

**U.S. Department of the Interior
Bureau of Land Management**

Environmental Assessment

**Atchees Wash Abandoned Mine Reclamation Project
DOI-BLM-UT-G010-2015-0155-EA**

PREPARING OFFICE

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Environmental Assessment
Atchees Wash Abandoned Mine Reclamation
Project
DOI-BLM-UT-G010-2015-0155-EA

Prepared by
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Bureau of Land Management
Vernal Field Office
Vernal, Utah

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Finding of No Significant Impact

Based on the analysis of potential environmental impacts (per Environmental Assessment DOI-BLM-UT-G010-2015-0155-EA), I have determined that the proposed action with the mitigation measures described below will not have any significant impacts on the environment and an environmental impact statement is not required.

Signatures:

Recommended by:

/s/ Richard Goshen
Richard Goshen
Geologist

9/17/2015
Date

Approved by:

/s/ Jerry Kenczka
Jerry Kenczka
Assistant Field Manager,
Lands and Minerals

9/18/2015
Date

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DECISION RECORD

Decision

It is my decision to approve and authorize *reclamation of the Atchees Wash abandoned Gilsonite mine shaft*, and to proceed as set out in the Proposed Action of the Environmental Assessment (DOI-BLM-UT-G010–2015–0155–EA) subject to stipulations, compliance and monitoring. This alternative is hereafter called the Selected Alternative. This decision applies to BLM-administered lands only.

I have determined that authorizing this selected alternative is in the public interest, and will minimize impacts so that no undue disturbance will occur. This decision is subject to the following stipulations.

Compliance, Monitoring, Stipulations

1. The applicant would perform ground disturbing activities outside of the flowering period for *Sclerocactus wetlandicus* (March 15 through June 30).
2. The seed mix would be amended to exclude all introduced and non-native species for reclamation seeding on this project (i.e. crested wheatgrass).
3. Erosion control measures (i.e. silt fencing) would be implemented to minimize sedimentation to *Sclerocactus wetlandicus* plants and populations located downslope of proposed surface disturbing activities when working in all suitable cactus habitat.

Plan Conformance and Consistency

The proposed action and alternatives have been reviewed and found to be in conformance with one or more of the following BLM Land Use Plan and the associated decision(s):

The selected alternative has been reviewed, and found to be in conformance with the 2008 Vernal Field Office Record of Decision and Approved Resource Management Plan (RMP) as well as ongoing management programs and actions. One of the stated objectives of the RMP in reference to Abandoned Mine Lands is "...to protect and safeguard human health, prevent/restore environmental damage and to limit the BLM's liability" (Appendix Q, page 3). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan..

Compliance with NEPA:

This EA was prepared by the BLM in accordance with the National Environmental Policy Act (NEPA) of 1969 and in compliance with all applicable regulations and laws passed subsequently, including the President's Council on Environmental Quality regulations, and the U.S. Department of Interior requirements and guidelines listed in the BLM Manual Handbook H-1790-1. This EA assesses the environmental effects of the Proposed Action and the No Action Alternative.

Rationale / Authorities / Public Involvement

The decision to close and reclaim the abandoned Gilsonite mine shaft has been made in consideration of the environmental impacts of the proposed action. This decision has been made after considering impacts to resources within the Vernal Field Office.

Identification of issue(s) for this assessment was accomplished by considering any resources that could be affected by implementation of one of the alternatives.

Issues identified by BLM Specialists are documented in Appendix C, *Interdisciplinary Team Checklist* (p.).

Alternatives Considered

Alternative A: Proposed Action

Fill the abandoned Gilsonite mine shaft with on-site material (including rock, soil and mine refuse) via the BLM VFO operations crew.

Alternative B: Fence Installation

Install a fence around the shaft opening.

Alternative C: No Action

The No Action Alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action. Under the No Action Alternative, the BLM would not abandon the open mine shaft and would not cause any new surface disturbance. However, the safety hazard and BLM liability would remain.

The authority for this decision is pursuant to Section 21 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 195)

The proposed action was posted to the Utah BLM's Environmental Notification Bulletin Board on 5/1/2012 and reposted to the public BLM E-Planning website with its assigned NEPA number on 07/17/2015. To date, no questions or comments have been received. A public comment period was not offered due to lack of expressed interest in the project.

