historic maps, photographs, and Google Earth satellite data to determine where buildings, structures, and features related to the operation of the ACMS were known to have been. Broadbent then completed a reconnaissance survey targeting the areas of operation which contained buildings, structures, and features that were integral to the operation of the mine site.

The recording strategy for architectural Buildings, Structures, and Objects followed the 2014 *Guidelines for Recording and Reporting Architectural Resources in Nevada* (Forest Service et al. 2014). The Class I Inventory identified both architectural and archaeological components of the ACMS, which were summarized using the appropriate recording forms. The architectural component of the ACMS and architectural resources identified during the Class III inventory are presented in *An Architectural Assessment of the Anaconda Copper Mine Site and the Sagecrest Drive-In Theater, Yerington Nevada* (CRR 3-2831.2).

1.2.3 CLASS III INVENTORY

The Class III inventory area consisted of eight discontinuous blocks totaling 396 acres within the Disposal APE. For the purposes of the survey, the blocks were designated Survey Areas 1-8. The Broadbent GIS staff produced digital and physical maps showing the extent of the APE and individual survey areas, as well as locational data for the boundaries or approximate boundaries of the previously recorded sites that overlapped the survey areas. The Intermountain Antiquities Computer System (IMACS) records for previously recorded sites were collected via the Nevada Cultural Resources Information System (NVCRIS).

Fieldwork for the Class III Inventory was completed in August and September 2019. The inventory methods and site documentation strategy followed the Nevada BLM's 2019 *Guidelines and Standards for Archaeological Inventory* (Sixth Edition). Per Nevada BLM standards, a "site" was usually defined as two or more artifacts, more than one cultural feature, or a combination of at least one artifact and one feature. However, some exceptions to this were made in areas that were heavily impacted by modern disturbances, where artifacts were present but entirely without historic integrity. In cases where modern traffic or grading resulted in extremely widespread, diffuse background scatters of highly fragmented historic artifacts, i.e. non-diagnostic bottle glass and metal fragments, site boundaries were drawn around intact features and/or definable activity areas. Modern mechanical push-piles containing fragmentary historic artifacts were considered disturbances to archaeological sites. Deliberate modern deposits of multiple historic items, i.e. bottle collection piles, were documented as isolated features.

The project area was surveyed using parallel transects no more than 30 meters apart. When archaeological sites were encountered, IMACS forms were completed. Photos were taken of sites, features, and artifacts as necessary. All sites and isolates were mapped using a GPS unit.

Broadbent archaeologists attempted to relocate previously recorded sites within the survey areas based on the locational information provided on NVCRIS. Updated IMACS forms were completed for relocated sites. If a site could not be relocated in the survey area, a summary IMACS form describing the survey effort and the current status of the site (incorrectly mapped or destroyed), was completed for inclusion in NVCRIS. Previously recorded sites that were not located within the survey areas were not updated, as these had been recently recorded to standards considered adequate by the BLM.

The results of the Class III Inventory are presented in *An Assessment of Cultural Resources for the Anaconda Copper Mine Land Disposal, Yerington, Nevada* (CRR 3-2831.1). This report also includes a summary of the archaeological components of the ACMS.

1.3 EFFECTS OF THE UNDERTAKINGS

The investigations described above identified three historic properties: the ACMS Historic District (D358) and its contributing elements, the Sagecrest Drive-in Historic District (D357), and site CrNV-03-10012 (26LY2588). The ACMS Historic District is within the Disposal APE and the APE for physical effects for the Remediation. Two contributing elements of the ACMS Historic District are located outside of the mine boundary, but are within the Remediation APE for visual, auditory, and atmospheric effects. These are the Weed Heights Historic District (D199), and the Anaconda Company Powerlines (S1520). Portions of the latter also intersect the Disposal APE. The Sagecrest Drive-in Historic District and site CrNV-03-10012 are in the Disposal APE.

In accordance with 36 CFR 800.5(2)(vii) and the 2014 State Protocol Agreement between the BLM and the Nevada SHPO (2014 Protocol), a transfer of public lands from federal management is considered an adverse effect to historic properties. Because the properties would be transferred out of federal control, current measures designed to ensure long-term preservation of their historic significance would no longer apply. For this reason, the historic properties in the Disposal APE would be adversely affected by the undertaking.

The ongoing remediation work within the ACMS involves treatment of multiple environmental hazards resulting from the former operations and subsequent deterioration of the mine. Physical remediation treatments include, but are not limited to, earthmoving activities such as excavation, trenching, grading, evaporation pond construction, removal of hazardous materials, and demolition of unsafe structures. Auditory and atmospheric effects resulting from the physical treatments may vary but are expected to be temporary and limited to the duration of a given remediation action. The primary long term and cumulative visual effect of the remediation would be the alteration of the current landscape and viewshed within the APE for visual, auditory, and atmospheric effects.

Apart from Weed Heights (D199) and the Anaconda Company Powerlines (S1520), the ACMS Historic District and its contributing elements are within the APE for physical effects. Physical remediation activities may alter, remove, or bury contributing elements of the Historic District, impacting its historic integrity and ability to convey its significance. Weed Heights and the Powerlines are in the APE for visual, auditory, and atmospheric effects. Because these resources are elements of the ACMS system, alterations to the large landscape features and structures that characterize the mine would impact their integrity of historic setting, feeling, and association. The ACMS would therefore be adversely affected by the remediation undertaking.

1.4 PROJECT PERSONNEL AND RESPONSIBILITIES

All cultural resources work for this project will be managed by Broadbent staff members who qualify under the Secretary of the Interior's qualification standards and guidelines for their respective project assignments. Broadbent will assign Margo Memmott, Senior Archaeologist, as Principal Investigator. Ms. Memmott will continue in her role as the primary project manager for Broadbent's cultural resources work on the ACMS and primary point of contact for clients, state and federal agencies, and other contractors.

In enacting the treatment plan, Broadbent will assign personnel that have been involved in the 2019 identification efforts to maintain continuity with work to date. Stuart Rathbone, Project Archaeologist, will manage the treatment of resources within the ACMS Historic District, consulting with Corri Jimenez, Architectural Historian, as necessary. Treatment of the Sagecrest Drive-in Historic District and CrNV-03-10012 will be managed by Alain Pollock, Project Archaeologist, with assistance from the Broadbent staff. Project oversight will continue to be provided by Wood.

1.5 TREATMENT PLAN STRUCTURE

This *Introduction* (Section 1.0) has presented the background for these undertakings, a summary of the resource identification efforts completed, and the potential for these undertakings to impact historic properties.

Section 2.0 contains an *Environmental Context* for this project area which includes relevant information concerning the natural setting of the region.

Section 3.0 presents a *Cultural Context* summarizing the history of the Mason Valley area between the prehistoric period and the present, with focus on the cultural and historical themes important to the region. This overview provides a synopsis of these subjects that allows historic properties to be understood in their historic context.

Section 4.0 describes the *Historic Properties* affected by the undertakings. It includes the physical descriptions and National Register eligibility considerations for the three historic properties.

Section 5.0 contains *Research Designs* tailored to the individual properties. The purpose of these research designs is to present the historical research themes relevant to these properties and the avenues for expanding our knowledge of these themes. They present the historical research questions that the treatment protocols for each property are designed to address.

Section 6.0 summarizes the *Methods* used to address the data potential of historic properties considered eligible to the NRHP with reference to each of the four Criteria of Significance. It describes Broadbent's overall approach to archival research, surface and subsurface data recovery, collection policy, and laboratory analysis of collected materials.

Section 7.0 details specific *Treatment Protocols* for the historic properties. These protocols apply the methods described in the previous section to address the individual data potential of the resources.

Section 8.0 describes the protocols for *Curation and Deliverables* related to this project. It includes the plan for the disposition of materials and records obtained through data recovery, proposed reporting and public outreach efforts, and proposed deliverables.

Section 9.0 contains a bibliography of *References Cited* in this report. It is followed by two Appendices. Appendix A contains Project Area Maps; Appendix B contains a table summarizing the 210 architectural resources located within the Weed Heights Historic District.

2.0 ENVIRONMENTAL CONTEXT

The project area is in the western part of Mason Valley, at the eastern foot of the Singatse Range. It is approximately one mile west of the urban center of the City of Yerington, however the businesses and residences that surround the ACMS are part of the Yerington municipal area. The community of Weed Heights, established in 1951 as housing for the employees of the Anaconda Copper Company (Melvin and Trew 2016), is located immediately west of the ACMS. The main thoroughfare through the valley is US-95 ALT, which passes the eastern boundary of the mine site. The northern extent of the project area is bordered by Luzier Lane, a well-travelled road providing access to residences, ranches, and agricultural fields. Burch Drive, the main road to Weed Heights, passes through the approximate center of the APE. The project area is about 500 meters west of the Walker River corridor that traverses Mason Valley from north to south. The valley around the river is well-watered and currently supports extensive agricultural operations. Fields owned and operated by Peri & Sons Farms are located north and east of the mine, and businesses are located along both sides of the highway.

The ACMS is in the Singatse Range foothills, at an average elevation of 4,650 feet above mean sea level (amsl). The topography within the project area varies between colluvial hills and ridgelines with slopes of up to 25 degrees and relatively level alluvial floodplains. The local geology is composed of Triassic and Permian eugeosynclinal deposits with surface soils consisting of Rawe gravelly sand, Patna fine sand, Singatse very gravelly loam, Malpais gravelly loam, and Orizaba silty clay loam.

Flora

The project area is in a high desert environment that is characterized by the Shadscale vegetation community. This includes shadscale (*Atriplex confertifolia*), saltbush (*Atriplex canescens*), rabbitbrush (*Ericameria nauseosa*), ephedra (*Ephedra nevadensis*), hop-sage (*Grayia spinosa*), and winterfat (*Krascheninnikovia lanata*). The Walker River corridor also supports riparian vegetation, including Russian olive trees (*Elaeagnus angustifolia*), cottonwood trees (*Populus angustifolia*), greasewood (*Adenostoma fasciculatum*), and saltgrass (*Distichlis spicata*) (Peterson 2008).

The ACMS itself was entirely cleared of vegetation during its years of operation. During and after its operations, large areas were capped with vat leach tailings (VLT) and otherwise disturbed. Since it has been shut down, small stands of greasewood and rabbitbrush have become established in isolated areas. The area surrounding the mine is characterized by low-growing shadscale, rabbitbrush, and saltbush with some ephedra and bunch grasses.

Fauna

The Walker River corridor supports a wide variety of animal species in the vicinity of the project area (Hall 1995). Common bird species include great egret (*Casmerodius albus*), snowy egret (*Egretta thula*), black-crowned night heron (*Nycticorax nyciticorax*), and white-faced ibis (*Plegadis chihi*) as well as migratory geese and ducks. Raptors and owls are also common around the agricultural lands. Mammal species in the area include black-tailed jackrabbit (*Lepus californicus*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), badger (*Taxidea taxus*), and mule deer (*Odocoileus hemionus*). Snakes, lizards, and other small reptiles are common in the hills and have been observed on the mine site.

3.0 CULTURAL CONTEXT

3.1 PREHISTORY OF MASON VALLEY

Mason Valley lies within the Western sub-region of the Great Basin, an area that has been occupied by humans since between 12,000 and 10,000 years ago. During this time, the environment was considerably cooler and wetter than it is today, with Pleistocene lakes and marshes covering many valley floors in the Great Basin (Hockett et al. 2008). The most expansive Pleistocene lake in the eastern Great Basin was Lake Lahontan, and likely inundated the current project area before the Late Pleistocene era. During the early Holocene transition (c. 11,700 BP), the bounds of Lake Lahontan receded to the extent that the project area was likely on dry-ground near the lake shoreline (Reheis 1999).

From the Pre-Archaic period onward, the lifestyle of the people in Mason Valley was characterized by a pattern of seasonal residential mobility with more permanent settlements in the Walker River corridor. The archaeological record indicates that, over time, prehistoric communities adapted to changing climatic conditions and resource distribution with a general pattern of decreasing residential mobility and increasing exploitation of local resources. A detailed discussion of the existing knowledge about the prehistoric period in the Western Great Basin and human adaptive change over time is contained in CRR 3-2831.1.

No historic properties related to the prehistoric occupation of Mason Valley were identified in the project area.

3.2 ETHNOHISTORIC OVERVIEW

The current project area falls within the traditional range of the Northern Paiute, or Numu. The term Numu, which in the Northern Paiute language means “human being,” is used to collectively refer to the local Native community in this area (YPT 2020). Numu bands living in Mason Valley and the surrounding Walker Lake Basin were also called the *Agai Dicutta* (*aga’idökadö;* trout eaters), *Pugwi Dicutta* (*pakwidökadö*; fish or chub eaters), the *Toi Dicutta (*tule eaters) to the north, and *Tobusi Dicutta* (*tövusidökadö*; grass bulb eaters) to the west (Fowler 1989; Fowler and Liljeblad 1986; Johnson 1978; Stewart 1941; Inter-Tribal Council of Nevada 1976). The descendants of these people now comprise the members of the Yerington Paiute Tribe and the Walker River Paiute Tribe (the Tribes).

The cultural history of Numu asserts that they have lived on these lands since time immemorial. Despite a lack of written documentation detailing the lifestyle of the Numu groups before contact with non-Native Americans, their oral stories describe life before their intrusion (Huddleston et al. 2019). They occupied multiple ecological zones: they collected pine nuts in mountainous areas as far as Mount Grant near Walker Lake, approximately 50 miles from the project area, and they collected various plant and fish resources in Mason Valley and the surrounding valleys (Fowler and Liljeblad 1986; Inter-Tribal Council of Nevada 1976; Steward and Wheeler-Voegelin 1974; Stewart 1941; Huddleston and Huddleston 2019).

The Numu occupied the banks of the Walker River and Walker Lake in order to take advantage of the varied resources of the area, particularly the abundant fish. The emphasis on fishing is seen through their material culture (e.g., weirs and platforms, basket traps, nets, hooks and lines, harpoons, and spears). Other subsistence remnants commonly found in archaeological deposits include implements for plant/seed processing and hunting game animals.

Ethnographic accounts (Fowler and Liljeblad 1986; Ruhstaller and Pendleton 1982; Fowler 1989) indicate that the ancestors of the Tribes lived a semi-sedentary lifestyle, residing in fixed locations during the winter, and moving away from the river in the spring in order to avoid rising waters and flooding from snowmelt. Smaller temporary camps (consisting of two to three families) were utilized during the spring, summer, and autumn. Fresh green plants were gathered in the spring, various seeds were collected in the summer, and roots and pinyon pine nuts were collected in the fall. Women sometimes stayed in the pine nut hills all winter, while the men returned to the river to fish. Most hunting was done in the late fall (Fowler 1989). While pine nuts and corresponding pine nut festivals were of primary importance, festivals were also held in association with communal rabbit and pronghorn drives.

The effect of the arrival of Euro-American settlers on Native subsistence-settlement systems is evident in the archaeological record. Glass trade beads are often the earliest sign in the archaeological record of Euro-American influence on indigenous economies. They have been used as a signal of the existence of a proto-historic period in the Western Great Basin c. 1700-1850, where indirect effects of the presence of Euro-Americans were experienced by native groups prior to direct contact. Californian native groups traded glass beads into the Eastern Sierra Nevada region, possibly as early as 1775 (Arkush 1990).

Direct interactions between Native and non-Native Americans in the Great Basin began in the 1820s when fur trappers crossed over the Sierra Nevada into the Great Basin to begin trapping operations. Englishman Peter Skene Ogden spent much time in the Western Great Basin trapping beaver and described continuous contact with Native groups during this time. Later in 1833, Joseph Reddeford Walker's party used the help of Native guides to cross the Sierra Nevada into California. This group also often had violent conflicts with Native groups during trapping excursions in the Western Great Basin (Huddleston and Huddleston 2019; Johnson 1978).

The incursion of Euro-American settlers traveling through Numu territory on the California trail in the 1840s-1850s initiated a series of events that were disastrous for the economies of the indigenous inhabitants. With 6,200 wagons, 21,000 people, and 50,000 head of livestock using the trail in 1849 alone (Fowler and Liljeblad 1986:456), the fragile ecosystems alongside the trail system were destroyed for miles, and water systems were severely compromised. During the 1850s the area in and surrounding Mason Valley was settled by ranchers, who provided supplies to the nearby mining operations, usurping productive areas for livestock grazing, altering the ecology of the region, and deterring game animals from visiting the valleys and marshlands. Pinyon groves were clear cut for timber and fuel to support the mines, further disrupting the existing economy and subsistence patterns.

As trade routes and resource areas became inaccessible, Native inhabitants traded goods such as pine nuts and wild game for flour, canned goods, coffee, clothing, and firearms (Hattori 1975). Native groups became more assimilated into the economy of the new settlers and began participating in the monetary system and purchasing such goods (Cain 1961; Mills 2003). As they obtained merchandise from Euro-Americans, Numu people began to repurpose them to fulfill traditional subsistence functions. These artifacts are often modified by various means, such as attaching a wire handle to a metal bucket to use for gathering pine nuts or fashioning a biface or projectile point from glass bottle fragments (Arkush 1995; Mills 2003).

As access to their resource bases was denied and resources were destroyed, conflicts between the Native communities and Euro-American settlers in the Western Great Basin increased, culminating in the Pyramid Lake Indian War in 1860 (Angel 1881:150; Fowler and Liljeblad 1986). As part of the

settlement of the war, the Walker River and Pyramid Lake reservations were established (Hattori et al. 1984:4). Although, as many native inhabitants refused to relocate to these reservations, smaller, more localized reservations such as the Yerington Colony were established.

In the face of drastic changes and restrictions to Native communities, people turned to prophets to help guide them through those demanding times. In the 1870s, the "Ghost Dance" movement was conceived at the Walker River reservation. Based on a fusion of the traditional Paiute Round Dance and the Cry Dance (a mourning dance), the prophet Wodziwob believed that the Ghost Dance would both restore the resources on which the native inhabitants had once lived, and bring deceased individuals back to life (Johnson 1978). The movement quickly spread throughout the Great Basin and into California and parts of Oregon and Idaho (Hittman 2013:132–134). However, after five years, the Ghost Dance faded as its original participants were reluctantly subsumed into the regional economy (Hittman 2013:133–134).