Appeal or Protest Opportunities:

Protest/Appeal Language: This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below.

Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied,
- (2) The likelihood of the appellant's success on the merits,
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

Authorizing Official:

/s/ Jerry Kenczka

Jerry Kenczka

Assistant Field Manager, Lands and Minerals

9/18/2015

Date

Contact Person

For additional information concerning this Finding, contact.

Stephanie Howard, NEPA Coordinator
Vernal Field Office
170 South 500 East
Vernal, UT 84078
(435) 781-4469 or email: showard@blm.gov

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Acronyms and Abbreviations

ACHP Advisory Council on Historic Preservation

AO Authorized Officer

BLM Bureau of Land Management

DR Decision Record

EA Environmental Assessment

EIS Environmental Impact Statement

FLPMA Federal Land Policy and Management Act of 1976

FONSI Finding of No Significant Impact

ID Interdisciplinary

LWC Lands with Wilderness Characteristics

NEPA National Environmental Policy Act

NHPA National Historic Preservation Act

NRHP National Register of Historic Places

RFA Reasonably Foreseeable Action

RMP Resource Management Plan

ROD Record of Decision

VFO Vernal Field Office

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Chapter 1. Introduction

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1.1. Identifying Information:

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of Atchees Wash Abandoned Mine Reclamation Project as proposed by the Bureau of Land Management's (BLM) Vernal Field Office (VFO). The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. An EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). A FONSI is a document that briefly presents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in the Vernal Field Office Resource Management Plan (VFO RMP), October 2008. If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the alternative selected.

1.1.1. Title, EA number, and type of project:

Title: Atchees Wash Abandoned Mine Reclamation Project

NEPA#: DOI-BLM-UT-G010-2015-0155-EA

Project Type: Environmental Assessment

1.1.2. Location of Proposed Action:

Township 10 South, Range 23 East, Section 33, SENE, Salt Lake Base & Meridian, Uintah County, Utah. The shaft is approximately 39.3 miles southeast of Vernal, UT. See Appendix B, *Location Map* (p.).

1.1.3. Name and Location of Preparing Office:

Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400

1.1.4. Applicant Name:

Bureau of Land Management

Vernal Field Office

1.1.5. Background

Although the specific history of the depression is unknown, it is believed to be the result of historic Gilsonite exploration activities. Gilsonite mining first began in Uintah County in late 19th century and experienced a series of booms and busts related to regional, national and worldwide economic conditions. This activity left a legacy of abandoned mine workings, including the depression at the proposed project site. As a result, visitors to this area today face a wide variety of physical safety hazards. Old mine access roads lead directly to the mine sites making them a destination for hikers and mining history enthusiasts. This current ease of access increases the risk to the public.

Abandoned mines are hazardous because they are no longer maintained, lack ventilation and may collapse. People may become lost or injured inside them. Nationwide an average of thirty deaths occur a year at abandoned mine sites (MSHA, 2005).

The proposed project would address hazardous abandoned mine openings on public lands in the Atchees Wash area of Uintah County, Utah. The project area is south of Vernal (see Appendix B, *Location Map* (p.)). Access to the project areas is via existing graded roads, unimproved dirt roads, trails and footpaths. The proposed construction work is estimated to require approximately 1 day complete. Reclamation construction would commence immediately.

The project would eliminate hazards in such a way as to preserve the historic values and provide visitors a safer recreational experience.

1.2. Purpose and Need for Action:

The BLM's need is to consider closure of an open, abandoned Gilsonite shaft in a manner that provides for elimination of an existing safety hazard, while mitigating other resource values that is consistent with state, local and tribal plans to the extent allowed under federal laws, regulations, policies, and plans. BLM's purpose is to avoid or reduce impacts on sensitive resource values associated with the project area and prevent unnecessary or undue degradation of the public lands.

1.3. Scoping, Public Involvement and Issues:

During preparation of the EA, public involvement consisted of posting the proposal on the Eplanning NEPA Register on 08/17/2015. *No public comment or inquiries were received.* The proposed action was reviewed by an interdisciplinary team of BLM resource specialists. For a list of all resources considered, refer to Appendix C, *Interdisciplinary Team Checklist* (p.).

Chapter 2. Proposed Action and Alternatives

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2.1. Description of the Proposed Action:

The proposed project would fill and reclaim a a depression caused by mining activities on land administered by the BLM in the Atchees Wash area of Uintah County, Utah with on-site material via BLM's operations crew.

Methods: Using a backhoe, rock and soil from the surrounding berm would be used to backfill the depression. The depression would be backfilled with material to a height of 3–4 feet above the collar of the opening in order to direct drainage away from the backfilled mine feature and allow the material to settle. Backfill sources would normally be the mine waste dump adjacent to the mine opening, the brow and slope above the opening, and nearby surface rock. All backfill material would be obtained in a manner designed to preserve the visual appearance/contour of the site. This site will have approximately 3 acres of disturbance and rock, soil and mine refuse will be used to fill the shaft from the immediate vicinity.

No access roads would be constructed. Truck and equipment access to mine site would utilize existing access. Construction would be performed in a way that minimizes disturbance to the ground and vegetation. All disturbed areas will be raked out and reseeded once work has been completed. All areas disturbed by construction activities would be seeded by hand broadcast using a seed mix specified by the BLM (see Appendix D, *Pure Live Seed Mixture* (p.)). No water would be used. Less than 10,000 gal of chemicals (under SARA, 1986) and less than the TPQ of chemicals in 40 CFR 355 would be used in association with the operations (applicant would clean up spills of fuel, lubricants, acids or antifreeze from trucks used and dispose of properly).

Post Project Monitoring: Monitoring would be performed by the BLM within the first year of completion of construction to evaluate closure effectiveness, stability, revegetation success and presence of noxious weeds. The BLM would continue monitoring once a year for the first five years and then on a five-year cycle thereafter. BLM Green River District standards for reclamation would be maintained.

2.2. Description of Alternatives Analyzed in Detail:

2.2.1. Alternative Action A (Fence Installation)

Alternative Action A is to install fencing around the shaft opening. Although fencing would involve very minimal surface disturbance, there are drawbacks. One, fencing a shaft is considered a temporary closure method and is used only when access may be necessary. Two, fences are used in permanent closures only as secondary protection, such as around a cap or gate. Considering the previous, the fencing alternative may not address the purpose and need for the action (i.e. safety hazard and BLM liability). In addition, fencing requires continued inspection and maintenance.

2.2.2. Alternative B (No Action Alternative)

The No Action Alternative is considered and analyzed to provide a baseline for comparison of the impacts of the proposed action. Under the No Action Alternative, the BLM would not reclaim the abandoned mine shaft and would not cause any new surface disturbance. However, the safety hazard and BLM liability would remain.

2.3. Alternatives Considered but not Analyzed in Detail

There were no other alternatives identified that would meet the purpose and need of this project.

2.4. Conformance

The EA is in conformance with the 2008 VFO Record of Decision and approved RMP as well as ongoing management programs and actions. One of the stated objectives of the RMP in reference to Abandoned Mine Lands is "...to protect and safeguard human health, prevent/restore environmental damage and to limit the BLM's liability" (Appendix Q, page 3). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan.

The Proposed Action, Alternative A (Fence Installation) and No Action Alternative are also consistent with all applicable Federal, State and local laws and regulations including the following:

- Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.).
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. 9601 et seq.) and National Contingency Plan (NCP) (40 CFR Part 300).
- General Mining Law of 1872, as amended (30 U.S.C. 21. et seq.).
- Surface Resource Act of 1955 (30 U.S.C. 611-615).
- Section 106 of the National Historic Preservation Act of 1966 (as amended).
- National Environmental Policy Act of 1969 (as amended).
- Executive Order 11988 (floodplains)
- Executive Order 11990 (wetlands)
- Executive Order 12898 (environmental justice)
- Executive Order 13186 (Migratory Bird Treaty Act)
- Clean Air Act of 1970 (As Amended)
- American Indian Religious Freedom Act of 1979
- Archaeological Resource Protection Act of 1980
- Rangeland Health Assessments (2002)
- BLM Handbook 3720.
- Surface Mining Control and Reclamation Act (SMCRA) Title IV.
- Taylor Grazing Act (TGA) of 1934
- Public Rangelands Improvement Act (PRIA) of 1978
- Endangered Species Act (ESA) of 1973 (as amended)

- Standards of Quality for Waters of the State, R317-2-6, Utah Administrative Code, December 1997
- BLM Utah Riparian Management Policy, UT-93-93, March 1993.