In the late 1880s, Wovoka (also known as Jack Wilson) re-popularized the Ghost Dance as a means to counter the effects of Euro-American encroachment by giving people a way to cope with their present in order to allow for eternal happiness in the spirit world (Jorgensen; Smoak 2006). As with the prior movement, this revival originated in the Mason Valley area, although this time the movement spread not only west into California but also east to the Plains. The movement quickly ended after the Wounded Knee Massacre on December 29, 1890, when winter ended and the new millennium promised through the prophecies did not occur (Zanjani 1994).

Currently, the descendants of the Numu people who inhabited this area and participated in these movements make up the Yerington and Walker River Paiute Tribes. They live primarily on lands near Yerington and Schurz, Nevada. Lands held in trust for the Yerington Paiute Tribe consist of 22 acres adjacent to Yerington, Nevada, and a ranch comprised of 1,633 acres about 10 miles north of Yerington (Tiller 2015; Yerington Paiute Tribe 2016). The Walker River Reservation encompasses about 323,000 acres, primarily in Mineral county (Walker River Paiute 2019; Tiller 2015).

One historic property in the project area, CrNV-03-10012 (26LY2588), has been identified as an archaeological site dating to the Ethnohistoric period.

3.3 HISTORIC OVERVIEW

This is an overview of the post-Contact history and development of the ACMS and Mason Valley. It is not meant to be an exhaustive history of Mason Valley; instead, there is a focus on the themes of historic mining and community development which are central to understanding the built environment of the ACMS Historic District and the context for the Sagecrest Drive-in Historic District.

3.3.1 COPPER MINING IN NEVADA

The copper industry in North American has historically centered on a limited number of productive areas. Prior to contact with Euro-Americans, copper deposits around the Great Lakes were known and utilized by Native American groups. From the early 1800s through the Civil War, copper mines in Michigan dominated production for the United States. The Michigan industry faltered after the 1860s, and by the 1880s the focus of copper production had shifted to the west.

Native copper occurred in quantity only in Michigan; outside of the Midwest the metal occurs in copper sulfide, copper oxide, and copper carbonate deposits found in veins that often occurred alongside other

metals. For this reason, copper was frequently mined in conjunction with other precious metals, particularly silver. The two major mining centers focused primarily on copper production in the 1880s through the 1900s were Montana and Arizona. Discoveries of copper in Butte, Montana earned the area the moniker of "the Richest Hill on Earth." The Anaconda Company was created in Anaconda, Montana, in 1881—some 60 years before becoming involved with mining in Yerington. For a comprehensive discussion of the history of copper mining in the United States, see Hyde 1998.

Within the continental United States, Nevada is the only other state to have produced a major copper industry. While copper sources are not nearly as extensive as gold and silver within the bounds of the state, copper has been produced alongside these metals at mines across the northern part of the state. Three mines have historically led copper mining in Nevada producing in excess of 2,000,000 tons of copper reserves: the Robinson Mine in Ruth, the Anaconda Mine in Yerington, and the Copper Basin Mine near Battle Mountain (Tingley 1998:105).

Early Mining Exploration: 1865-1907

In 1859, the discovery of the Comstock Lode in the Virginia Hills triggered an influx of people and resources into the western Great Basin that dramatically influenced the growth of the region and the development of Nevada as a state. The growth of the Comstock Mining District and the hopes of another large strike led to extensive prospecting in the mountain ranges of what is now western Nevada. Thus, as the small agricultural communities of Mason Valley were taking form, the exploration of the Singatse Range for mineral resources was also underway.

The earliest documented mine in Mason Valley is the Ludwig Mine, established by German immigrant John Ludwig in 1865 following the discovery of copper ore in the Yerington Mining District. The Yerington Mining District includes most of the Singatse Range and the buttes at the edge of Mason Valley (Moore 1969).

The most commercially significant product of the Ludwig Mine was the copper sulfate ("bluestone") that occurred along the major ore bodies. Copper sulfate was used in the Washoe Pan Process of silver amalgamation and several thousand tons were mined in Mason Valley to supply the silver mines in the Comstock Mining District during the bonanza (Knopf 1918). However, the Ludwig Mine produced very little high-grade copper ore and was ultimately not a successful venture. This was also the case for other early mining ventures, including the initial operations of the Bluestone Mine established on the east side of the Singatse Range by 1900 (Knopf 1918; Hulse 1991; Lincoln 1982). Prior to 1907, the Yerington Mining District produced no more than 1,000,000 pounds of copper, most of it in the form of bluestone (Knopf 1918).

Empire-Nevada Copper Smelting Company (ENCSC) Period: 1907-1941

The first major copper mining boom in the Yerington District began around 1907. A year earlier, in 1906, the Nevada-Douglas Copper Company was established using capital from investors based in Boston, Massachusetts (Myrick 1992). The Nevada-Douglas Company began acquiring other earlier mines, including the Ludwig Mine, and initiated a new wave of development in the District. On the east side of Mason Valley, the Bluestone Mine also escalated operations around this time (Knopf 1918). The Empire-Nevada Copper & Smelting Company (ENCSC) and Empire Nevada Mine were established in 1907 and focused on 500 acres in the western part of the valley near the foot of the Singatse Range (Smith 1958a). At this time, other active mines in the area included the Malachite Mine, the McConnel Mine, the Montana-Yerington Mine, and the Western Nevada Mine (Ansari 2001).

The output of the mines was supported by the development of a new smelter in the District. The Mason Valley Mining Company began operating at the northern extent of Mason Valley in the early 1900s. In 1911, it began construction of a smelter at Thompson, two miles north of Wabuska. The Thompson Smelter was completed and began production in 1912 (Knopf 1918). The location of the smelter was established with consideration of the local agricultural community. Given that the prevailing wind in Mason Valley comes from the south, the smelter was intentionally located at the northern end of valley to minimize the spreading of fumes from the operations over arable land (Knopf 1918).

Between 1907 and 1932, the Yerington District produced 100 million pounds of copper (USBM 1958:4). The initial boom occurred between 1912 and 1914 (Knopf 1918). With the outbreak of World War I (WWI), the price of copper depreciated significantly worldwide and caused a general depression in the mining fortunes of the District. By 1917, the price of copper had risen again and most of the mines made a brief recovery (Knopf 1918; Myrick 1992). While the District reported large outputs of copper through the 1920s, the Mason Valley Mining Company shut down the Thompson Smelter in 1929. Production continued in the District, though at a smaller scale, from 1929 until the early 1950s (Smith 1958).

3.3.2 ANACONDA COPPER MINING COMPANY PERIOD

The origins of the Anaconda Copper Mining Company (the Anaconda Company) can be traced back to mining ventures of Marcus Daly in Butte, Montana in the 1880s. Daly incorporated the Anaconda Copper Mining Company in 1895. Backed by investors, including George Hearst, the Anaconda Company rapidly began to absorb an array of companies ancillary to the copper mining industry of Butte, Montana (Strahn 2006:108). By the 1920s, the Anaconda Company was one of the largest mining companies in the world (Brittanica 2019). During the Great Depression the Anaconda Company, though no longer at its zenith, remained active and continued to invest in mines and companies around the world. The Anaconda Company acquired the Yerington Mine formerly operated by the ENCSC as a lease and option in 1941. Between 1941 and 1945, the Anaconda Company carried out an extensive program of exploration on the old claims and in the surrounding areas. During this time, plans and cost estimates for mining the deposit were prepared, but no major operations were undertaken (Smith 1958b:4).

By 1950, the Anaconda Company had demonstrated that the Yerington deposit contained up to 60,000,000 tons of ore with 0.9 to 0.95 percent copper (Moore 1969:28). The ore body consisted of oxide ores overlying sulfide ores with each type of ore requiring specific means of processing to extract the metal (Moore 1969:28). The Anaconda Company did not attempt to exploit this ore until 1951 after the outbreak of the Korean War.

The Korean War triggered a sharp increase in the demand for copper for military and industrial use, as the US and other countries sought to stockpile copper as a strategic metal. The federal government, motivated to incentivize domestic copper mining, made an agreement with the Anaconda Company for the development of the Yerington deposit. The agreement required the Anaconda Company to develop and begin production on the deposit within two years, in exchange for which the federal government offered significant tax incentives. Additionally, the government committed to purchasing a large amount of copper for a fixed price that was two cents higher than the current industry average (Smith 1958a:5). Under these terms, the Anaconda Company began major industrial developments on the Anaconda Copper Mine Site.

Anaconda Copper Mining Company Operation

The Anaconda Company built and operated the ACMS in two distinct phases. The phasing of the development of the ACMS reflected the local stratigraphic conditions where zones of oxide-bearing ore overlay zones of sulfide-bearing ore.

Initial Mine Development and the Oxide Plant

To meet the two-year timeline required by the US government, the Anaconda Company assembled a team of officers from within the Anaconda Company to design, build, and lead the new mine in Yerington. Due to the efforts and leadership of the Anaconda team the mine was constructed with remarkable efficiency. The Anaconda Company assigned Albert E. Millar, a 27-year veteran of the Anaconda Company, the position of General Manager. Millar's responsibilities included designing the mine pit and management of the construction and operation of the mine complex. Allison Jay Gould, Henry R. Burch, Jerry Houck, and J. P. Hagerty were assigned to assist Mr. Millar (Nevada State Journal 1952).

Wilbur Jurden, widely considered a pioneer in mine engineering, was also assigned to the Yerington project (Harmon 2010:67-73). Mr. Jurden was the Chief Engineer for the Anaconda Company. He and his team of architects, metallurgists, mining experts, and construction engineers were assigned the task of designing the mine, plant, and company town of Weed Heights (Nevada State Journal 1953a). By 1951, Jurden had already had a long career with the Anaconda Company, extending back to his design of a smelter at Los Potrerillos Mine in Chile in 1916 (Harmon 2010:67). Jurden has a long list of mining projects attributed to him and his team. Some of the most notable include Basic Magnesium Inc., Henderson, Nevada; copper production plant in Cananea, Mexico; sulfide crushing mill and smelting plant at Chuquicamata, Chile; the concentrator, smelter, and townsite for San Manuel, Arizona; and the mine complex and town site at El Salvador, Chile (Harmon 2010:67-73).

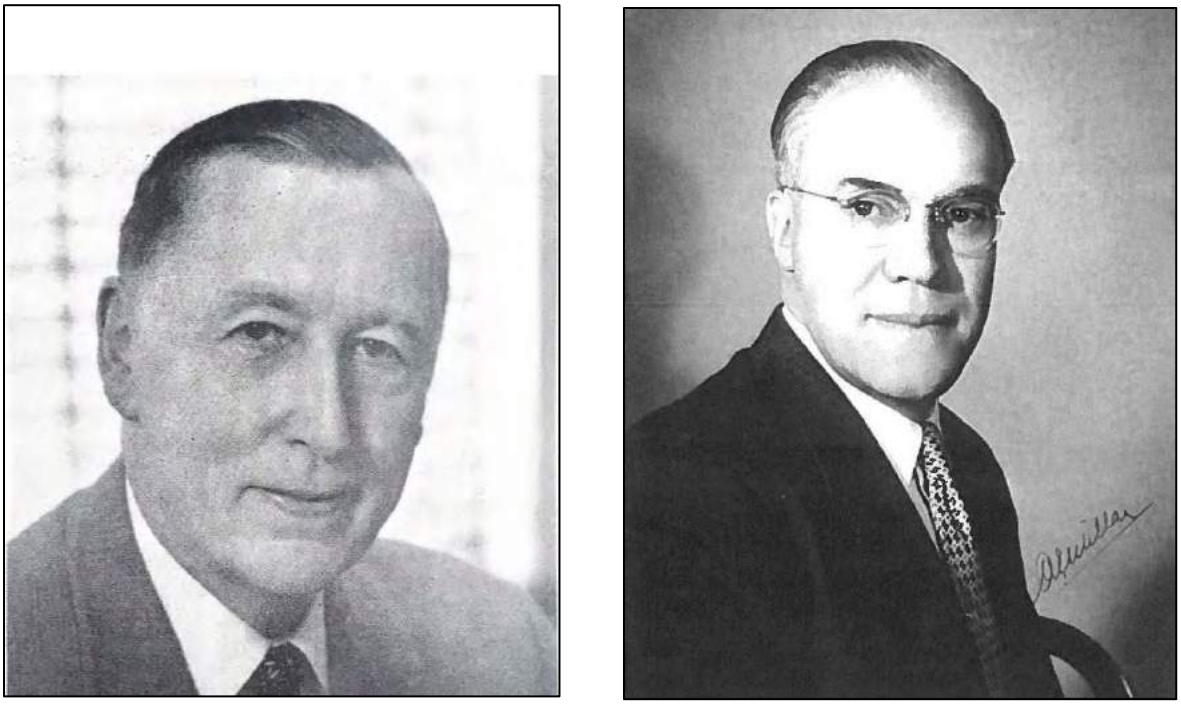

Figure 3.1 Portrait of Wilbur Jurden (Left; Anon 1958: 93) and Portrait of Albert E. Millar (Right; Harmon 2010: 39).

Under the direction of Mr. Millar, work to develop the mine began in December 1951 with initial efforts involving the creation of the Weed Heights company town. The first residents moved into Weed Heights in May 1952 and work began in June 1952 to remove the overburden from the mine pit. In July 1952, construction of the Ore Crushing Area, the Acid Plant, and the Oxide Ore Processing Area (Figure 3.2) commenced (Skillings 1972:18). The first cement copper was produced on November 10, 1953—under two years from the beginning of construction. The event was marked with a dedication ceremony attended by Robert E. Dwyer, President of the Anaconda Company, Clyde E. Weed, Vice President of the Anaconda Company, Nevada Governor Charles H. Russell, U.S. Senator Patrick A. McCarran, and U.S. Senator George W. Malone (Nevada State Journal 1953b).

The original configuration of the mine consisted of Weed Heights, the Water Tank, the Mine Pit with waste rock areas to the north and south, the Acid Plant, the Ore Crushing Area, the Oxide Ore Processing Area, the Support Building Area, and the Oxide Tailings. As first constructed, the mine was able to process 10,000 tons of oxide ore per day, and operated on a three-shift, seven days-a-week schedule (Skillings 1972:19).

Despite its size, the facility was not self-sufficient. Due to concerns about a world-wide shortage of elemental sulfur at the time, the United States requested that Anaconda develop its own sulfur supply at the Leviathan Mine in Alpine County, California, located 58 miles away. The ore was brought to the mine using haulage trucks. The ore was processed at the Acid Plant, which created a sulfuric acid leaching solution used in the Oxide Ore Processing Plant. The Oxide Ore Processing Plant also required a large amount of fragmented iron sourced from California in the form of recycled cans and waste metal from can manufacturers. It is not known if the iron was trucked all the way from California or if it was moved by train and then trucked in from Wabuska (Brown & Caldwell 2007: 1-10). The mine was provided with electricity by the Sierra Pacific Power Company that generated power from four hydroelectric power stations located on the Truckee River 70 miles away. The power stations had been constructed between 1899 through 1911 and were initially built to provide power to the remaining mines in the Virginia City area (Zanin et al. 2019). Finally, the product of the Oxide Ore Processing Area, a copper cement which was around 87% pure copper, was dried and then transported from the site to the Anaconda Copper Mining Company smelter located in Anaconda, Montana. The dried copper cement was transported by haulage trucks to the railway station at Wabuska, 12 miles to the north, where it was taken by train to the Washoe Smelter in Anaconda, Montana.

Development of Sulfide Plant and Full Operation

In 1958, construction began on the Sulfide Plant to process the sulfide ores which underlay the oxide ores. This addition appears to have always been part of Wilbur Jurden's plan for the mine, given that the presence of sulfide ores in the ore body were identified in the 1940s, and that the original configuration of the mine seems to have provided space for the subsequent expansion. Alongside the Sulfide Plant itself there were several associated construction projects undertaken at the same time: a second ore store was added to the Ore Storage Area; the conveyor belt running along the southwest side of the Leach Vats was extended to the northwest where it could supply the new Sulfide Ore Crusher and Stockpile; the Sulfide Tailings Dam was constructed to the northeast of the Sulfide Plant to constrain liquid runoff from the Sulfide Plant. In the same time period that the Sulfide Plant was being constructed, a cooling tower was added to the northwest end of the Solution Tanks in the center of the Oxide Ore Processing Area. The facility became operational in October 1961.

In 1962, the mine stopped hauling sulfur from the Leviathan Mine and relied for a time on material stockpiled at the site before switching to purchasing sulfur from external suppliers. The liquid sulfur was

brought to the Wabuska Station by rail and then transported to the mine by truck. The liquid sulfur was still processed by the Acid Plant to create the sulfuric acid required for the Oxide Ore Processing Area and, after 1965, for the dump-leach activities at the W-3 Waste Rock Area (CH2MHill 2010:2–7). In March 1963, an additional ball mill was added ahead of the existing ball mills at the Sulfide Plant (Skillings 1972:19).

Figure 3.2: The Oxide Tailings to the northwest of the Oxide Ore Processing Area in 1962, looking southwest (CH2MHill 2010: Figure A-21).

In 1965, the W-3 Waste Rock Area began to be used for dump leaching (a process like heap leaching but using uncrushed ores). The same sulfuric acid solution that was used in the Leach Vats was percolated through the waste rock and the pregnant solution was gathered in a pond on the east side of the W-3 Waste Rock Area. Once ready, the pregnant solution was pumped to two modified cells in the Precipitation Plant, the dump-leach primary, and the dump-leach secondary. The solution was moved between the primary and secondary cells via the newly added recirculation sump because the solution from the dump-leach process was kept separate from the solution from the Leach Vats (CH2MHill 2010:A-12). Spent solution was sent to the newly constructed Dump Leach Surge Pond to the northeast of the Precipitation Plant.

In 1966, the Sulfide Plant was expanded. The original plant consisted of a concentrator building with two small external tanks, a medium-sized external tank, and a large external tank. The expansion saw the concentrator building double in size and the small tanks were replaced by three medium-sized tanks. The capacity of the Sulfide Plant was doubled through these modifications. The increase in capacity created a larger quantity of liquid waste and over the next decade a series of new evaporation ponds were added to the north of the Oxide Tailings.

At some point between 1965 and 1968 Burch Drive was altered to allow for the continuing expansion of the W3 Waste Rock Area. The road re-alignment began to the immediate northeast of the Administration Building. Where the original road had curved to the northeast, heading towards US 95-ALT, the new alignment continued running to the north for some distance before turning to the east and reconnecting with the original alignment just to the west of the junction with US 95-ALT. The original alignment has largely been buried by the expansion of the W3 waste pile, but a small section at the western end of the waste pile remains exposed and was recorded during the Class III archaeological survey as S2395.