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Chapter 3. Affected Environment:

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3.1. General Setting

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix C, *Interdisciplinary Team Checklist* (p.). This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

The proposed project area is located in southern Uintah County in the area known as the Atchees Wash. (See Appendix B, *Location Map* (p.)). The elevation of the proposed project area is about 5200 feet above sea level. The area has been impacted previously by grazing, the development of roads for mineral exploration development and mining activity.

3.2. Cultural

3.2.1. Cultural Resources

A file and records search and Class II cultural resource inventory was conducted for the Atchees Wash Abandoned Mine Reclamation Project. The objective of the inventory was to identify whether or not the abandoned mine is associated with an eligible historic property nearby. It was determined that the area proposed for reclamation is directly associated with a site eligible for inclusion to the National Registry of Historic Places.

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to consider the effects of their undertakings on such properties, following regulations issued by the Advisory Council on Historic Preservation (ACHP) (36 CFR 800). Criteria for evaluating the significance of resources for listing on the National Register of Historic Places (NRHP) are outlined in 36 CFR 800.10, "National Register Criteria." 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.
- b) That are associated with the lives of persons significant in our past.
- c) That embody the distinctive characteristics of a type, period, or method of construction, or 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, and,
- d) That have yielded, or may be likely to yield, information important in prehistory or history.

The proposed project site is considered eligible for the NRHP under criteria A and C.

3.2.1.1. Cultural Background

The cultural-chronological sequence in the Project Area represents a Euro-American stage, which began with the arrival of Europeans in the eighteenth century. The proposed project site is most likely related to early mining developments in the late 1800s and early 1900s.

3.3. Plants

3.3.1. Threatened, Endangered, Proposed, or Candidate Plant Species

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

Uinta Basin hookless cactus is a perennial herb and a member of the cactus family. It is federally listed as threatened and is endemic to the Uinta Basin. It consists of a perennial succulent shoot, solitary or rarely branching, globose, ovoid or cylindrical. Individuals are usually 3 to 9 centimeters in diameter and 4 to 12 centimeters. Each spine cluster, areoles, usually consists of one large (15 to 29 millimeters) central spine, three to four lateral central spines, and six to ten radial spines. From late April to May, Uinta Basin hookless cactus produces 2.5 to 5-centimeter high pink to violet flowers.

The ecological amplitude of Uinta Basin hookless cactus is wide, being found from clay badlands up to the pinyon-juniper habitat. The preferred habitat occurs on river benches, valley slopes, and rolling hills consisting of xeric, fine textured, clay soils, derived from the Duchesne River, Green River, Mancos, and Uinta formations, overlain with a pavement of large, smooth, rounded cobble. The typical plant community in Uinta Basin hookless cactus habitat is the salt desert shrub community.

The proposed project is located entirely within an area that the US Fish and Wildlife Service (USFWS) has identified as being potential habitat Uinta Basin hookless cactus. The project is not located within a Core Conservation Area (CCA) for the species. The nearest documented occurrence of the species is located approximately 4.9 miles from the Project Area.

Chapter 4. Environmental Effects:

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This chapter describes the direct and indirect impacts that would be expected to occur upon the implementation of the considered alternative. It also discloses the expected cumulative impacts, which are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

4.1. Proposed Action

4.1.1. Cultural Resources

Cultural resources are sensitive and nonrenewable resources that can be irreversibly damaged or destroyed by ground-disturbing activities, such as site and road construction, and secondary surface activities, such as vehicular and pedestrian traffic. The Atchees Wash Abandoned Mine Reclamation Project is a Federal undertaking in accordance with 36 CFR 800 (regulations implementing provisions of Section 106 of the National Historic Preservation Act of 1966). Any potential undertaking must consider potential effects to significant historic properties and must conform to Federal regulations in determining effects that a project may have on significant cultural resources and in mitigating those effects determined to be adverse. As defined in 36 CFR 800, adverse effects to significant historic properties include physical alteration, damage, or destruction, alteration of the character of the setting of a property that contributes to its significance, or neglect that results in deterioration or destruction.

The proposed action is to fill the abandoned Gilsonite mine shaft (identified as a hand dug well in the site report) with on-site material (including rock, soil and mine refuse) via a contractor. The mine shaft has already caved in due to natural forces and has been deemed hazardous to public safety. It has been determined that the proposed action will not further damage the mine and will not have an adverse effect on the overall integrity of the eligible historic site. In addition, previous recordation of the site describes the mine and its location which allow for future excavation and data collection if warranted.

4.1.2. Plants

4.1.2.1. Threatened, Endangered, Proposed, or Candidate Plant Species

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

The entire Project Area is within the 2013 polygon established by U.S. Fish and Wildlife Service (USFWS) as potential habitat for *Sclerocactus wetlandicus*. Surveys were conducted on September 3, 2015 for the proposed project. A clearance survey was conducted on 17.2 acres, and approximately 5 percent of the surveyed area was identified as suitable habitat for *S. wetlandicus*. No individual plants or populations of *Sclerocactus wetlandicus* were identified during the clearance survey. The surveyed area was dominated by Wyoming big sagebrush dominated vegetation communities, large alkaline soil areas dominated by black greasewood and cheatgrass, and rocky hillslopes dominated by black sagebrush. The rocky hillslopes provided the only suitable habitat for *Sclerocactus wetlandicus* in the surveyed area, although the species was not present.

Possible dispersed indirect negative impacts which may result from implementation of the Proposed Action include: loss of suitable habitat, loss of forage opportunities for pollinators of

the species, habitat modification by invasive weed species which may compete with individuals, accidental spray or drift of herbicides used during invasive plant control, and deposition of fugitive dust from project activities and vehicle traffic on unpaved roads, resulting in altered photosynthesis, respiration, and transpiration.

Due to these indirect negative impacts the Proposed Action warrants a “*may affect, is not likely to adversely affect*” determination for *Sclerocactus wetlandicus*.

Mitigation for Uinta Basin hookless cactus:

1. The applicant would perform ground disturbing activities outside of the flowering period for *Sclerocactus wetlandicus* (March 15 through June 30).
2. The seed mix would be amended to exclude all introduced and non-native species for reclamation seeding on this project (i.e. crested wheatgrass).
3. Erosion control measures (i.e. silt fencing) would be implemented to minimize sedimentation to *Sclerocactus wetlandicus* plants and populations located downslope of proposed surface disturbing activities when working in all suitable cactus habitat.

Discovery Stipulation: Reinitiation of section 7 consultation with the USFWS will be sought immediately if any loss of plants or occupied habitat for Uinta Basin hookless cactus is anticipated as a result of project activities.

4.2. Alternative Action A (Fence Installation)

4.2.1. Cultural Resources

Under Alternative A – A fence will be installed around the shaft opening. This alternative will preserve what remains of the opening of the mine, but the fence will not deter it from deteriorating. In addition, installation of the fence will detract from the visual aspect of the site and may attract undue attention to the mine and potential hazards.

4.2.2. Plants

4.2.2.1. Threatened, Endangered, Proposed, or Candidate Plant Species

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

Under the Fence Installation Alternative, there would be no ground disturbing activities with the exception of the installation of a fence around the mine shaft. The fence would require monitoring and periodic maintenance, resulting in increased vehicle traffic to the site. Because surface disturbance would be reduced under this alternative, and activities would be restricted to a small area around the mine shaft, no direct impacts to plants are anticipated. However, an increase in vehicle traffic to the site may result in deposition of fugitive dust from travel over unpaved roads. In addition, vehicle traffic may result in the introduction or spread of invasive plant and/or noxious weed infestations near the site. Under this alternative, all applicable mitigation measures listed under the Proposed Action alternative would apply.

4.3. Alternative B (No Action Alternative)

4.3.1. Cultural Resources

The No Action Alternative will preserve the current condition of the site, but allow for possible safety hazards and BLM liability.

4.3.2. Plants

4.3.2.1. Threatened, Endangered, Proposed, or Candidate Plant Species

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

Under the no action alternative, there would be no direct disturbance or indirect effects to threatened or endangered plant species from surface disturbing activities associated with the proposed project. Current land use trends in the area would continue, including increased industrial development, increased OHV traffic, increased recreational use for hunting, bird watching and sightseeing.