In 1969, the Secondary Crusher was improved (although it is not clear what changes were made). The program of expansions and improvements that took place between 1954 and 1970 allowed the mine to process an average 28,000 tons of ore per day, split equally between oxide ore and sulfide ore in the early 1970s (Skillings 1972:19). This marked a considerable increase from the original processing capability of 10,000 tons of oxide ore per day in 1952.

During this period Albert E. Millar, long time Anaconda Company employee and General Manager of the ACMS in Yerington, retired. Millar announced his retirement in 1963 and subsequently turned over leadership of the ACMS to his assistant, Henry Ray Burch. Mr. Burch served successfully as the General Manager of the ACMS until September 1974, when he retired due to health concerns. Mark Nesbitt succeeded Burch and served as General Manager until the mine ceased operations in 1978 (Mason Valley News 1974; Harmon 2010:48).

The period of significance for the ACMS Historic District encompasses two operational phases of activity on the mine: the initial phase with the Oxide Ore Processing Area, and the second phase when the Sulfide Ore Processing Area was added. The period of significance for the Historic District therefore runs from 1951 through to 1978. The period of significance does not encompass the post-Anaconda activities, which commenced in 1979.

Figure 3.3 H.R. Burch, General Manager of the Anaconda Company, Weed Heights (The Anaconda Company: 2).

Post Anaconda Copper Mining Company Operations

In 1977, the Anaconda Copper Mining Company was merged into a wholly owned subsidiary of the Atlantic Richfield Company (the subsidiary merged with the parent company in 1981). The mine closed in 1978. In 1979, Unison leased space in the Support Building Area and began work dismantling transformers for disposal. The locally owned Tibbals Construction Company purchased the entire mine including Weed Heights in December 1982. Approximately half of the buildings at Weed Heights were renovated in the following two years and were then leased for private rentals. Tibbals Construction partnered with Copper Tek and constructed a new crusher adjacent the Mine Pit, within the S23 (Sulfide Ore) Waste Rock Area.

In 1989, Tibbals Construction and Copper Tek sold the site, excluding Weed Heights and a portion of the Oxide Tailings, to Arimetco. Arimetco began heap leaching operations and created a new processing facility on the southeast side of Burch Drive, opposite the original Administration Building. In 1991, Unison ceased dismantling transformers on the site. In 1992, Arimetco dismantled and removed the Acid Plant and subsequently constructed the Phase III Heap Leach Pads over its former position (CH2MHill 2010:2–7). In 1993, Arimetco expanded their operations on the site. In 1997, Arimetco filed for bankruptcy but remained active on the site until 2000. With the departure of Arimetco, the site entered a new phase of remediation work, a process which is ongoing.

In the time between the closure of the original mine in 1978 and the present, substantial alterations have taken place across the mine which have lessened the ACMS' historic integrity. The most visible losses of integrity have occurred at the Acid Plant, the Ore Crushing Area, the Oxide Ore Processing Area, and at the Sulfide Plant. In 1992 Arimetco demolished the Acid Plant and constructed two large

heap leach pads over its former location. Within the Ore Crushing Area, the Primary and Secondary Crushers have been reduced to their concrete components and the Ore Storage bins have been demolished. Within the Oxide Ore Processing Area many of the buildings and structures appear to have been crudely smashed using heavy machinery, although it is not clear when, or why, this occurred. These activities have left many of the buildings and structures surrounded by debris piles, frequently cutting off access to them entirely. The Sulfide Plant has been reduced to its concrete components, but many of the surrounding features survive relatively intact. Other major impacts include the careful demolition of a number of buildings and structures in the Support Building Area under the direction of the EPA who had determined that they contained or constituted environmental hazards; the capping of large areas of the site by Vat Leach Tailings (VLT) as part of the remediation efforts which have occurred at the site; and the alteration or infilling of many of the various ponds located around the site.

3.4 WEED HEIGHTS AND COMMUNITY DEVELOPMENT

The first construction work begun at the Anaconda Copper Mine Site was the company town, Weed Heights. This was constructed on a previously unoccupied hillside to the immediate west of the mine. The site was named after Clyde E. Weed, the Vice President of Anaconda Copper Mining Company. In November 1951, work at the future townsite began, commencing with laying out the street pattern and grading and terracing the hillside. The first residents were able to move in May 1952.

The town site consisted of 116 two bedroom houses, 53 three bedroom houses, 20 one bedroom four-plexes, eight 16 person dormitories, five managers' houses, a guest house, an office, a recreation and mess hall, a post office, five fire stations, and a trailer park with space for 52 trailers. The 211 buildings were manufactured off-site in a factory in Reno and transported to the site (Melvin and Trew 2016:5). The town was serviced by a sewer and water system, a sewage treatment plant, and two fifty-thousand-gallon water tanks located on a hill to the west of the town. Electricity and water were provided free of charge by the Anaconda Company (Melvin and Trew 2016:5).

Recreation facilities at the town site included a baseball diamond, a children's playground, tennis courts, basketball courts, and a swimming pool (Melvin and Trew 2016:10, Figure 01). A nine-hole golf course opened in 1954 (Melvin and Trew 2016:10). This was located to the east of the manager's houses at the south of the town, but aerial photographs suggest that it was lost to the expanding mine pit between 1963 and 1967. Recreation facilities listed in a 1970s company booklet include the children's playground, tennis courts, and a basketball court, but there is no mention of the golf course (The Anaconda Company:7). The current unmaintained baseball diamond is not the original baseball diamond at the site; the original baseball diamond was located to the south of Burch Drive and was lost to the expanding mine pit at some point after 1968 and prior to 1977, when a new baseball diamond is shown in aerial photographs in its current location (CH2MHill 2010:A-47, A-49). The current outdoor pavilion, tennis courts, putting green, and nine-hole golf course appear to have been created after ownership of Weed Heights was transferred to Tibbals Construction in 1982.

The Anaconda Company appears to have taken considerable pride in the construction of Weed Heights. The handbook published in the 1970s states that tours were offered for visitors twice a day on weekdays. The design of both the company town and the mine itself emphasized innovation and modernity. The Anaconda Company later developed a subsidiary company specifically concerned with exporting their mine and company town designs, potentially inspired by success at the ACMS and Weed Heights.

The Anaconda Company did not provide the residents of Weed Heights with community services such as schools, churches, and grocery stores. For these, the residents of Weed Heights had to travel to the City of Yerington via Burch Drive and the highway. In this way, Weed Heights was not a separate town, but rather functioned partially as a suburban extension of Yerington. This situation is not typical of company towns; even in Anaconda's other mining concerns, towns were generally designed to be complete and self-contained (i.e. El Salvador, Chile).

When the mine closed in 1978, the town was vacated. It was subsequently sold to Tibbals Construction in 1982 who renovated a large percentage of the residential buildings during the 1980s. Work on the buildings included replacing the original asbestos siding with aluminum or vinyl siding, replacing doors, windows and roofs, adding bay windows and garages, converting garages into living spaces and converting the fourplexes into duplexes or single family residences (Melvin and Trew 2016:11). The town is still owned by the Tibbals family and large parts of it are occupied by renters.

3.4.1 THE SAGECREST DRIVE-IN

The Sagecrest Drive-in is located northwest of the intersection of US-95 ALT and Burch Drive, roughly equidistant from Weed Heights and downtown Yerington. The drive-in, while not constructed by the Anaconda Mining Company, is representative of the general growth made possible in the Yerington community by the opening of the mine.

The Sagecrest Drive-in's timeline is divided into two distinct periods: the continuous operation period and the intermittent operation period. The continuous operation period occurred between the opening of the theater, in 1952, and 1983. These years coincide with the broader period of high popularity for drive-in theaters across the United States between 1950 to 1970 (Segrave 1992). The intermittent operation period refers to the years of fluctuation, changes in ownership, and ultimate closure between 1983 and 1995.

Plans for the theater were publicly announced by Regina "Gina" Perry in the *Mason Valley News* on April 11, 1952. The facility was to be constructed on BLM lands that were currently under lease to the Anaconda Mining Company; Perry obtained a sub-lease from the Anaconda Company's main office in New York (Mason Valley News 1962). A name was not determined at that time but would be announced later through a contest. By September 5, 1952, construction began with the "Sage Crest Drive-In Theatre" slated to open in October of the same year. The theater was expected to accommodate between 200 and 300 vehicles and contain a projection booth with restroom facilities and a snack bar (Mason Valley News 1952). Anecdotal accounts of the theater state that it opened in 1954 with a showing of Disney's *The Living Desert*, though this is not confirmed in local newspapers.

After its opening, the drive-in thrived. It was a popular attraction to the local population, being called a "…mecca of most young people…" (Mason Valley News 1969:12) and a haven for young parents who could bring their kids along. In a 1960 "Letters to the Editor" column, local resident April Sutton discussed the recent expansion of the Town of Yerington noting that the "drive-in theater was a delight to everyone," (Sutton 1960:6).

There is limited information about the drive-in during its operational period. Specific mentions in the *Mason Valley News* include a minor theft from the concession stand (Mason Valley News 1963), minor acts of vandalism (Mason Valley News 1964, 1973), and a small fire in 1968 (The Pete Perry Family

1968). A section in the *Mason Valley News* advertised every Friday with the opening and closing of the season and movies and showtimes.

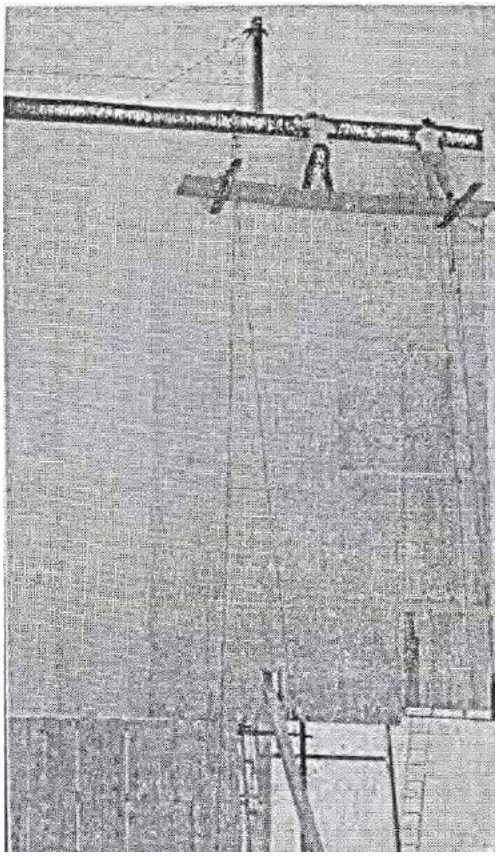

Figure 3.4: Two men painting the 65- foot high movie screen at the Sagecrest Drive-In (Mason Valley News 1969).

By 1983, the drive-in appears to have fallen on hard times. It was listed for sale by West Realty Inc. at a "reduced price" of $125,000 (Mason Valley News 1983). The advertisement does not mention the original asking price. This marks the beginning of the decline period. By 1988, it was noted in an article of the local news that the drive-in was disused (Mason Valley News 1988). In 1989, it was reported that the theater was slated to reopen with new owners Mike Wiley and Joe Bealm under a new name and with a new color scheme. The re-named "Mason Valley Drive-In Theatre" was changed from its original colors of green and blue to brown and gold and was advertised to open with the movie *Batman* at "only $5.00 a car" (Mason Valley News 1989:5).

This venture was not long-lived, and the theatre soon changed hands again. In 1991, the *Mason Valley News* reported that the state had accepted Gary Mile Smith's business license for the newly dubbed "Sagecrest Drive-In" (Mason Valley News 1991b). Smith attempted to incorporate new aspects into the drive-in including playing Spanish language movies on Sundays and incorporating a "swap meet" or flea market during the day on Saturday and Sunday (Mason Valley News 1991a). He also held concerts at the drive-in. Again, these efforts proved unsuccessful; an announcement in the paper citing a new owner for the drive-in, Ben Catlin, appeared in 1995. Catlin was the owner of one of the local casinos, and he announced that he was hoping to re-open the drive-in by July 7, 1995 (Mason Valley News 1995a). He

planned to undertake major updates, including the instalment of a new sound system that broadcast FM frequencies.

However, on July 7, 1995 the local news reported that the property was only leased for one year and advised residents to call the owners for an update on the theater's opening (Mason Valley News 1995b). By July 28, the paper again reported on the acceptance of a new business license for the theater under yet another owner, Mike Wiley. It did not, however, operate long after this point. On November 10, 1995, a public notice was submitted to the newspaper stating that the drive-in's "public water system did not submit a valid bacteriological water sample for total coliform analysis during the quarter of July 1 – September 30, 1995," (Mason Valley News 1995c). After this, the drive-in was closed, and it has not re-opened or been re-purchased since.

4.0 HISTORIC PROPERTIES

The Section 106 process requires investigators to evaluate identified cultural resources for inclusion in the National Register of Historic Places (NRHP) with respect of four Criteria of Significance and seven aspects of integrity. For the purposes of data recovery and cultural resources management, only cultural resources that are eligible for the NRHP are considered to be "historic properties."

This section details the National Register evaluation criteria, provides detailed descriptions of the three historic properties identified in this project area, and presents justifications for their eligibility status.

4.1 NATIONAL REGISTER CRITERIA FOR EVALUATION OF CULTURAL RESOURCES

A cultural resource's National Register eligibility is a function of its integrity and its applicability to one or more of the four federally recognized Criteria of Significance (36 CFR § 60.4). These Criteria are defined as follows (McClelland 1997):

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association, and:
>
> A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B) that are associated with the lives of persons significant in our past; or
>
> C) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D) that have yielded, or may be likely to yield, information important in prehistory or history.

The seven aspects of integrity, listed in the above quotation, are specifically defined as:

> Location: Location is the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why something happened.
>
> Design: Design is the combination of elements that create the form, plan, space, structure, and style of a property. Design is the result of conscious decisions made during the original conception and planning of a property.
>
> Setting: Setting is the physical environment of a historic property and refers to the character of the place in which the property played its historical role.

Materials: Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. In this case, choice and combination of materials reveal the preferences of the property's creators, as well as the availability of materials and technologies.

Workmanship: Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in prehistory or history. Workmanship can apply to the property as a whole, or to its individual components.

Feeling: Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.

Association: Association is the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer.

In determining the eligibility of a resource, the researcher must determine under which Criterion/Criteria the resource is potentially eligible, which aspects of integrity are relevant to that Criteria, and whether those aspects of integrity are demonstrated by that resource. If the resource is a component of a District, this process is repeated to evaluate its potential to contribute to the overall significance of the District.

Some resources, such as buildings, structures, objects, and sites may be both individually eligible for NRHP listing *and* contributing elements of a District. Individual archaeological features within a site are not evaluated for individual eligibility but are considered as contributing or non-contributing elements of Districts.

4.2 THE ANACONDA COPPER MINE SITE HISTORIC DISTRICT (D358; CRNV-03-11759; 26LY2886)

The ACMS Historic District has been determined eligible for inclusion in the National Register under Criteria A, C, and D. It is currently unevaluated under Criterion B. The ACMS is a mid-twentieth century open pit mine and ore processing plant that was planned during the 1940s, constructed in the first years of the 1950s, and became operational in November 1953. The facilities, as originally constructed between 1951-1953, were centered around an oxide ore processing area that was designed to extract copper from the oxide ores located in the upper part of the adjacent ore body. The mine facilities were expanded in 1958-1961 with the addition of a Sulfide Plant to process sulfide ores. The sulfide ores were located deeper in the ore body and were not accessible when the ACMS first became operational. The original operator of the site, the Anaconda Copper Mining Company, merged with an Atlantic Richfield Company subsidiary in 1977, and the mine ceased operations in 1978.

The *period of significance* for the ACMS Historic District encompasses the operational life of the mine, from 1951 to 1978. The period of significance involves three clearly defined themes: mining, transportation, and community development.

4.2.1 NARRATIVE DESCRIPTION

The ACMS is in the Singatse range foothills, at an average elevation of 4,650 feet above mean sea level (amsl). The local topography varies between colluvial hills and ridgelines with slopes of up to 25 degrees and relatively level alluvial floodplains. The local geology is composed of Triassic and Permian eugeosynclinal deposits, with surface soils consisting of Rawe gravelly sand, Patna fine sand, Singatse very gravelly loam, Malpais gravelly loam, and Orizaba silty clay loam (Huddleston et al. 2019).

Buildings, structures, and features that could be dated to the Anaconda Copper Mining Company activities at the site between 1951 and 1978 were considered contributing elements of the Historic District. Due to the scale of the mining operations at the ACMS, it was thought unlikely that any traces of the earlier Empire Nevada Mine would have survived. This assumption was largely confirmed, although a small stretch of the Nevada Copper Belt railroad grade spur, which had run to the Empire Nevada Mine, was identified on site (S2383). The scale and nature of activities which occurred at the ACMS site after it was sold off were quite different to those that occurred during the period of significance. It was a relatively straightforward process to separate out evidence relating to secondary activities that were largely confined to scavenging materials and reprocessing waste rock and low-grade ores. Similarly, the ACMS has very clear physical boundaries, meaning there were no issues determining the extent of the mine or identifying the district boundaries.

The ACMS Historic District consists of the pit, waste rock piles, processing plants, support buildings, and tailings piles. The facilities, as originally constructed between 1951-1953, were centered around an Oxide Ore Processing Area. This was designed to extract copper from the oxide ores which were in the upper part of the ore body. The facilities were expanded in 1958-1961 with the addition of a sulfide ore plant to process sulfide ores which were located deeper in the ore body. Minimal heap leaching was initiated in 1965 and necessitated some modifications to the Oxide Ore Processing Area and the W-3 Waste Rock Area. The Sulfide Plant was greatly expanded in 1968 and represented the last major construction project undertaken during the Historic District's period of significance.

The ACMS consists of a large number of architectural and archaeological resources that relate to the period of significance. A total of 21 buildings, 28 structures, 21 archaeological features (representing demolished buildings and structures), and 14 large landscape archaeological features (representing the mine pit, waste rock areas, tailings piles and heap leach pads) were surveyed within the site. Of these 84 individual resources, 73 were found to relate to the period of significance between 1951 and 1978. These resources were sorted into seven groups reflecting the separate activities taking place within the site: the Ore Crushing Area, the Oxide Ore Processing Area, the Sulfide Ore Processing Area, the Dump Leach Circulation System, the Support Buildings Area, the Evaporation Ponds, and the Site Perimeter. Weed Heights is an eighth area of activity relating directly to the ACMS's period of significance. The remaining 11 individual resources were found to pre- or post-date the period of significance defined for the ACMS Historic District. In addition, 12 resources representing a mixture of post-Anaconda mining buildings, structures, and landscape features were left unevaluated, as they post-dated the period of significance of the ACMS Historic District.

The Ore Crushing Area consists of the remnants of the Primary and Secondary Crushers, two ore bins and several conveyors. An Acid Plant was previously located to the west of the Ore Crushing Area, but this was demolished in 1992. It had previously consisted of a complex system of parallel scrubbers, reactors, heat exchangers, and condensers. The area is now buried under a pair of large leach pads from the Arimetco operation.

The Oxide Ore Processing Area consists of three very large concrete structures for processing oxide ore, considered three elements of a single machine for producing copper cement, and a number of support structures and buildings. The Oxide Ore Processing Area is very precisely arranged over three large terraces.

The Sulfide Ore Processing Area consists of the partially demolished sulfide plant (consisting of a concentrator building, several large thickening tanks, and a small number of partially demolished support buildings and structures), a free-standing office building, and the partially demolished liquid conveyance system that transported expended ore to the Sulfide Tailings area.

The Dump Leach Circulation System consisted of a pond and a pumphouse at the east of the ACMS site and the Dump Leach Surge Pond, located to the north east of the Oxide Ore Processing Area. The Dump Leach Surge Pond was surrounded by a small number of structures which controlled the flow of liquids in and out of the pond and was used as a large open air storage tank.

The Support Buildings Area consisted of three large industrial buildings, a demolished Administration Building, and several smaller service buildings, most of which have been demolished. The demolished buildings are frequently represented by exposed concrete pad foundations.

The Evaporation Ponds are a series of wide shallow ponds where spent solution from the Oxide Ore Processing Area was sent to settle. The southern portion of the evaporation pond area has been buried under a leach pad from the Arimetco operations. The structures relating to the transfer of liquids to the evaporation ponds were recorded as part of the architectural survey. The evaporation ponds themselves were recorded as large landscape features, as described below.

The Site Perimeter was defined by a tall chain link fence, much of which still survives. Burch Drive, constructed in 1951 to provide access to the main entrance of the mine and the new community of Weed Heights, is a second important element of the site perimeter system. The previously recorded Anaconda Company powerlines (S1520) run parallel to and outside of the western boundary of the mine. These are a third element of the Site Perimeter.

In addition, there were a total of eight large mining landscape features related to the period of significance including the Mine Pit (Feature B), the South Waste Rock Area (Feature A), the W-3 Waste Rock Area (Feature C), the S-23 Sulfide Ore Waste Rock Area (Feature D), the Oxide Tailings (Feature F), the Sulfide Tailings (Feature G), the Sulfide Tailings Dam (Feature H), and the Evaporation Ponds (Feature I).

The Mine Pit (Feature B) is a large, irregular ovoid-shaped pit that was excavated in 25-foot benches with the top of the ore body located around 300 feet below the surface. During the operation of the Mine Pit multiple wells kept groundwater from inundating the pit. Following the closure of the ACMS in 1978, the pit has been slowly filled with water and now contains a substantial pit lake. The South Waste Rock Area (Feature A) is a large pile of overburden located to the south west side of the Mine Pit. The W-3 Waste Rock Area (Feature C) is a large pile of low-quality oxide ore and overburden located to the north east of the Mine Pit. It has been disturbed through the creation of several later leach pads. The S-23 Sulfide Ore Waste Rock Area (Feature D) is a smaller pile of low-quality sulfide ore located to the north west of the Mine Pit. The Oxide Tailings (Feature F) is a large pile of fully processed oxide ore located to the north east of the Oxide Ore Processing Area. The Sulfide Tailings (Feature D) are a large

spread of final tailings which were piped from the Sulfide Plant as a slurry to settle behind the Sulfide Dams (Feature H).

A large number of large leach pads were established at the site following the period of significance by Arimetco. These large features often overlie, or partially overlie earlier features. While not of historic significance themselves, they do interact with historically significant features and were recorded alongside the other large landscape features. These features are Phase I Heap Leach Pad (Feature J), Phase II Heap Leach Pad (Feature K), Phase III South Heap Leach Pad (Feature L), Phase III 4X Heap Leach Pad (Feature M), Phase IV Slot Heap Leach Pad (Feature N), and Phase IV VLT Heap Leach Pad (Feature O).

The condition of the various buildings and structures located across the ACMS is varied. The buildings and structures in the Ore Crushing Area have been decommissioned, with their metal frames, cladding, and roofs removed to leave their internal concrete elements exposed. The Acid Plant was removed by Arimetco in 1992 and leach pads were constructed over its former location. It is not known if anything remains of the Acid Plant under the leach pads. The larger buildings in the Support Building Area have survived in good condition, but most of the smaller buildings and structures have been demolished. The Oxide Ore Processing Area has been heavily altered through selective salvage and demolition processes. The main components of the concrete structures remain in place, but their fixtures and fittings are generally missing or badly damaged. The other buildings and structures in this area are in poor condition. The Sulfide Plant is in a similar state as the Ore Crushing Area, with the concentrator building having had its metal frame, siding, and roof removed, leaving a complex mass of concrete foundations, floor surfaces, and machine mounts exposed. The thickening tanks survive in poor condition, but the reservoir has been demolished. The connecting pipes have been removed from the Liquid Conveyance System reducing it to a large number of disconnected junctions, valve boxes, and pipe mounts. Most of the large landscape features have been partially affected by later activities, such as the construction of leach pads, the creation of drainage features, or capping with clean fill material. These features retain much of their mass and layout and still convey a sense of the appearance of the mine when it was operational. The road network and the South Waste Rock Pile are in largely undisturbed condition.

A total of 12 resources were not evaluated during the current project because they were related to the activities which took place across the site after period of significance. These resources were concentrated in several locations, principally at the Copper Tek (Tibbals Construction) processing plant located in the eastern side of the S-23 Sulfide Ore Waste Rock Area, the Arimetco plant site located to the south east of Burch Drive, opposite the main entrance to the ACMS, the Arimetco crusher and hopper site located at the north west edge of the oxide tailings, and the various heap leach pads and the pumps and ponds associated with them.

Weed Heights was not surveyed during this project but was identified as an integral part of the ACMS during its period of significance. It is no longer part of the mine property; it was retained by Tibbals Construction when the rest of the mine site was sold to Arimetco. In 2016, Weed Heights was surveyed as a separate entity by JRP Historical Consulting, LLC. The information derived from that earlier study was incorporated into this consideration of the ACMS.

The Weed Heights Historic District (D199) contains 210 buildings and structures, most of which were constructed in 1952 by the Anaconda Company. The BLM has determined that these resources are currently unevaluated for Section 106 purposes, though D199 is a contributing element of the ACMS Historic District. The resources contained in D199 are summarized in Appendix B of this HPTP.

The 84 individual resources (21 buildings, 28 structures, 21 archaeological features, and 14 large landscape scale archaeological features) that were surveyed within the ACMS historic district are listed in Section 9 of District Form D358. They consisted of: several large custom designed concrete structures that were in poor condition and were where the main stages in ore processing occurred; small concrete structures that were in poor condition and were related to smaller stages in the ore processing procedures; large industrial buildings in the Support Building Area that were in good condition; smaller buildings and structures in the Support Buildings Area that had largely been demolished and only existed as archaeological features, namely concrete pad foundations; three structures which related to the perimeter of the ACMS site; eight large mining landscape features consisting of the Mine Pit, waste rock piles, the tailings dam, tailings piles, and the evaporation ponds; and six large heap leach pads that were constructed at the site following the change of ownership and the end of the period of significance.

4.2.2 NATIONAL REGISTER JUSTIFICATION

The construction and operation of the ACMS constituted an important sequence of events which were historically significant at local, regional, and national scales. The mine is significant on a national level, first, because its development was directly linked to the federal government's effort to stockpile domestic copper resources during the Korean War, and also, as a milestone project of the Anaconda Copper Mining Company. Development of the ACMS provided the Company's engineers an opportunity to integrate technologies and designs that had been individually developed at other Anaconda mine locations into an innovative and modernized system of copper production that was later exported throughout the United States and the world.

This mine had a significant impact on the local and state economy. After the end of the early twentieth century bonanzas at Tonopah and Goldfield, gold mining declined in Nevada. It did not regain traction until the development of cyanide heap leach extraction processes on the Carlin Trend in the 1970s and 1980s. Copper production became increasingly important in Nevada from the beginning of the twentieth century with the opening of the mines at Copper Basin (Battle Mountain) and Ruth. The ACMS followed in 1952, joining the two earlier mines as a third major producer up until the end of the 1970s.

On the local level, the entry of the Anaconda Company changed the course of the Yerington and Mason Valley economies. Formerly an agricultural community with limited mining interests, the development of the ACMS brought industrial capital to the area, drove the development of infrastructure, and added a subsidiary community, Weed Heights, to the City of Yerington.

The ACMS Historic District retains its historic integrity in six aspects. Considered as a whole, it possesses integrity of *location*. It has not been reduced in size since it was last fully operational and many of the original elements are still in place in some form. It retains integrity of *setting*; despite the later activities, the ACMS retains the qualities of a large open pit mine site and ore processing area surrounded by waste rock piles and tailings. The Historic District retains its *associations* with the construction and operation of the mine site, and with the careers of notable individuals responsible for its design, development, and operation.

The ACMS possesses integrity of *design*; it currently preserves the layout presented in an artist's rendering of the mine site dated to sometime prior to May 1952. The principal alteration was the addition of the Sulfide Plant, although that should not be seen as a change to the design, rather it was the result of a phased construction program. Other additions to the site were smaller in scale and added

to the original design without any major revisions. Further, the mine demonstrates integrity of *workmanship*. Although they are in poor condition, the most important structures on the site, the main elements of the Oxide Ore Processing Area and the Sulfide Ore Processing Area, which were the core of the operations in terms of the built environment, still provide clear evidence of the ingenuity of the engineering team which designed and constructed them. Because the design of the mine site is still largely intact it is possible to follow the flow of production through the ACMS, from the initial extraction of ore to the truck scales which weighed the loads of copper cement and sludge as they left the site heading for Montana. The complexity of this flow of processes which is embedded in the physical layout of the ACMS is evidence of the high level of workmanship that went into its design and construction.

The ACMS possesses integrity of *feeling*. Despite the poor condition of many of the individual elements of the ACMS, the retention of many buildings and structures in such proximity to one another, and the retention of the surrounding mining landscape features means that the ACMS has retained the feeling of a major mining complex.

In its current condition, the ACMS does not demonstrate integrity of *materials.* Although some individual buildings and structures within the site do possess integrity of materials, the reduction of so many examples to their concrete foundations and the removal of so much equipment from the site have led to a loss of integrity of materials for the Historic District.

As discussed above, the development and operation of the ACMS was an event of national, local, and regional significance in history. Most of the architectural and built environment components of the ACMS Historic District are present and retain a substantial level of integrity. Subsequent activities at the ACMS have impacted the integrity of the Historic District but not to a critical degree. The ACMS Historic District is therefore determined eligible to the NRHP under *Criterion A*.

The ACMS possesses strong associations with three important people who may be considered as significant to our past. The first important person associated with the ACMS is Wilbur Jurden. Jurden was the Anaconda Copper Mining Company's Chief Engineer, and he led the team of engineers and metallurgists who designed the mine. Jurden is a nationally important mine designer who is credited with updating the way in which mining complexes were designed and organized (Garcés Feliú and Vergara 2011:185). He designed numerous similarly scaled mines for the Anaconda Copper Mining Company in different locations around the world, and formed the subsidiary company, Anaconda-Jurden Associates, Inc. He was known as "Anaconda's master builder" (Anon. 1958; Garcés Feliú & Vergara 2011: 185). The second significant person associated with the ACMS is Albert E. Millar, the first General Manager of the ACMS. Millar designed the Mine Pit and supervised the construction of the mine (Nevada State Journal 1952). He subsequently supervised the operation of the mine until the role of General Manager was taken over by Henry R. Burch in 1964. Burch is the third significant person associated with the ACMS. Burch worked as the second General Manager from 1964 until he retired in 1974. Burch oversaw the expansion of the Sulfide Plant, which was the last major change that occurred at the site during its period of significance. Burch was replaced as General Manager by Mark Nesbitt. Nesbitt did not undertake any large programs of modification or expansion during his time at the ACMS and is therefore not considered to be a significant person with respect to the Historic District (Mason Valley News 1974).

While these individuals made major contributions to the development of the ACMS and the copper mining industry, the current state of knowledge for this subject is limited. The BLM has determined that

additional research is needed to place their work in an appropriate context. The ACMS therefore remains unevaluated under *Criterion B*.

Many components of the ACMS are complex and are bespoke designs by accomplished engineers or architects including Millar (who designed the Mine Pit), Jurden, and members of the team managed by Jurden. When the ACMS was constructed it utilized proven state-of-the-art scientific processes for the processing of ore to extract copper. As a largely intact example of technologically advanced mid-twentieth century industrial mine engineering, the ACMS Historic District is determined eligible to the NRHP under *Criterion C*.

The ACMS is an important resource for addressing questions that will further our understanding of the history of mining. It is both an architectural and archaeological resource with the potential for improving our understanding the mining technologies and organizational principles which were developed in the mid-twentieth century. There are many details of the technological processes utilized at the site which are currently unclear, and which could be resolved through further archival research and more detailed examinations of the mine site itself. The ACMS Historic District is therefore determined eligible to the NRHP under *Criterion D*.

4.3 THE SAGECREST DRIVE-IN HISTORIC DISTRICT (D357; CRNV-03-11841; 26LY2887)

The Sagecrest Drive-in Historic District has been determined eligible for inclusion in the National Register under Criteria A, C, and D. It is in a valley between two prominent hills on the west side of US 95-ALT east of the ACMS. The construction of the drive-in was announced in 1952 by Regina “Gina” Perry. The theater opened between 1952 and 1953 as the “Sage Crest Drive-in,” and operated under that name until about 1983. The drive-in changed ownership multiple times between 1983 and 1995, during which time it was re-named first as the “Mason Valley Drive-in Theatre” in 1989 and again as the “Sagecrest Drive-in” in 1991. The drive-in was shut down around 1991 and briefly re-opened in 1995. It was finally shut down and abandoned entirely in November 1995, when the public water system at the facility failed to pass inspection (Mason Valley News 1995).

4.3.1 NARRATIVE DESCRIPTION

The Sagecrest Drive-in is set on a north-south axis off US 95-ALT and is roughly 700 feet north of the Burch Drive turn off that leads to Weeds Heights and the ACMS Historic District. The theater currently includes three buildings and two structures: a small utility Shed (B18205), a free-standing Ticket Kiosk (B18206), a triangular Attractions Board (S2396), the Movie Projection Screen (S2397), and a Projection Room/Concession Stand located opposite the screen (B18207). A series of 10 semi-circular parking lanes radiate from the front of the screen to the northwest. It is unclear how the parking lanes at the Sagecrest were utilized, but Bell (2003) describes a trend for the informal arrangement of space at drive-in theaters, with families using the forward lanes and teens and young adults, especially couples, using the rear lanes. Approximately 30 speaker stands are still located on the berms consisting of either cylindrical or conical concrete pylon bases which supported tall metal pipes. While some examples retain some of their wiring, no intact speakers are present.

The theater is accessed via a series of two-track roads. The main entry road extends from the highway, past the ticket kiosk, and continues west along the southern edge of the theater. This road, currently an unmaintained two-track, is poorly defined at its eastern extent. Approximately 230 meters west of the highway, it encounters a north-south trending two-track road. The intersection between these two

roads has been heavily used as a turning area. From the intersection, a two-track road continues west through the valley. This two-track is a historic road corridor (CrNV-03-11842) that appears on topographic maps of the Yerington area as early as 1914; it appears to have been partially incorporated into the road network around the drive-in.

The area around the structures and the parking lanes contains very few historic artifacts. Most of the refuse appears to have been intentionally cleared, either during or after the theater's period of operation. Four separate historic refuse deposits were located to the south and west of the main theater area. Additionally, the area to the north of the outermost parking lane was found to be littered with modern cans and bottle glass, potentially related to the later years of operation. Four concentrations of historic refuse were recorded and documented under the site designation CrNV-03-11841.

4.3.2 NATIONAL REGISTER JUSTIFICATION

The Sagecrest Drive-in Historic District (D358) consists of three buildings, two structures, four concentrations of associated refuse, and a constructed landscape of parking lanes. The architectural and archaeological elements retain integrity of location and setting along US 95-ALT between Weed Heights and Yerington. The landscape elements, i.e. the unpaved parking lanes are overgrown, but retain their original form. The artifact concentrations consist of mass-produced items that do not demonstrate integrity of design, materials, or workmanship in a significant way. Concentrations 1-3 are highly disturbed artifact scatters in secondary context. Concentration 4, while impacted by modern activity, appears to retain integrity of location and setting as the unofficial dump for the theater and/or concession stand.

The Sagecrest Drive-in is an unoccupied and derelict example of an early 1950s drive-in theater. Though it has been altered since its initial opening in 1952, it retains much of its historic integrity. It was an important recreational landscape for the local community that was shared by a large sub-set of the population. These 1950s-era drive-in theaters are recognized as an increasingly rare resource class that played an important role in the development of automobile and entertainment culture in the mid-twentieth century. The theater retains its core structural elements including its screen, ticket booth, and projection booth/concession stand. Further, the built landscape of the Drive-in remains evident.

The archaeological component of the Historic District includes a large historic refuse scatter (Concentration 4) that represents the unofficial refuse disposal area for the facility. It contains several thousand artifacts that reflect the composition of the goods being sold and brought into the theater by its patrons. Further analysis of the contents of the artifact assemblage contained here has the potential to yield information relevant to questions of *Community Development*. Because the Concentration includes multiple discrete deposits, it has the potential to demonstrate changes in the types of concessions offered over time. It may also yield information relevant to the economy of the region, i.e. the selling of local products at the drive-in versus mass-produced national brands.

For these reasons, the District is determined eligible to the National Register of Historic Places (NRHP) under Criteria A, C, and D.

Of the five architectural elements, the two structures and two of the buildings are directly associated with the historic use of the theater and are determined to be contributing elements of D358 (S2396, Attractions Board; S2397, Movie Projection Screen; B18206, Ticket Kiosk; and B18207, Projection Room

and Concession Stand). The remining building, B18205, is a small shed of unknown age. It cannot be directly associated with the operations of the theater and is therefore determined to be a non-contributing element of D358. The archaeological component of D358 has the potential to yield additional data about the use of the theater and is therefore determined to be a contributing element of D358.