4.4. Cumulative Impacts

Cumulative impacts are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

4.4.1. Cultural Resources

No cumulative impacts are expected during the Atchees Wash Abandoned Mine Reclamation Project. The project will be small scale in nature and will not affect overall integrity of the site itself or similarly related cultural resources in the area.

4.4.2. Plants

4.4.2.1. Threatened, Endangered, Proposed, or Candidate Plant Species

Uinta Basin hookless cactus (*Sclerocactus wetlandicus*)

The CIAA for Uinta Basin hookless cactus is the area delineated by the USFWS as potential habitat for the species. This area covers approximately 537,564 acres on BLM, Ute tribal, state of Utah, and privately held lands. Due to inclusions of areas of unsuitable habitat within the potential habitat area, the total acreage of suitable habitat is less than 537,564 acres. However, a complete survey of suitable habitat has not been performed and thus the amount of suitable habitat has not been quantified. Impacts to the species from past, current, and reasonably foreseeable actions may be greater or smaller than those described for the total area depending upon the exact distribution of actions relative to suitable habitat.

Within the CIAA, there are approximately 1,875 miles of roads. Past, present and reasonably foreseeable disturbance from oil and gas will affect 44,674 acres (8.3% of the CIAA), as shown in the table below. Cumulative impacts include dust impacts to plants, and plant and pollinator habitat destruction. Surface disturbance is a good indicator of the extent of these cumulative impacts.

Under the Proposed Action alternative, approximately 3 acres of new surface disturbance is proposed. Under the Fence Installation alternative, a negligible amount of surface disturbance would occur. The No Action alternative would not result in an accumulation of impacts.

Table 4.1. Cumulative Impacts Analysis for Uinta Basin Hookless Cactus

| | Project Area Acreage | Surface Disturbance Analyzed | Project Area Acreage within the CIAA | Surface Disturbance within the CIAA ¹ |
|---------------------------------------------------------------------------------------------------------------|----------------------|------------------------------|--------------------------------------|--------------------------------------------------|
| Ongoing Field Development | | | | |
| Chapita Wells-Stagecoach Area | 31,872 | 1,735 | 22,678 | 1,235 |
| Gasco Natural Gas Field Development EIS | 236,165 | 3,604 | 77,339 | 1,180 |
| Greater Deadman Bench Oil and Gas Producing Region EIS | 98,785 | 1,239 | 22,444 | 282 |
| Greater Natural Buttes Project EIS | 162,911 | 8,147 | 97,529 | 4,877 |
| North Alger Natural Gas Expansion Project EA | 2,320 | 192 | 943 | 78 |
| North Chapita Natural Gas Well Development Project EA | 31,872 | 1,735 | 9,191 | 500 |
| River Bend Unit Infill Development EA | 17,719 | 924 | 14,892 | 823 |
| Rock Point EDA Leasing and Exploratory Drilling EA | 92,098 | 340 | 11,344 | 42 |
| Saddletree Draw Leasing and Rock House Development EA | 4,826 | 106 | 4,774 | 105 |
| West Bonanza Area Natural Gas Well Development Project EA | 24,813 | 608 | 1,070 | 26 |
| West Tavaputs EIS | 137,930 | 1,603 | 30,704 | 357 |
| Past Developments and Current and Future Developments Not Covered by a Field Development NEPA Document | | | | |
| 729 abandoned wells ^{2,3} | NA ⁴ | NA | NA | 3,565 acres |
| 5,239 existing wells ^{2,3} | NA | NA | NA | 19,158 acres |
| 752 proposed well ³ | NA | NA | NA | 2,377 acres |
| Field Development Proposals | | | | |

| | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|--------|----------------------|
| Greater Chapita Wells Natural Gas Infill Project EIS | 40,027 | 3,696 | 31,741 | 2,931 |
| Monument Butte Area Oil and Gas Development Project EIS | 119,850 | 15,612 | 43,964 | 5,727 |
| Randlett EDA Area Programmatic Leasing and Exploration Project | 53,380 | 2,613 | 28,817 | 1,411 |
| Total CIAA Disturbance from Oil and Gas | | | | |
| | -- | -- | -- | 44,674 acres (8.3%) |
| Current Project | | | | |
| Proposed Action | 3.00 | 3.00 | 3.00 | 3.00 |
| Fence Installation | 3.00 | ~0.1 | 3.00 | ~0.1 |
| No Action | NA | 0 | NA | 0 |
| Total CIAA Disturbance from Oil and Gas including the Proposed Action | | | | |
| | -- | -- | -- | 44,677 acres (8.31%) |
| <p>¹Assumes surface disturbance was authorized evenly across the analysis area of the document.</p> <p>²Uses the assumption contained within the Greater Uinta Basin Cumulative Impacts Technical Support Document.</p> <p>³As of 4/8/2013</p> <p>⁴NA = not applicable</p> | | | | |

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Chapter 5. Tribes, Individuals, Organizations, or Agencies Consulted:

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Table 5.1. List of Persons, Agencies and Organizations Consulted

| Name | Purpose & Authorities for Consultation or Coordination | Findings & Conclusions |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Utah State Historic Preservation Office | Section 106 of the NHPA | A Consultation letter was sent out on 8/20/2015. The concurrence with BLM findings from the Utah State Historic Preservation Office was received on 8/25/2015. |
| Native American Tribes | Section 106 of the NHPA and The American Indian Religious Freedom Act of 1978 | Consultation with the Native American Tribes was not initiated for this project due to the fact that the project area is not associated with any Native American Religious sites or Traditional Cultural Properties. |
| U.S. Fish and Wildlife Service (USFWS) | Informal Consultation for impacts to threatened plant species <i>Sclerocactus wetlandicus</i> under Section 7 of the Endangered Species Act (ESA) | USFWS transmitted a Biological Opinion (BO) FWS/R6 ES/UT 06E23000–2015–I-0280, that concurred with the determination of “may effect, is not likely to adversely effect” for <i>Sclerocactus wetlandicus</i> . |

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Chapter 6. List of Preparers

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Table 6.1. List of Preparers

| Name | Title | Responsible for the Following Section(s) of this Document |
|--------------------|---------------|--------------------------------------------------------------|
| Richard Goshen | Geologist | Team Lead |
| Christine Cimiluca | Botanist | Threatened, Endangered, Candidate and Proposed Plant Species |
| David Christensen | Archaeologist | Cultural Resources |

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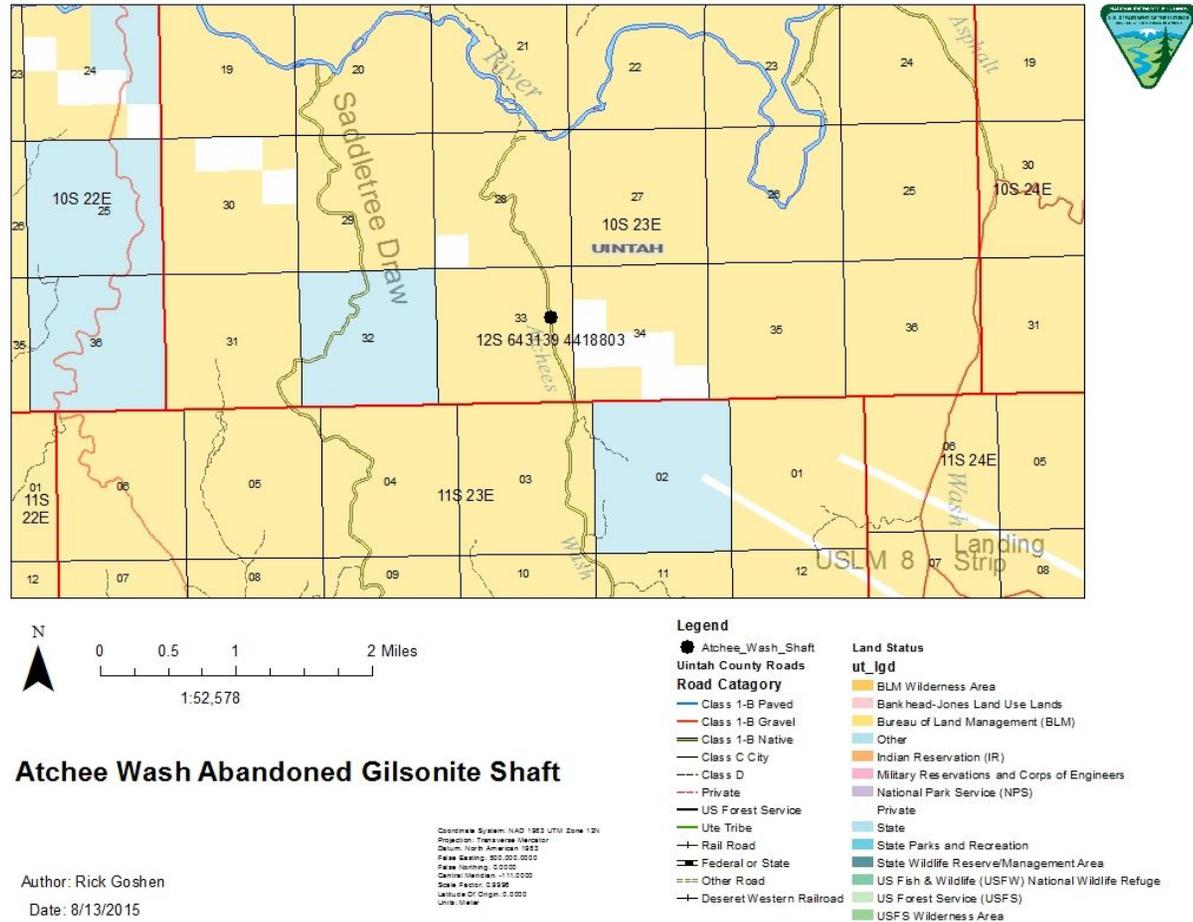
Appendix A. Works Cited