4.4 CRNV-03-10012 (26LY2588)

Site CrNV-03-10012 is an archaeological site located [redacted]

CrNV-03-10012 was not relocated or updated during the 2019 Class III Inventory. The following description and eligibility justification are duplicated from the original report, CRR 3-2710.1 (Melvin and Trew 2016).

4.4.1 NARRATIVE DESCRIPTION

The site was described in 2016 as follows: "Resource CrNV-03-10012 is a small artifact concentration that may be ethnohistoric in age. The site is situated [redacted]

"The assemblage is composed of a few flakes and a non-portable, two-sided tabular granitic millingslab (sic), in association with a few historic period items. The millingslab was found partially buried. The exposed side has a flat ground surface, while the buried side has a well-shaped and well-used basin. Scattered around this artifact are four obsidian flakes and one chert flake, as well as a Prosser button dating to around the turn of the twentieth century, a metal four-hole sew-through button, a nineteenth century hole-in-cap food can, a fragment of amethyst bottle glass (pre-1916), and a smashed upright pocket tobacco tin (ca. 1910s-1930s). The fact that all of these items were found in close proximity suggests that the assemblage as a whole is an ethno-historic resource. Given that the grinding implement was buried at least 10 centimeters below the surface and just above the West Walker River floodplain, the site is considered to have high potential for additional buried artifacts and possibly features (e.g. hearth)."

4.4.2 NATIONAL REGISTER JUSTIFICATION

The following National Register Justification was presented in the 2016 site record: "Although the surface assemblage contains very few items, the potential for additional buried materials warrants that this possibly ethno-historic resource be recommended eligible for the National Register under Criterion D. Buried material could include features with dietary remains and/or organics suitable for radiocarbon dating, which might address research issues related to Chronology and Culture, Land Use, and Ethnic Boundaries. The site lacks characteristics suitable for evaluation under Criteria A, B, and C."

Based on this recommendation, the BLM has determined the site to be eligible to the NRHP under Criterion D.

5.0 RESEARCH DESIGNS

The purpose of a cultural resources inventory is to identify resources within a given APE and evaluate those resources for inclusion in the NRHP. For the Class I and Class III inventories completed in advance of the undertakings at the ACMS, general research designs were developed based on the prehistoric and historic records of the project area. These designs provided the framework in which the historic significance of resources identified during inventory were evaluated and provided justification for their eligibility status.

Three historic properties were determined to be eligible to the NRHP. Of these, two are Historic Districts that contain contributing and non-contributing elements. The last is a single-component archaeological site.

The Research Designs presented in this HPTP are intended to address, rather than evaluate, the National Register eligibility of each of these properties. They address relevant historical research themes and provide the foundation for the *Treatment Protocols* described in Section 7.0. These treatment methods have been chosen to address the specific research questions listed under each theme.

5.1 THE ANACONDA COPPER MINE SITE HISTORIC DISTRICT

For the ACMS Historic District and its contributing elements, the most relevant historical research domain is *Mining*, particularly twentieth century copper mining.

The research domain of Mining concerns the development of the industry and economy in the Yerington Mining District and the surrounding area. In the mid-1800s, prospectors exploited the mineral deposits in Nevada's Virginia Range using the same surface mining techniques used in California. The discovery of the Comstock Lode, an extensive underground gold and silver ore deposit, triggered the development of new mining and milling technologies on an unprecedented industrial scale. The trajectory of mining in Nevada rapidly escalated from small-scale individual efforts to massive corporate undertakings such as the ACMS. Development of new technologies and the fluctuating productivity of the mines through time has influenced the material record contained in mining and milling sites throughout Nevada.

The study of mine and mill sites is best accomplished by understanding the mine, mill, or mine complex as a whole. The material remains of mines and mills reveal what systems were employed by the people and companies operating the mines/mills.

5.1.1 SOCIAL AND ECONOMIC SYSTEMS

The influence of mining on economic and social systems is an important area of inquiry, particularly in terms of status, class, gender, and ethnicity. This includes the incorporation of immigrants into the workforce and the influence of labor unions. When possible, identifying these social groups either within company towns or the community at large has the potential to create a more nuanced and complete picture of human behavior within the mining/industrial complex.

Data from household or community refuse dumps are important for addressing these questions. Those dumps need to be clearly associated with either a specific household or representative of a substantial portion of the community (i.e. the official town dump). Architecturally, an increase or decrease in the construction of homes, businesses, government buildings in the surrounding communities, or evidence

of houses and businesses in nearby communities being remodeled, improved, or abandoned may reflect changes in the local economy or in the productivity of an associated mine.

Standing buildings and structures are not necessarily required to address these questions. The material remains of buildings, structures, and features such as foundations, platforms, depressions, retaining walls, and structural debris are enough to address these questions. Most artifacts directly associated with mine and mill sites are likely to be industrial in nature. Domestic artifacts may be present, but in limited quantities, for that reason household questions are often best addressed by sites outside of the active mining/milling area.

Intact or ruined buildings, structures, and work areas used by management and those used by laborers may be useful for addressing questions regarding differences in status, class, ethnicity, and gender. Safety and working conditions at mine buildings, machines, and mining structures were an important concern of the workforce, the mine operators and, if present, unions. Evidence of added safety measures such as guardrails, signage, and ventilation may provide important data regarding the experience of the workers over time.

Research Questions

- Can resource(s) within the ACMS be confidently associated with a specific time period during the operations of the mine, and if so, how do they illustrate the living/working conditions of that period?

- How does the material record of the ACMS pertain to the living and working conditions of the miners? Do those conditions change over time, and if so, can those changes be correlated with changes in the management of the mining complex?

- How do resources within the ACMS and/or the material record of the ACMS as a whole illustrate the impact of mining on the local economy through time? Can comparisons be drawn between the impact of the ACMS on the Mason Valley community and other copper mines and communities? Further, can comparisons be drawn between the ACMS and Mason Valley and other types of mining and mining communities, e.g. gold/silver mining, in Nevada and the west?

- How does the material record at the ACMS reflect the presence of different social groups? Does it demonstrate differences in class, gender, status, ethnicity, occupation, or working/living conditions? To what extent does the material record represent members of the local Native American community involved with the mine?

- How does the material record evidence safety controls and/or attempts to mitigate potentially dangerous tasks? Can the prioritization (or lack thereof) of workers' safety be inferred by examination of the remaining buildings and structures? What evidence, if any, demonstrates changes in the management's efforts to change the working conditions through time? Is there any evidence of un-official/improvised adaptions to equipment or buildings?

5.1.2 TECHNOLOGY

Mining technology may be divided into three stages of mineral processing: extraction, beneficiation, and refining (Noble and Spude 1992:12). Extraction involves the processes by which ores are accessed and

removed from their original veins. Beneficiation concerns the means by which the ores are processed and rendered into upgraded materials ready for shipping to a refinery or smelter. Refining is the stage where the upgraded ore is finally converted into useable materials. The three stages of the mining process may be found in one complex or in multiple locations depending on an array of environmental, geographic, economic, or regulatory restrictions. Where two or three of the stages occur at a single location the site can be identified as a mining complex. Where a mining complex consists of only two of the stages, it will be connected to other locations, where the third stage occurs, and the separate location(s) should be considered to be part of the same system. As explained in Section 3.3.2, the mining complex at ACMS represents the extraction and beneficiation stages, with refining occurring elsewhere.

In order to address questions about technology there must be material evidence of the various landscape features, buildings, and structures that made up the mining complex. At twentieth century mining complexes, features may include open mine pits, mine shafts, adits, waste rock dumps, ore storage piles, ore bins, stamp mills, rock crushers, acid plants, acid stores, processing plants, heap leach pads, tailings piles, evaporation ponds, kilns, hotplates and smelters. Other structures and buildings might include administrative buildings, tramways, skyways, shops, sheds, reservoirs, water tanks, gas tanks, utility lines, sub-stations, water towers, railways, and haul roads.

Standing buildings and structures are not necessarily required to address research questions about mining complexes. The material remains of buildings, structures, and features such as foundations, platforms, depressions, retaining walls, platforms, and structural debris may be enough to address many questions. Most artifacts directly associated with mining complexes are likely to be industrial in nature (e.g. chemical drums, hand tools, tires, machinery, machine parts, pipe, wire, cable). Domestic or personal artifacts may be present, but in limited quantities (e.g. tobacco tins, beverage cans, alcohol bottles, buttons).

Research Questions

- How do resources within the ACMS demonstrate changes in the development of copper mining technologies over time? How do those changes correspond to the major periods of activity and/or changes in management at the ACMS? How do they correspond with national or global trends in copper mining?

- How do resources within the ACMS demonstrate major innovations in mining design and engineering? What types of technological improvements are evidenced in the material record?

- How does the design/layout of the ACMS compare to other copper mines, copper processing plants, or copper mining complexes of the same period? What do these differences and similarities illustrate about the history of copper mining at the local, state, or national level?

- Because mines are dynamic historic resources, the elements of the mine that endure through multiple periods of management and economic shifts tend to be the most central to the mining operation overall. Does the ACMS retain features, structures, and buildings that have endured through multiple management and economic episodes? How do those enduring elements interact with the other elements of the ACMS that have been modified or added at a later date?

5.2 THE SAGECREST DRIVE-IN HISTORIC DISTRICT

The Sagecrest Drive-in Historic District is relevant to the historic themes of *Community Development* and *Entertainment*.

The development of mining communities is itself an important research domain. Human communities generally develop around concentrations of usable resources, usually food and water. Mining communities are centered around the mineral or metal being extracted. Mason Valley, however, was an agricultural community prior to the development of major mines. The complex dynamics of economic and social interdependence between the agricultural town of Yerington and the Anaconda Company are of interest, especially in regard to the integration of employees housed at Weed Heights with the existing Mason Valley residents. The Sagecrest Drive-in is a point of interconnectivity between the two communities and the balance between these two themes.

5.2.1 COMMUNITY DEVELOPMENT

The influence of mining on the local community is an important area of interest encompassing several interrelated themes relevant to the lived experience of people in Mason Valley. These include community demographics, material manifestations of gender, ethnic, and class identities, and formal efforts at city and community planning. An example of this is the development of popular social activities that were usually only available to larger communities. When possible, identifying social groups within activity centers has the potential to create a more nuanced and more complete picture of human behavior within the broader community involved with the mining/industrial complex.

Data from activity centers are important for addressing these questions. Trash dumps need to be clearly associated with the center or representative of a substantial portion of the community (i.e. the official town dump). Architecturally, an increase or decrease in the remodeling, improvement, or abandonment of activity centers may reflect changes in the local economy or changes in the productivity of an associated mine.

Standing buildings and structures are not necessarily required to address these questions. The material remains of buildings, structures, and features such as structural debris is enough to address many questions, such as those presented below. Most artifacts observed within the Sagecrest Drive-in Historic District are consumer goods, primarily food and beverage containers. Domestic artifacts were also noted in limited quantities.

<u>Research Questions</u>

- How does this Historic District illustrate the general living and social conditions for the Yerington and Weed Heights communities during the middle of the twentieth century?

- Can analysis of the artifact assemblage within the Historic District be used to demonstrate changes in the use of the facility over time, either in terms of the economic prosperity of the communities in general, or the specific demographics of the users?

- How does the material record reflect the presence of different social groups? Does it demonstrate differences in class, gender, age, status, or ethnicity?

- Does the material record indicate a preference for specific local brands, or were certain items imported? Can the presence or absence of imported or luxury goods be correlated to specific periods of time?

5.2.2 ENTERTAINMENT

Drive-in theaters represent a particular form of entertainment that can contribute to our understanding of community dynamics. Because drive-in theaters are generally open, accessible, and inexpensive in comparison to other types of theaters, their users include young people, families, and both high- and low-income subsections of the community. Analysis of this Historic District can potentially identify activities and change over time within and between these demographics.

As discussed in Bedeau and Canaday (2003), 1950s-era drive-in theaters are an "increasingly rare" resource class that played an important role in the development of automobile and entertainment culture in the mid-twentieth century. They are important recreational landscapes for the local community that were shared by a large sub-set of the population. The material record of the Sagecrest Drive-in Historic District can address how the community functioned and changed over time.

Regarding discarded consumer items, i.e. beverage and food containers, it is important that the disposal areas be clearly associated with the theater. In the case of this Historic District, four refuse dumps containing waste from the drive-in have been identified. These include deposits of food waste as well as structural and mechanical debris from the fixtures. Regarding the architectural elements of the Historic District, an increase or decrease in the remodeling, improvement, or abandonment of the facilities may reflect changes in the local economy or changes in the popularity of automobile-centered activities. These changes may be identified in a study of the buildings and structures themselves and/or in the historic record.

<u>Research Questions</u>

- How does the layout, structure, and design of this drive-in theater compare to other examples dating to the 1950s? To what degree does it follow a standardized formula and how does it incorporate unique elements?

- Can the material record demonstrate how different groups of people used the space, e.g. families, teenagers, and the elderly? Is there evidence that certain groups attended the theater more frequently than others?

- How does the material record reflect the changes in the Sagecrest Drive-in's ownership and management over time? Is there evidence that the various owners successfully appealed to new and different markets?

- Are historically documented upgrades, such as the remodeling and repainting of the theater, correlated with changes in the consumption patterns, e.g. the quality, cost, or point of origin for the concession items?

5.3 CRNV-03-10012 (26LY2588)

This site may yield information that contributes to our knowledge of the *Ethnohistoric Period* in Mason Valley. The term 'ethnohistoric' refers to the history of Native American groups after they came into

contact with European-Americans. It is understood as a period of cultural history that was initiated at different times in different regions. The study of this period in general is concerned with how Native populations adapted to the disruption in their traditional lifeways caused by the influx of Euro-American settlers.

The *Pugwi Dicutta, Tobusi Dicutta*, and *Agai-Dicutta* Numu people, whose descendants now comprise the Yerington Paiute Tribe and Walker River Paiute Tribe, experienced contact with European-Americans in Mason Valley around 1840. The goals of research into the experiences of the these communities during this period focus on how they were able to retain aspects of their culture and integrate them into changing social and economic contexts. This includes the continuation of traditional cultural practices such as pine nut harvests and game drives, as well as Native movements such as the Ghost Dance.

The original record for this site references three historic research themes (*Chronology and Culture, Land Use, and Ethnic Boundaries*) that are explained in detail in CRR 3-2710.1. Broadbent has reviewed the research design in the 2016 report and has incorporated the relevant research priorities identified under these themes into the following discussion and research questions.

The surface component of CrNV-03-10012 consists of four obsidian flakes, one chert flake, a groundstone milling implement, and a scatter of early twentieth century manufactured consumer goods. The extent of the subsurface component is unknown. Because the assemblage occupies a relatively small area, it has been categorized as an ethnohistoric period site with the potential to contain buried deposits of organic materials, additional artifacts, and/or features. If located, such materials could provide information relevant to the diets, subsistence patterns, and lifestyles of Native people at the turn of the twentieth century.

If appropriate samples of organic materials are collected from stratified deposits, radiocarbon dating techniques may be applied as a method to establish absolute dates for the occupation of the site over time. These techniques may not be applicable to surficial and/or more recent deposits. The historic artifacts on the surface of the site suggest that it was last occupied between 1880 and 1910, and it is unlikely that the range of dates produced by radiocarbon dating methods will further refine this timeframe.

If buried groundstone tools are recovered, pollen grain and/or starch residue analysis may be applicable. Both analyses can be conducted if the tools recovered are completely buried and if sufficient evidence exists that they retain pollen grains or starch residue. In addition, features containing organic materials may be located. If it is possible to collect soil samples from such features, flotation screening may be conducted to filter out seeds and other organic materials for further analysis. The resulting data may inform questions regarding Native diet and resource use at the turn of the century.

This site also contains obsidian artifacts and may include additional buried deposits of obsidian or other volcanic toolstone. Obsidian hydration dating techniques, when applied to temporally diagnostic artifacts such as projectile points, can help to refine our understanding of prehistoric chronology and changes in technology over time. Additionally, volcanic materials have distinctive chemical signatures that can be traced using methods such as X-ray fluorescence spectroscopy (XRF) to toolstone sources in the Great Basin. This information can demonstrate the resource procurement strategies utilized by Numu groups in Mason Valley.

Regarding the ability of non-diagnostic obsidian artifacts to contribute to archaeological discourse through hydration analysis, Hockett (1996) proposed the following criteria for sites with obsidian artifacts. These criteria may also be applied to other volcanic materials suitable for sourcing studies (e.g. XRF), such as basalt.

According to Hockett's method, sites with obsidian artifacts may yield meaningful data if they:

- Contain a relatively large number of typable projectile points that are made from obsidian; this characteristic would apply to both small and large sites;
- Are small sites that contain discrete clusters of artifacts and at least 20 obsidian flakes or bifaces that are suitable for hydration analysis. Because of the potential uses of obsidian hydration dating, diagnostic artifacts such as projectile points need not be present;
- Are large sites which contain small, discrete clusters of artifacts within their site boundaries which may represent individual procurement activities;
- Contain relatively large numbers of obsidian artifacts that are exotic to the immediate region; and
- Have the potential for depth and evidence that the depth present is such that additional chronological information, subsistence data, and other organic materials may be preserved beyond the data available from the surface of the site.

Sites would not have the potential to yield meaningful data if they:

- Do not maintain good integrity;
- Contain diffuse flake scatters that are so large in areal extent that they are suggestive of multiple, overlapping occupations over centuries of use;
- Do not have the potential for natural or cultural depth; and/or
- Do not contain discrete clusters of artifacts or diagnostic artifacts such as projectile points and ceramics (Hockett 1996: 5).

While the surface assemblage of CrNV-03-10012 does not meet Hockett's threshold, the National Register eligibility recommendation for this site references the potential for buried deposits. If such deposits exist, they may include volcanic materials suitable for hydration analysis and/or sourcing studies.

<u>Research Questions</u>:

- How does the material record present in this site illustrate the ways that the Native Numu population integrated non-Native goods and practices with their established lifeways? What choices were made regarding the use and non-use of non-Native materials?

- If stratified deposits containing diagnostic materials can be located, how can further analysis contribute to our knowledge of the use of the Walker River corridor over time? How does this information correlate with what is known through the oral and cultural history of the local tribal communities?

- How does the assemblage of obsidian and/or other volcanic toolstone inform our understanding of the resource acquisition strategies used by the Numu before and after the introduction of non-Native manufactured goods?

6.0 METHODS

The goal of mitigation is to address and preserve, to the extent possible, the aspects of a historic property that contribute to its National Register eligibility. Those aspects vary between properties deemed eligible under Criteria A, B, C, and D because of the different types of historic significance indicated by each Criterion. Specific treatment methods for individual resources are determined according to the relevant Criterion/Criteria of Significance. The field data recovery methods outlined below will be managed by a field supervisor responsible for enacting the treatment protocols for the historic property.

6.1 GENERAL METHODS

Properties affected by this undertaking are eligible or unevaluated under different combinations of Criteria A, B, C, and D, as described in Sections 4.2.2, 4.3.2 and 4.4.2. The ACMS and Sagecrest Drive-in Historic Districts also contain components that, while individually not eligible to the NRHP, contribute to the historic significance of the larger resources. These Historic Districts include both archaeological and architectural elements. The Weed Heights Historic District (D199) is a contributing element of the ACMS Historic District.

Criterion A

Properties that are eligible under Criterion A are associated with significant past events and broad patterns of history. For this project area, the development of the Mason Valley community and economy before and after the operation of the ACMS constitute the primary significant historic events. Significant events during the ethnohistoric or contact period include repeated events involving traditional cultural practices, e.g. pine nut harvests, regional movements such as the Ghost Dance, and the early interactions between Native people and settlers.

Treatment of these properties focuses on establishing *how* and *to what degree* a resource contributed to the significant event, e.g. the growth of the ACMS. This can be accomplished through a combination of archival research and field documentation of the resource, including GIS mapping, photography, and narrative description. All aspects of integrity are important when dealing with resources eligible under Criterion A, though integrity of location, setting, feeling, and association may be the most critical, particularly for roads and other infrastructure.

Adverse effects to resources eligible under Criterion A are mitigated by documenting and recording their historic significance prior to the impact and by making the resulting data accessible to future researchers and the public. These records may include archaeological reports, books, and publicly available interpretive materials, such as pamphlets and signage.

Criterion B

Properties that are eligible under Criterion B are associated with individuals who made a substantial contribution to the historic development of a region. In order to be considered, the resource must demonstrate a clear connection between the property and the life or career of the individual. Association in name only, i.e. naming a resource or place after an important historical figure, may not qualify a property for listing under Criterion B.

Because of the nature of the information involved, establishing significance under Criterion B is accomplished primarily through archival and historical research. In the first place, individuals whose lives and careers have made a significant impact on a region must be identified. These people are often, but

not always, active within the events that shaped the history of a given area. Further, properties eligible under Criterion B must be directly associated with the activities for which the individual is known. Birthplaces, gravesites, childhood residences, etc. that do not necessarily convey the individual's contributions to history may not be eligible under Criterion B. All aspects of integrity are important in demonstrating this connection.

Adverse effects to properties eligible under Criterion B are mitigated using many of the same techniques applied to properties eligible under Criterion A. The property would be documented prior to impacts, and the resulting data would be presented to the public. The information may also be a vehicle for increasing awareness of the work of specific people whose contributions to history, while substantial, may not be widely known or understood.

Criterion C

Properties that are eligible under Criterion C are those that demonstrate the distinctive characteristics of a type, period, style, method of construction, or resources that have high artistic value or represent the work of master. Treatment protocols concentrate on documenting the style, construction technique, or technological details of the resources. This may include architectural, engineering, or surveyor documentation as well as field documentation. Archival research may locate photographic examples of the technology through time or original images of the resource in question. Records concerning the development of the technology and its use in the district may also be identified. Because these properties are significant for their stylistic and/or technological value, integrity of design, materials, and workmanship are of the greatest importance.

Mitigation of adverse effects to resources eligible under Criterion C focuses on preserving the integrity of design, materials, and workmanship when possible. If preservation of the resource itself is not possible, the specifics of the significant design elements are retained via field photography, photogrammetry, and/or technical drawings.

Criterion D

Properties that are eligible under Criterion D have the potential to yield information that can address specific research topics relevant to the history or ethnohistory of the region. Aspects of integrity important to the evaluation and treatment of the resource vary depending on the nature of the resource and its constituent elements, e.g. whether it is a historic industrial resource such as the ACMS or an open-air ethnohistoric resource, such as CrNV-03-10012.

In most cases, treatment of resources eligible under Criterion D consists of field data recovery and laboratory analysis of artifacts and/or samples collected from the field. Field methods include intensive data recovery, subsurface investigation, and artifact collection. Collected artifacts are analyzed in a laboratory setting appropriate to the material. Following analysis, the data is synthesized to address the relevant research topic.

Some forms of field data recovery, such as excavation, are destructive processes; data recovery results in the loss of data potential within the resource itself. Forms of field data recovery that are not destructive, such as intensive inventory, may be followed by adverse effects to the resource that similarly result in a loss of data potential, e.g. demolition of a standing building. It is therefore important that the results of the data recovery be made available to other researchers and to the public. This can be accomplished through archaeological reports, books, public and professional presentations,

interpretative trails and signage in the project area, internet resources, and public interpretative materials.

6.2 ARCHIVAL RESEARCH

Archival research is primarily used to address the data potential of properties eligible under Criteria A, B, and C. Because the goal of the research is to investigate the physical remains associated with significant events, useful sources will discuss not only general historical trends, but specific locations and their material signatures. Potential research avenues include primary sources, secondary sources, public records, gray literature, and interviews with knowledgeable individuals.

Table 6.1 Repositories and Collections Proposed for Consultation

Repository	Repository Location	Materials Location	Materials Type
Overview of Anaconda Copper Mining Company			
Montana Historical Society	Helena, MT	Archives	Company Records (1876-1974)
Butte-Silver Bow Public Archives	Butte, MT	Archives	Company Employee Interviews
University of Montana	Missoula, MT	Special Archives	Company Records
Montana Tech, University of Montana	Butte, MT	Anaconda Collection	Company Records
University of Wyoming	Laramie, WY	Special Collections	Company Records and Reports, Maps (aerials)
Marcus Daly Historical Museum	Anaconda, MT	Archives	Company Records
Anaconda Copper Mine Site (Yerington, NV)			
Lyon County Museum	Yerington, NV	Archives	Company Scrap book, Company Records
Churchill County Museum	Fallon, NV	Archives	Company Records
Nevada Historical Society	Reno, NV	Archives	Historic photos, Company records
Nevada Bureau of Mines and Geology, University of Nevada, Reno	Reno, NV	Archives	Reports on Mine
University of Nevada, Las Vegas	Las Vegas, NV	Special Collections	Microfilm, Photographs, and Oral Histories
University of Nevada, Reno	Reno, NV	Special Collections	Microfilm, Photographs, and Oral Histories
People and Community			
University of Connecticut	Mansfield, CT	Archives and Special Collections	Employee Files and Company Records
Newspapers.com	Online	Online	Digitally Archived Newspapers

6.3 FIELD METHODS

Field data recovery is used primarily to address those resources that are eligible under Criterion D, though some methods may also be employed to document properties eligible under Criteria A and C. Field methods include surface characterization, subsurface investigations, and artifact/sample collection. Treatment protocols for each resource will involve a combination of these tailored to the specific resource.

6.3.1 SURFACE CHARACTERIZATION

Surface characterization is used to determine the horizontal extent of a resource, assess the condition of extant surface components, and to determine if the resource has been impacted by modern development. Surface characterization also allows for an assessment of indirect visual, auditory, or atmospheric effects to the integrity of the resource.

Intensive Inventory
Methods for Class III Inventory are designed to allow archaeologists to generally characterize a site and make a recommendation on its eligibility. In the data recovery phase, more intensive inventory methods may be used to gain more detailed information about the contents of an artifact assemblage. A complete inventory or robust sample inventory of an artifact deposit may allow the researcher to address nuanced questions regarding the consumption patterns, material use, and change in patterns over time. The resulting information may be analyzed for general trends or statistically significant data points using an artifact database.

Ground Exposure
Some parts of a property may be overgrown by vegetation. Surface characterization may involve removal of grass or bushes to fully expose, photograph, and describe surface features. Ground exposure at the surface characterization stage will be limited to vegetation clearing; it will not include removal of pavement, built structures, or earthmoving.

Photography
For the purposes of this project, site, feature, and artifact photography will be taken with a digital camera in 10-megapixel resolution or better. All significant resources will be photographed with multiple detail views taken as necessary. Provenience information for each photo will be included on detailed photologs. Locational data will consist of the bearing of the photo (given in degrees) and the UTM coordinates at the place the photo was taken. If an artifact is moved from its original location for photography, the UTM coordinates of the photo should reflect the actual location of the item. All photographs related to this project will be presented as an attachment to the final data recovery report.

Illustration
Feature and artifact sketches will be completed when photography is determined to be insufficient to capture the significant details of the subject. This may be necessary for resources eligible under Criterion C and D. Illustration will be used in lieu of photography at the discretion of the field supervisor.

Mapping
Resources will be mapped using a GPS unit capable of sub-meter locational accuracy. The resulting data will be used to produce district, site, and feature maps showing the locations of the properties and their components. GIS data may also be used to assist in reconstructing the historical configuration of engineered resources within a property.

Documentation
The three historic properties addressed in this HPTP have been previously documented on BLM NARA District, Building, and Structure forms and on Nevada IMACS site records, as appropriate. Additional documentation generated during the data recovery effort, such as photograph logs, maps, drawings, resource descriptions, and detailed artifact catalogs, will be appended to the existing records and included in the final data recovery report. Documentation will include both surface and subsurface data if both exist for a single resource.

Artifacts will be cataloged in the field using artifact recording forms designed to capture relevant data points.

6.3.2 SUBSURFACE INVESTIGATIONS

Subsurface investigations are intended to establish the presence or absence of buried cultural materials. Some built resources are known to have subsurface components, e.g. basements or vaults. Other types of resources, particularly archaeological sites, may contain stratified layers of material deposited over time.

Exploratory Probes
Exploratory probes are a minimally invasive method used to test for the presence or absence of cultural materials and/or stratigraphic changes. They are typically made with a bucket auger or a small shovel and do not disturb more than 20 square centimeters of surface area. Probes may be used to test for artifacts and soil changes at archaeological sites where subsurface deposition is suspected. Exploratory probes are not intended to expose resources or recover data, only to locate materials. Because of their limited scope it is not necessary to photograph or GPS locate exploratory probes unless they yield materials.

Surface Scrapes and Excavation Units
Surface scrapes and excavation units are formal site treatment measures designed to expose features and collect data. They are typically employed for archaeological sites rather than built resources. The procedures for excavation are very similar; use of one or the other depends largely upon the type of resource being investigated and the nature of the data potential.

Surface scrapes are large, shallowly excavated units that are intended to expose materials buried near the surface of a site. They are set up on a square or rectangular grid that is GPS-located and photographed prior to excavation. Excavation of a shovel scrape may be extremely shallow, e.g. limited to removing grass and duff, or may expose up to the first ten centimeters below surface. The depth of the excavation and the size of the area that is exposed is dependent upon the nature of the resource. Scrapes may also be used to locate past living surfaces or changes in stratigraphic deposits.

Excavation units are typically excavated in a grid or squares 1-x-1 meter in size, though the size may be adjusted if appropriate. Like surface scrapes, they are GPS located and photographed prior to

excavation. Excavation units are employed to explore specific features or areas of a site that are suspected to have significant data potential. They may also be used in the general site area to locate the cultural depth of a site or expose cultural changes in successive stratigraphic layers. They may be excavated by stratigraphic layer or in arbitrary 10-centimeter levels with reference to a unit datum placed outside the excavated area. This is done to identify natural or cultural stratigraphic layers with greater precision. Excavation units are photographed after excavation and a profile sketch of one wall is completed. Additionally, features identified in the unit are photographed and/or sketched, as appropriate. Unique and diagnostic artifacts are collected according to the procedures outlined below (Section 6.3.3).

Sediment excavated from shovel scrapes and excavation units will be screened through 1/8-in mesh. Artifacts will be collected or recorded on a unit-specific level form with their provenience data.

Excavated units will be backfilled after data recovery on the site is complete.

6.3.3 COLLECTION POLICY

The historic properties addressed in this HPTP are known to contain historic industrial debris, numerous historic artifacts, and potentially ethnohistoric artifacts. In general, industrial materials and mass-produced consumer goods will not be collected during the data recovery. Collection will be limited to ethnohistoric materials that may constitute a complete and related assemblage and unique and diagnostic historic artifacts. This policy applies to both surface and subsurface finds.

Unique and diagnostic historic artifacts are understood to be those items that:

- Represent an uncommon type or an unusually intact example of a type, or
- Contain data potential that cannot be recovered in the field, or
- Are at risk of being destroyed or looted should they remain on the site

All other artifacts will be documented on field forms and listed in the resulting report. Collected artifacts will be bagged individually or with like items from the same context (e.g. a single level in a unit) in a resealable plastic bag. Each bag will contain an artifact tag with the following information:

- Unique Bag Number
- Project Number
- Site Number (if applicable)
- Unit Type, Number, and Level (if applicable)
- Feature Number (if applicable)
- Initials of excavator(s) and date collected
- Description of bag contents

Artifact bags from the same probe, excavation unit, or shovel scrape will be placed in a paper bag with the number and provenience information of the probe, etc. Bags will be listed on a bag log maintained by the field supervisor.

If subsurface features containing distinctive soil deposits with the potential to yield organic materials are encountered, a soil sample will be collected. Soil samples will be prepared for soil flotation in order to identify seeds, animal bones, and other small organics that may be present. They will be placed in

resealable one-gallon size bags and will be given a bag tag with the same information listed above. Tags may be placed in smaller bags to prevent deterioration. If there is moisture in the soil, the plastic bag may be ventilated and placed in a bucket or paper bag for transportation to the laboratory.

Faunal remains will be collected if encountered in context with a feature. Only bones large enough for additional analysis, e.g. speciation, will be collected. Faunal remains will be stored in paper bags only and will be given bag tags with all relevant provenience information. Both soil samples and faunal samples will be included in the bag log.

6.4 ARCHITECTURAL RECORDING

Architectural recording is intended to produce data about buildings, structures and their surrounding landscapes in a variety of written and visual formats. Architectural recording traditionally involves: detailed written descriptions which describe the architectural resource and any associated resources and/or landscape features; photographs which illustrate the nature of the architectural resource from a variety of angles, document any associated resources, and illustrate the siting of the resources in the landscape; sketches or measured survey drawings which present plan views (horizontal) and elevations (vertical) that depict the details of the architectural resources. The development of new computer based photographic techniques over the last two decades have added a wide variety of new techniques that can be used to rapidly and accurately record architectural resources.

Written Descriptions
Written descriptions of architectural resources attempt to convey the physical form of an architectural resource, identify the key characteristics of type and style that it possesses, and assess whether it is eligible for listing on the NRHP and/or if it contributes to a historic district. Descriptions must be written in a consistent fashion in order to ensure that all necessary details are included, and to allow for descriptions from different projects to be usefully compared. This project utilizes Nevada Architectural Resource Assessment (NARA) forms and follows the 2014 NARA guidelines to ensure the correct information is recorded and the correct nomenclature is utilized.

Ground level photography
Ground level photography is used during architectural surveys to record a series of 'square on' photographs, taken parallel and central to a building's or structure's elevation, and 'oblique' photographs, taken at an angle to a building or structure, which illustrate the relationship between different elevations of a building. In addition, ground level photography is used to record significant details of a building or structure, to record images of accessory resources associated with a building or a structure, and to illustrate.

Low-level photomosaic aerial photography
A geo-rectified photomosaic of a landscape is created by taking several overlapping high-resolution photographs using cameras mounted to an unmanned aerial vehicle (UAV). The UAV flies a regular pattern over the landscape, using on-board GNSS (Global Navigation Satellite System) receivers and visual ground controls to record the position of the UAV at the time each photograph is taken. Upon completion of the survey, each photograph is uploaded into a software suite that combines the photograph into a single ortho-corrected and geo-rectified image. Ortho-correction removes any perspective 'tilt' from the final image, so that each point in the orthomosaic appears to be viewed from directly overhead, the perspective used in a traditional map. Georectification is achieved through recording the position of fixed survey points within the landscape and through processing the data

recorded by the onboard GNSS receiver. The geo-rectified photomosaic created for this project will be correctly aligned to USGS map co-ordinates.

The high resolution, ortho-corrected, and geo-rectified orthomosaic is provides a suitable basis for additional maps. The orthomosaic will be loaded into the AutoCAD software package and individual buildings, structures and mining landscape features will be traced over, using a variety of vector graphic drawing tools to create detailed 2-dimensional plan views. These images will then be loaded into ArcGIS and traditional 2-dimensional plan views will be generated.

Oblique low-level aerial photography
Using a high-resolution camera mounted to a UAV, a series of overlapping oblique photographs are taken of a building or structure, following a semi-circular path. Using on-board GNSS receivers, the position of the UAV at the time each photograph is taken. Upon completion of the survey, each photograph is uploaded into a software suite that uses differences identified between the position of the same points on the building or structure in consecutive images to extrapolate a three-dimensional mesh model of the building and structure. A texture map derived from the photographs is subsequently draped over the three -dimensional mesh, creating a highly accurate three -dimensional full color model of the building or structure. These models can be viewed from any possible angle, and static images can be captured showing the building or structure from any position desirable. Oblique views of buildings or structures generated in this fashion can be informative. Square-on elevation views generated in this fashion are of considerable use, presenting perspective-corrected representations that are often impossible to capture using ground level photography, because of the large size of the subject. In addition, individual oblique photographs which provide useful illustrations of an architectural resource or of a historic district or landscape can be individually captured or separated out from a group of overlapping photographs taken during the recording of a particular resource.

6.5 LABORATORY METHODS

Collected artifacts will be analyzed at the Broadbent archaeology laboratory at 5450 Louie Ln, Reno, NV. Bags will be checked in by the archaeologist assigned to manage lab samples and checked against the field bag log. Artifacts will be cleaned in a manner appropriate to the material (washing, dry-brushing, etc.) and re-bagged in clean, archival quality plastic bags. Provenience information will be transferred from the field bag tag to a permanent bag label. Faunal samples and any sample intended for residue analysis will not be cleaned and will not be handled more than necessary.

Artifacts will be analyzed and cataloged by qualified archaeological technicians under the direction of a laboratory supervisor. If samples such as volcanic toolstone, faunal and other organic material, or soil samples are collected, these can be analyzed by specialists contracted through Broadbent and may be sent to a dedicated off-site laboratory. Following analysis, artifacts and samples will be prepared for curation at the Nevada State Museum.

6.6 DISCOVERIES OF HUMAN REMAINS

While archaeological excavation activities on these historic properties are unlikely to encounter human remains, the potential for unanticipated discoveries exists. In the event that buried remains or suspected Native American burial goods are encountered, the field supervisor will immediately stop work and adhere to the procedures set forth in NRS 383-150-190, Protection of Indian Burial Sites in Nevada and/or the Native American Graves Protection and Repatriation Act (NAGPRA).

The Disposal undertaking does not involve ground or surface disturbing activities. The ground and surface disturbing activities that would take place during the Remediation undertaking are planned for private land within the ACMS. Because ground disturbance is not expected to occur on BLM land, it is unlikely that resources addressed under NAGPRA will be discovered during the Remediation undertaking. However, in the unlikely event that NAGPRA resources are identified, the supervisor or other designated responsible individual will immediately stop work, notify the BLM, and assist the BLM in following NAGPRA requirements.

6.7 SAFETY

Hazardous Waste Operations and Emergency Response (HAZWOPER) training is required for all personnel performing work on the ACMS. Broadbent personnel participating in this project will have completed this and all relevant site-specific training before beginning work on the site. The site-specific Health and Safety Plan (HASP) for the ACMS, prepared in advance of the Class I and Class III Inventories, will be updated for this scope of work.

Daily fieldwork authorizations and Task Risk Assessment (TRA) forms will be completed by the field supervisor before beginning work on any project-related task. If conditions change during the performance of a task, the field supervisor will stop work to reassess potential hazards and update the TRA, if necessary. Any safety incidents that occur will be immediately reported through the appropriate channels, as detailed in the HASP.

7.0 TREATMENT PROTOCOLS

7.1 ANACONDA COPPER MINE SITE HISTORIC DISTRICT

The ACMS Historic District consists of approximately 3,000 acres of land to the west of US-95 ALT. A total of 73 individual resources have been identified as relating to the ACMS Historic District's period of significance, between 1951 and 1978. These resources were sorted into seven groups, reflecting the separate activities taking place within the site: the Ore Crushing Area, the Oxide Ore Processing Area, the Sulfide Ore Processing Area, the Dump Leach Circulation System, the Support Buildings Area, the Evaporation Ponds, and the Site Perimeter. Weed Heights is an eighth area of activity considered to be part of the ACMS Historic District and relates directly to the ACMS's period of significance. The ACMS contains portions of the Disposal APE and the Remediation APE for physical effects. Weed Heights is within the Remediation APE for visual, auditory, and atmospheric effects.

7.1.1 PREVIOUS IMPACTS AND CURRENT CONDITION

Following the closure of the original mine, several periods of secondary mining and an ongoing program of remediation have affected the integrity of the Historic District (Section 4.2). Post-Anaconda Company activities have resulted in the addition of buildings and structures to the site which do not date to the period of significance; the demolition of buildings and structures which date to the period of significance; damage to and partial demolition of buildings and structures which date to the period of significance; and the modification and/or re-sculpting of large mining landscape features. Many of the partially demolished buildings and structures are not closely approachable because of significant health and safety issues, and the interiors and subterranean sections of the standing buildings and structures are not accessible for similar health and safety issues.

During the Class I Inventory (described in CRR 3-2831.2), a detailed survey of the ACMS Historic District was recorded on a NARA District form. Individual architectural resources (standing or partially standing buildings and structures) were recorded on individual NARA forms. Archaeological features (demolished buildings and structures) and large mining landscape features (rock piles, evaporation ponds etc.) were appended to an existing IMACS form (CrNV-03-11759). Individual resources were assessed to determine if they were individually eligible for listing on the NRHP and if they were contributing or non-contributing elements of the ACMS Historic District. The results are detailed in CRR 3-2831.1 and 3-2831.2, and they are summarized in Section 4.2.1 and 4.2.2 of this HPTP.

7.1.2 EFFECTS OF THE UNDERTAKING

Portions of this Historic District are located in the Disposal APE. The parts of the ACMS that will be transferred out of federal control and no longer subject to federal preservation laws will be adversely affected by the Disposal undertaking.

The boundaries of the ACMS are equivalent to the Remediation APE for physical effects. Physical remediation activities may alter, remove, or bury contributing elements of the Historic District, impacting its historic integrity and potential to convey its National Register eligibility. Weed Heights (D199) and the Anaconda Powerlines (S1520) are in the Remediation APE for visual, auditory, and atmospheric effects. Because these resources are elements of the ACMS system, alterations to the large landscape features and structures that characterize the mine would impact their integrity of historic setting, feeling, and association. The Historic District will therefore be adversely affected by the Remediation undertaking.

7.1.3 TREATMENT PROTOCOLS

The treatment of the ACMS Historic District includes a combination of *Archival Research, Surface Characterization*, and *Architectural Recording*. Extensive archival research will be undertaken to address the eligibility of the ACMS Historic District under Criterion A and to place the events it represents into context. Archival studies may also be used to evaluate the significance of the Historic District under Criterion B. While research to date has identified multiple individuals that made significant contributions to the operations of the ACMS and copper mining in and outside the United States, the BLM has determined that additional research is needed to place their work in an appropriate context. Because this resource is currently unevaluated under Criterion B, it is treated here as potentially eligible. The work of Wilbur Jurden and other key figures will therefore be explored through archival records and a full discussion will be included in the deliverables for this project (see Section 8.0).

The purpose of the field treatment measures undertaken within the ACMS Historic District is to provide additional details about the various components of the Historic District, principally involving the standing and partially standing buildings and structures, and to provide detailed mapping of the ACMS Historic District as a whole. The resulting data may be used to address the research priorities identified in Section 5.1, and address the eligibility of the Historic District under Criteria C and D.

Broadbent will work with a qualified operator to provide low-level aerial mapping and photography support. The operator will develop a georeferenced aerial orthomosaic over the approximately 3,000 acres which constitutes the ACMS Historic District. The aerial data will be collected using an unmanned UAV or a fixed-wing aircraft. The photos will be geo-rectified using high-precision on-board GNSS receivers and ground control, where appropriate. The horizontal accuracy of the orthomosaic will be less than one foot. The ground sampling distance will be less than five cm/pixel for the geo-rectified orthomosaic and vertical accuracies will be within one foot. A minimum of 30 elevation check shots will be taken throughout the project area for data validation purposes.

The resolution of the georeferenced photomosaic provided by the UAV operator will be high enough that Broadbent will be able to use it to develop detailed 2-dimensional plans of the main buildings and structures within the ACMS Historic District. Such maps cannot be produced using conventional ground-based survey methods because of the inaccessible nature of so many of the buildings and structures. Additionally, Broadbent will use the photomosaic to develop detailed 2-dimensional plans of the large mining landscape features. The 2-dimensional plans will be created by tracing over the orthomosaic in AutoCAD, and the resulting images will be correctly scaled, georeferenced, and informatively annotated.

The UAV operator will also provide detailed oblique photos taken in a semi-circular pattern around the Heap Leach Vats, Precipitation Plant, Change House, Warehouse, and the Truck Shop. Images will be taken at a resolution of less than 1.5 cm/pixel, on average. These images will subsequently be processed to provide rectified elevation images of at least two sides of each building and structure. These scaled and perspective corrective images will provide an accurate representation of the elevations of the structures, in a fashion which would not be possible using standard Historic American Buildings Survey / Historic American Engineering Record (HABS/HAER) style photography, because of problems with accessibility, visibility and the large scale of the buildings and structures.

During the preparation of the previous report detailing the ACMS Historic District (CRR 3-2831.2) Broadbent developed a detailed understanding of the processes occurring within the site's different areas. Because some of this information was not available during the initial field survey, it is proposed to revisit many of the previously recorded buildings, structures and large mining landscape features to produce supplemental records. Additional written descriptions will be prepared, and additional ground level photographs will be taken. These will be used to update the existing NARA District Form, existing individual NARA Forms and the existing IMACS form. Ground level photography for the architectural recording will use a Pentax K-70 DSLR camera with 24-megapixel resolution. The location of each photograph will be recorded using a sub-meter GPS device, and the bearing of each photograph will be taken using a magnetic compass.

Finally, the potential effects of the undertaking on resources within the Remediation APE for visual, auditory, and atmospheric effects will be assessed through a series of ground level photographs (Broadbent archaeologist) and oblique low-level UAV photographs (UAV operator). Views towards the ACMS will be taken from the Anaconda Company Powerlines and Weed Heights, as the setting of these resources will be impacted by changes made during the physical remediation activities on the mine. The overviews taken towards the ACMS from Weed Heights will be collected at key observation points around the Historic District, capturing wide views of the landscape. Views towards the mine will be taken from roadways and public property, as the field crew will not have access to private property within the Historic District.

The treatment protocols proposed for the ACMS Historic District and its contributing elements are summarized in Table 7.1, below:

Table 7.1 Treatment Protocols for the ACMS Historic District

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
Architecture					
Ore Crushing Area					
B18192	CC	Primary Crusher	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
B18203	OO	Secondary Crusher	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
B18186	ASN 3	Square Shaft	1952	Individually Not Eligible; Contributing to D358	Archival Research
B18187	ASN 4	Conveyor Belt Inclined Shaft 1	1952	Individually Not Eligible; Contributing to D358	Archival Research
S2371	ASN 5	Asphalt Surface	Unknown	Individually Not Eligible; Non-Contributing to D358	None

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
S2386	ASN 41	Weed Heights Bridge	1952	Individually Not Eligible; Contributing to D358	Ground-level Photography, Archival Research
-	ASN 6	Primary Crusher Ancillary Structure	1970-78	Individually Not Eligible; Contributing Landscape Feature to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
-	III	Coarse Ore Storage	1952	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	ASN 2	Small Building Foundation	1952	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
Oxide Ore Processing Area					
S2391	DD	Solution Tanks	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
S2392	EE	Precipitation Plant	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
B18196	FF	Solution Tanks Electrical Building and Pumphouse	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
S2394	P	Heap Leach Vats	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
S2370	ASN 1	Utility Line Junction	1952-58	Individually Not Eligible; Contributing to D358	Archival Research
B18188	ASN 32	Conveyor Belt Terminal Building	1961	Individually Not Eligible; Contributing to D358	Written Description, Ground-level Photography, Archival Research
S2388	ASN 48	Truck Scales	1952	Individually Not Eligible; Contributing to D358	Plan Layout, Written Description, Ground-level Photography, Archival Research

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
S2389	ASN 49	Central Trench	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
B18190	ASN 51	Pumphouse	1952-58	Individually Not Eligible; Contributing to D358	Archival Research
B18191	ASN 52	Shed	1952-58	Individually Not Eligible; Contributing to D358	Archival Research
Sulfide Ore Processing Area					
B18197	GG	Sulfide Plant Office	1958-61	Individually Not Eligible; Contributing to D358	Archival Research
B18198	HH	Sulfide Plant	1958-61	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Archival Research
S2393	II	Concrete Ramps	1958-68	Individually Not Eligible; Contributing to D358	Archival Research
S2379	ASN 27	Liquid Conveyance System	1958-68	Individually Not Eligible; Contributing to D358	Record pipe diameters
Dump Leach Circulation System					
S2373	ASN 11	Junction Box	1958-68	Individually Not Eligible; Contributing to D358	Archival Research
S2375	ASN 14	Sluice Gate	1965	Individually Not Eligible; Contributing to D358	Archival Research
S2376	ASN 15	Concrete Tank	1965	Individually Not Eligible; Contributing to D358	Archival Research
S2377	ASN 16	Pump with Bridge	1965	Individually Not Eligible; Contributing to D358	Archival Research
B18189	ASN 46	Leach Solution Pumphouse	1965	Individually Not Eligible; Contributing to D358	Archival Research
S2387	ASN 47	Pump Foundation	Unknown	Individually Not Eligible; Non-Contributing to D358	Archival Research
Support Building Area					
B17895	A	Administration Building	1952	Individually Not Eligible; Contributing to D358	Archival Research

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
B18185	AA	Core Building	1952-58	Individually Not Eligible; Contributing to D358	Ground-level Photography
S2390	BB	Water Tower and Pumphouse	1952	Individually Not Eligible; Contributing to D358	Ground-level Photography
B18193	D	Change House	1952	Individually Not Eligible; Contributing to D358	Ground-level Photography
B18194	E	School House	1970-78	Individually Not Eligible; Contributing to D358	Archival Research
B18195	F	Warehouse and Assay Lab	1952	Individually Not Eligible; Contributing to D358	Ground-level Photography
B18199	K	Truck Shop	1952	Individually Not Eligible; Contributing to D358	Ground-level Photography, Archival Research
B18200	L	Equipment Garage	1970-78	Individually Not Eligible; Contributing to D358	Archival Research
B18201	NN	Stacker Area Storage Building	1970-78	Individually Not Eligible; Contributing to D358	Ground-level Photography, Examine ancillary structures
B18202	O	Lead Shop	1952	Individually Not Eligible; Contributing to D358	Ground-level Photography
B18204	Y	Electric Shop	1952-58	Individually Not Eligible; Contributing to D358	Archival Research
S2372	ASN 9	Employee Parking Lot	1952	Individually Not Eligible; Contributing to D358	Re-survey for traces of demolished buildings
S2374	ASN 12	Retaining Wall	Unknown	Individually Not Eligible; Non-Contributing to D358	Archival Research
-	G	Large Warehouse Annex	1956	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	H	Small Warehouse Annex	1958	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
-	I	Fire Engine Storage/Tire Shop	1952	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	J	Grease Shop #1	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	M	Truck Wash and Paint Shop	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	N	Carpenter's Shop	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	R	Emergency Shed	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	S	Sheet Metal Shop	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	T	Plumber's Shop	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	U	Filling Station # 1	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	V	Grease Shop #2	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	ASN 7	Concrete Machine Mount	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
-	ASN 8	Small Pad	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	ASN 10	Transformer Mount	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	ASN 40	Large Concrete Pad	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
-	ASN 50	Sub Station	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Plan Layout, Written Description, Ground-level Photography
-	ASN 54	Filling Station # 2	1952-58	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
Evaporation Ponds					
S2369	AAA	Concrete Pump Tank	1958-68	Individually Not Eligible; Contributing to D358	Archival Research
S2380	ASN 30	Wooden Bridge	1958-68	Individually Not Eligible; Contributing to D358	Archival Research
S2381	ASN 33	Concrete Pad with Well Head	Unknown	Individually Not Eligible; Non-Contributing to D358	Archival Research
S2382	ASN 34	Concrete Vault with Vent Pipe	1958-68	Individually Not Eligible; Contributing to D358	Archival Research
S2383, 26LY406, 26LY1133	ASN 35	Nevada Copper Belt Railroad Grade	1914	Individually Not Eligible; Non-Contributing to D358	None
S2384	ASN 36	Timber Liquid Management System	Unknown	Individually Not Eligible; Contributing to D358	Archival Research
S2385	ASN 39	Sluice Box	1958-68	Individually Not Eligible; Contributing to D358	Archival Research

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
-	ASN 31	Transformer Mount	1958-68	Individually Not Eligible; Contributing Landscape Feature to D358	Archival Research
Site Perimeter					
S2378	ASN 24	Chain Link Fence	1952	Individually Not Eligible; Contributing to D358	Re-examine for variability along length of fence, Ground-level Photography
S2395	Burch Drive	Burch Drive	1951	Individually Not Eligible; Contributing to D358	Ground-level Photography
D199	-	Weed Heights	1951	Individually Unevaluated; contributing to D358	Ground-level photography from Weed Heights towards ACMS, Archival Research
S1520	-	Anaconda Powerlines (Previously Recorded)	1953	Individually Not Eligible; Contributing to D358	Written Description, Ground-level Photography, Document sub-station
Landscape/Archaeological Features					
-	Feature A	South Waste Rock Area	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature B	Mine Pit or “Pit Lake”	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature C	W3 Waste Rock Area	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature D	S23 (Sulfide Ore) Waste Rock Area	1952	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
-	Feature F	Oxide Tailings	1953	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature G	Sulfide Tailings	1958	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature H	Sulfide Tailings Dam	1958	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature I	Evaporation Ponds	1963	Individually Not Eligible; Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature J	Phase I Heap Leach Pad	1989	Individually Not Eligible; Non-Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature K	Phase II Heap Leach Pad	1989	Individually Not Eligible; Non-Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature L	Phase III South Heap Leach Pad	1992	Individually Not Eligible; Non-Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature M	Phase III 4X Heap Leach Pad	1992	Individually Not Eligible; Non-Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data

SHPO Resource #	Field #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
-	Feature N	Phase IV Slot Heap Leach Pad	1993	Individually Not Eligible; Non-Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data
-	Feature O	Phase IV VLT Heap Leach Pad	1995	Individually Not Eligible; Non-Contributing to D358	Low-level Aerial Photography, Ground Level Photography, Written Description, Examine existing engineering survey data

7.2 SAGECREST DRIVE-IN HISTORIC DISTRICT

The Sagecrest Drive-in Historic District consists of the material remains of a drive-in movie theater opened in 1952. It includes the buildings and structures that made up the theater, landscaped parking lanes, and large deposits of refuse associated with both the operation and the decommissioning of the facility. It has been determined eligible for inclusion in the National Register under Criteria A, C, and D.

7.2.1 PREVIOUS IMPACTS AND CURRENT CONDITION

The Historic District is located on the west side of US-95A, north of the intersection of the highway and Burch Drive. It was abandoned in 1995, leaving three buildings and two structures standing. Since that time, these have been left to deteriorate in place. The concession building/projection room (B18207) and the ticket kiosk (B18206) have been left vacant. The doors and windows of these two buildings have been variously boarded up, removed, or broken. Graffiti and recent modern trash were observed in both. There are some indications of intentional demolition and salvage; part of the gutter from the concession stand/projection room was removed and found discarded in another part of the site. The third building is a small utility shed (B18205) that has remained locked. The condition of its interior is not known.

The two structures within the Historic District have similarly deteriorated. The Attractions Board (S2396) located next to the highway has partially collapsed, as have portions of the backing for the Movie Projection Screen (S2397). A fence that formerly stood under the projection screen has been dismantled. The parking area contains a series of speaker stands, some of which remain in or near their original location. Most are broken or collapsed; the speakers have been removed. The area around the parking lanes appears to have been intentionally cleared of debris. Very few artifacts were observed between the lanes, and broken speaker stands, glass tubes from a neon sign, and various pieces of structural refuse have been collected in the southeastern part of the site (Concentration 1).

This Historic District is highly visible and accessible. The Movie Projection Screen is prominent from the highway, attracting occasional visits from motorists. The area is accessed via a series of two-track roads that, while not maintained, are frequently used. Since the drive-in was abandoned, it has been open to public recreational uses such as hiking, biking, and off-road driving.

Unrestricted access to the Historic District has resulted in clear evidence of looting and tampering within the historic artifact deposits. Some artifacts have been collected and deliberately arranged in patterns along the sides of roads. Very few complete artifacts were observed during the initial inventory; it is probable that most have been casually collected. However, the assemblage contains copious fragmentary artifacts, many with diagnostic potential.

7.2.2 EFFECTS OF THE UNDERTAKING

This site is in the Disposal APE. Because the site will be transferred out of federal control and no longer subject to federal preservation laws, it will be adversely affected by the undertaking.

7.2.3 TREATMENT PROTOCOLS

The treatment of the Sagecrest Drive-in Historic District includes a combination of *Archival Research, Surface Characterization*, and limited *Subsurface Investigation*. Archival records will be investigated to develop a more complete history of the theater, its changes in ownership, and its place in the community. Newspaper articles and local histories may provide additional information regarding the community's response to the theater's construction and use, how the owners marketed the theater to the communities of Yerington and Weed Heights, and to what degree specific demographics were targeted. If available, records concerning the programming at the theater and the amount of time between a film's release and its arrival in Mason Valley may be compared to traditional theaters and other drive-in facilities. This information may demonstrate the social and economic framework in which the theater operated through time.

The surface characterization of the drive-in is intended to document the buildings, structures, and archaeological components to a degree sufficient to characterize them and to facilitate comparison between this and other 1950s drive-in theaters.

Specific methods will include:

- Supplemental photographs of both standing buildings and structures and archaeological elements
- Mapping and/or illustration of the theater layout
- Ground exposure around dense artifact concentrations
- Intensive inventory within artifact concentrations using an informed grid-based sampling strategy
- Close-order pedestrian survey across the Historic District to identify additional intact artifact deposits

The initial inventory of the Historic District did not yield evidence of depth potential. However, a more intensive treatment of the surface component may identify areas that may have buried deposits. Within the concentrations, it is likely that some materials are shallowly buried.

For this reason, at least one surface scrape will be excavated in Concentration 4, which has been identified as the informal dump area for the concession stand. Additional scrapes may be excavated if the close-order survey identifies similarly dense deposits. The size and number of surface scrapes will be based on the results of the surface inventory and the professional judgment of the field supervisor. Shovel scrapes will initially expose up to five centimeters below surface. Geological maps obtained through the USGS WebSoil Survey indicate that this site lies on mixed alluvium and may contain

additional depth. At least one exploratory probe will be excavated to determine the potential for significant buried deposits. If there is evidence of buried deposits outside the concentrations, these will be investigated using scrape, probes, or excavation units, as appropriate. Depending upon the results of the exploratory probe(s), Broadbent estimates that up to four shovel scrapes and ten excavation units may be completed.

Excavations will be documented by level on appropriate forms. Because this Historic District contains thousands of fragmentary historic artifacts, surface and subsurface collection will be limited to unique and diagnostic artifacts, as defined in Section 6.3.3. Collected materials will be returned to the lab for analysis and entry into a database. Analysis is not expected to include outside testing of soil samples or other materials.

The treatment protocols proposed for the Sagecrest Drive-in Historic District and its contributing elements are summarized in Table 7.2, below:

Table 7.2 Treatment Protocols for the Sagecrest Drive-in Historic District

SHPO Resource #	Trinomial/ Agency #	Common Name/Resource Type	Year Built	NRHP Eligibility	Treatment Measures
B18205		Shed	c. 1952	Individually Not Eligible; Non-Contributing to D357	Written Description; Ground Level Photography
B18206		Ticket Kiosk	c. 1952	Individually Not Eligible; Contributing to D357	Written Description; Ground Level Photography
S2396		Attractions Board	c. 1952	Individually Not Eligible; Contributing to D357	Written Description; Ground Level Photography
S2397		Movie Projection Screen	c. 1952	Individually Not Eligible; Contributing to D357	Written Description; Ground Level Photography
B18207		Projection Room and Concession Stand	c. 1952	Individually Not Eligible; Contributing to D357	Written Description; Ground Level Photography
-	26LY2887/ CrNV-03-11841	Archaeological Component of D357	1952-1995	Individually Not Eligible; Contributing to D357	Mapping/illustration of theater layout; Surface Characterization; Subsurface Investigations; Artifact Collection

7.3 CRNV-03-10012 (26LY2588)

CrNV-03-10012 is an artifact scatter that has been identified as ethnohistoric with a potential for buried deposits. It consists of a combination of obsidian flakes, groundstone, and manufactured historic consumer goods located in a relatively small area, possibly representing a single temporal context. While the surface component has limited expected data potential, the site is eligible to the NRHP under Criterion D because of the possibility that buried artifacts or features may be located.

7.3.1 PREVIOUS IMPACTS AND CURRENT CONDITION

This site was documented in 2016; [redacted]

[redacted]

7.3.2 EFFECTS OF THE UNDERTAKING

This site is in the Disposal APE. Because the site will be transferred out of federal control and no longer subject to federal preservation laws, it will be adversely affected by the undertaking.

7.3.3 TREATMENT PROTOCOLS

Because this resource is thought to contain potentially significant subsurface deposits, treatment protocols consist of field data recovery utilizing a combination of *Surface Characterization* and *Subsurface Investigations*. Due to the small size of the site, archival research is unlikely to yield additional data about its use. However, historical maps and photographs will be used to examine the site area in its estimated temporal context (as indicated by the historic artifacts) between the 1880s and 1930s.

Surface Characterization
The first priority will be to re-locate the site within the APE and document its current condition. If the site is not relocated and no indication of it can be identified, the IMACS site record will be updated to reflect the fact that the site is now destroyed. If the site can be relocated, the surface component will be documented and collected. Complete collection is considered appropriate for this resource, as it is in an open, public area and may be vulnerable to looting. Because this assemblage is thought to represent a single context, both Native American and non-Native manufactured materials will be collected.

Surface characterization will consist of:

- Ground exposure across the site surface (removal of brush and loose grasses);
- Photography of the site before and after brush is cleared;
- Mapping of the site and its artifacts using GPS, hand-sketched point-plotting, or both; and
- Complete artifact collection.

Subsurface Investigations

Assessment of the presence or absence of cultural depth is a high priority for this resource. Due to the potential for shallowly buried artifacts, excavation will begin with a shovel scrape, followed by hand-auguring and placement of excavation units, as appropriate.

Per the original record, the site area is only 17 by 11 meters in size. The majority of the site area may therefore be exposed using a single 10-x-10-meter shovel scrape unit. As there may be small artifacts present below the surface, the first level of excavation will be shallow, removing only the first one to two centimeters of topsoil. An additional level will then be excavated to up to five centimeters below surface to expose the suspected depth referenced in the original record.

While this site is located near the Walker River floodplain, geological maps obtained through the USGS WebSoil Survey indicate that it lies on Singatse very gravelly sandy loam with a bedrock horizon between six and 16 inches below surface. For this reason, the depth potential of the site remains unknown pending testing. At least one exploratory probe will be excavated to test for depth beyond five centimeters below surface. Should the probe(s) indicate that the site contains the potential for buried deposits, one or more excavation units may be placed in or around the shovel scrape to further investigate the site. Broadbent estimates that up to five units may be excavated if depth potential exists.

Excavation units will be terminated after two culturally sterile levels are excavated or when bedrock is encountered. Collected materials, including any samples collected from subsurface features, will be returned to the lab for analysis and entry into a site database.

8.0 CURATION AND DELIVERABLES

8.1 CURATION

The project area includes lands currently managed by the BLM as well as privately-owned land within the ACMS. Records, photographs, maps, field, notes, artifacts, and any other materials collected from BLM lands remain federal property. These materials will be curated at the Nevada State Museum in Carson City after the final report detailing the results of field data recovery and artifact/sample analysis is accepted by the BLM. Curated materials will be treated in accordance with 36 CFR § 79 *Curation of Federally-Owned and Administered Archeological Collections*.

Artifact curation needs for this project are expected to be limited to materials collected from the Sagecrest Drive-in Historic District and site CrNV-03-10012, both of which are currently located on BLM land. No artifact collection is planned within the ACMS. Photographs, field maps, and other data generated from field activities will be included with the submission to the Nevada State Museum, regardless of whether the records concern federally-owned components, privately owned components, or both. If data recovery activities occur after the Disposal Undertaking is completed, then the materials will be curated according to NRS 383: Historic Preservation and Archaeology.

8.2 DELIVERABLES

The efforts to mitigate adverse effects to the ACMS Historic District (D358) and its contributing elements (including the Weed Heights Historic District (D199)), the Sagecrest Drive-in Historic District (D357), and site CrNV-03-10012 (26LY2588) as a result of the proposed Disposal and Remediation undertakings will be summarized, documented, and presented in three general ways. The results of data recovery and archival research on all three historic properties will be presented in a data recovery report. The data recovery report will be submitted to the BLM for review and comment and then to the Nevada SHPO for review and concurrence.

Broadbent also recommends the information produced from this data recovery effort be used to produce publications (i.e. booklet and/or journal articles) emphasizing one or more of the following research topics:

1. Twentieth century copper mining in Nevada
2. Historical operation and design of the Anaconda Mine/Weed Heights
3. Biography on important workers, managers, designers, and/or engineers (i.e. Wilbur Jurden, Albert E. Millar, Henry R. Burch)
4. History of Sagecrest Drive-In

These publications will be designed for public and scholarly consumption and be focused on the historical aspects of the ACMS and Sagecrest Drive-In. Currently, there are limited published works on the history of Yerington and the Mason Valley area. These types of publications will aid future historical research and help to establish the importance of Yerington and Mason Valley in the larger history of Nevada.

In addition to publications, Broadbent recommends the preparation of one or more professional/public presentations on the same four research topics. These presentations may occur in a range of conferences and venues. Some of those may include but not be limited to the following:

1. The National Association of Abandoned Mine Lands Annual Conference
2. The Society for Industrial Archaeology Annual Conference
3. The Mining History Association Annual Conference
4. The American Exploration & Mining Association Annual Meeting
5. The Great Basin Anthropological Conference
6. Amateur Archaeologists of Northern Nevada (AmArcs) Meeting
7. Yerington Rotary Club
8. Lyon County Museum

The presentations, like the publications, will be designed for a diverse audience and will focus on the historical aspects of the ACMS and Sagecrest Drive-In. These presentations will be important for sharing the importance of the history of the Mason Valley area with the public.

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APPENDIX A

Maps

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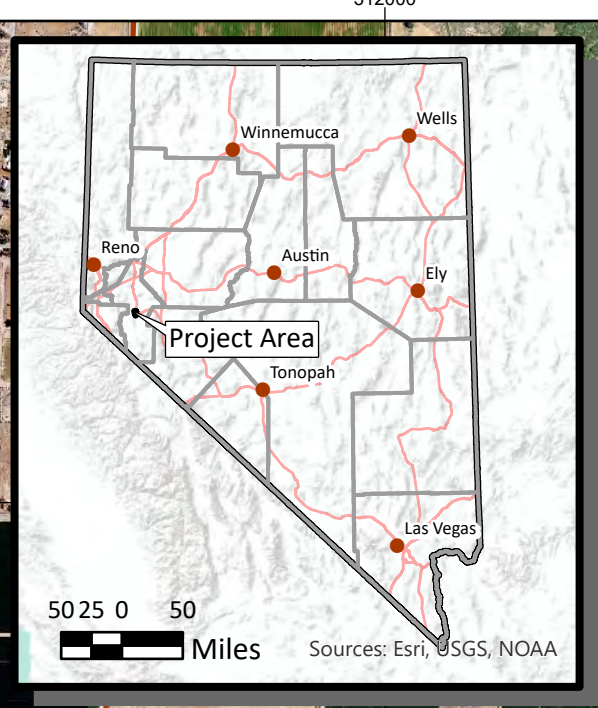

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Legend

- APE for BLM land disposal areas
- APE for physical effects
- APE for visual, auditory, and atmospheric effects
- Burch Drive
- US Hwy 95 Alt

Land Status

- BLM
- PVT

Map 1: Anaconda Land Disposal and Remediation Areas of Potential Effects (APE)

Anaconda Copper Mine Site
Historic Properties Treatment Plan

BROADBENT
Date: 2/21/2020
Project #: 18-02-202

Datum: NAD 1983 UTM Zone 11N Source: NAIP Digital Ortho Photo Image, 06/20/2017 and 07/12/2017

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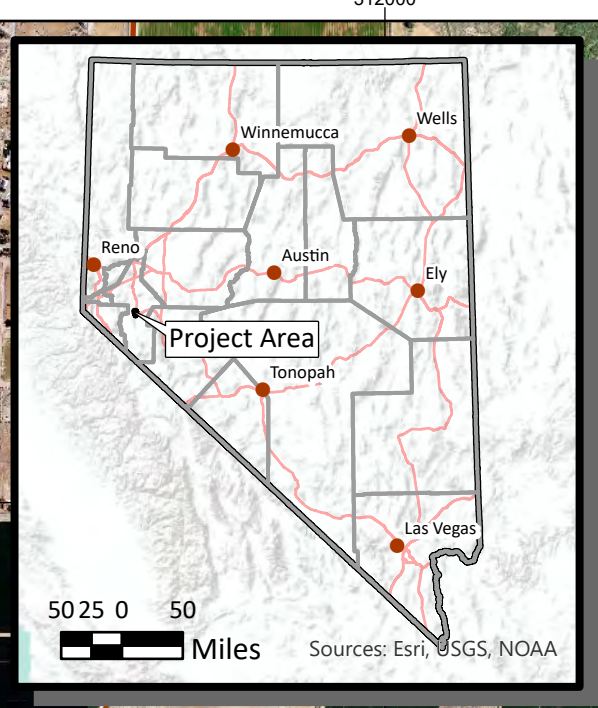

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Legend

- APE for BLM land disposal areas
- Class III Survey
- Burch Drive
- US Hwy 95 Alt

Land Status

- BLM
- PVT

Map 2: Anaconda Land Disposal Area of Potential Effects	Anaconda Copper Mine Site Historic Properties Treatment Plan	BROADBENT Date: 2/21/2020 Project #: 18-02-202

Datum: NAD 1983 UTM Zone 11N Source: NAIP Digital Ortho Photo Image, 06/20/2017 and 07/12/2017

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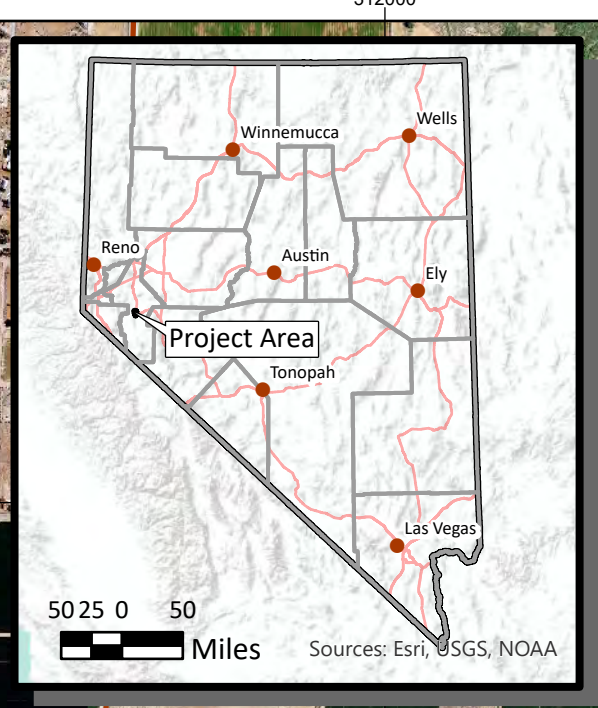

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Legend

APE for physical effects
Burch Drive
US Hwy 95 Alt

Land Status

BLM
PVT

Map 3: Anaconda Remediation Physical Area of Potential Effects	Anaconda Copper Mine Site Historic Properties Treatment Plan	BROADBENT Date: 2/21/2020 Project #: 18-02-202

Datum: NAD 1983 UTM Zone 11N Source: NAIP Digital Ortho Photo Image, 06/20/2017 and 07/12/2017

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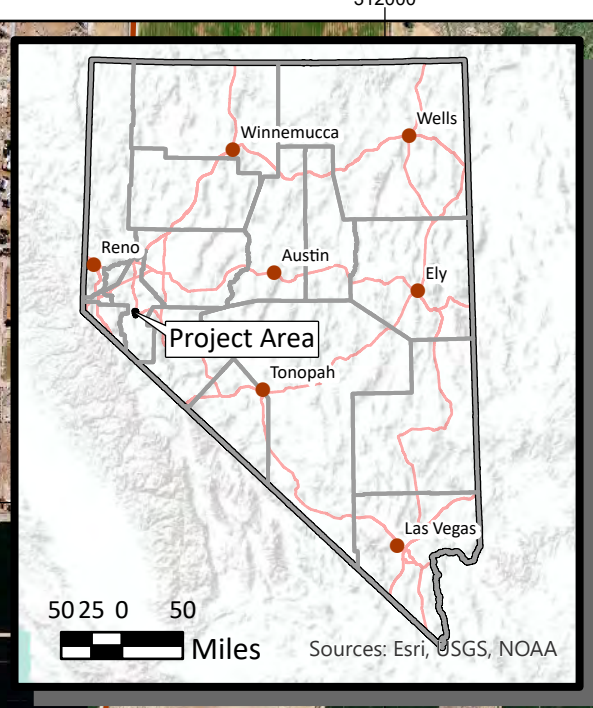

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Meters

Legend

APE for visual, auditory, and atmospheric effects
Burch Drive
US Hwy 95 Alt

Land Status

BLM
PVT

Map 4: Anaconda Remediation Visual, Auditory, and Atmospheric Area of Potential Effects	Anaconda Copper Mine Site Historic Properties Treatment Plan	BROADBENT Date: 2/21/2020 Project #: 18-02-202

Datum: NAD 1983 UTM Zone 11N Source: NAIP Digital Ortho Photo Image, 06/20/2017 and 07/12/2017