U.S. Mine Safety and Health Administration. 2008. Fatal Accident Summaries for 1999-2007. Available online at: <http://www.msha.gov/SOSA/previousfatalstats.asp>. Accessed March 18, 2008.

Sprinkel, Douglas A., 2009, *Interim Geologic Map of the Seep Ridge 30' x 60' Quadrangle, Uintah, Duchesne, and Carbon Counties, Utah and Garfield and Rio Blanco Counties, Colorado*, Utah Geological Survey Open-File Report 549DM.

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Appendix B. Location Map



This map depicts the location of the old Atchees Wash Gilsonite shaft. UTM coordinates are 12S 643139mE 4418803mN.

Figure B.1. Atchees Wash Abandoned Gilsonite Shaft

Appendix C. Interdisciplinary Team Checklist

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Project Title: | Atchees Wash Abandoned Mine Reclamation Project |
| NEPA Log Number: | DOI-BLM-UT-G010-2015-0155-EA |
| File/Serial Number: | |
| Project Leader: | Richard Goshen |
| DETERMINATION OF STAFF: | (Choose one of the following abbreviated options for the left column) |
| NP = not present in the area impacted by the proposed or alternative actions | |
| NI = present, but not affected to a degree that detailed analysis is required | |
| PI = present with potential for relevant impact that need to be analyzed in detail in the EA | |
| NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions. | |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------|
| RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1) | | | | |
| NI | Air Quality & Greenhouse Gas Emissions | <p>Emissions will occur from vehicles in the project area, but those impacts will be short term & transitory so they will not be detectable by monitors or models.</p> <p>No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.</p> | Rick Goshen | 8/19/2015 |
| NI | BLM Natural Areas | <p>The project does fall within a BLM Natural area. These areas are managed to preserve, protect and maintain wilderness characteristics present within that area. Wilderness characteristics include: size, naturalness, outstanding opportunities for solitude or primitive recreation, and supplemental values. The proposed action would not negatively impact the overall naturalness of the area because it would result in the reclamation of an existing man-made disturbance. The fence may be noticeable but under current policy does not detract from wilderness characteristics because it would be substantially unnoticeable.</p> | Rene Arce | 8/11/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|----------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|
| PI | Cultural: Archaeological Resources | The mine shaft has already caved in due to natural forces and has been deemed hazardous to public safety. It has been determined that the proposed action will not further damage the mine and will not have an adverse effect on the overall integrity of the eligible historic site. In addition, previous recordation of the site describes the mine and its location which allow for future excavation and data collection if warranted. | David Christensen | 8/19/2015 |
| NP | Cultural: Native American Religious Concerns | The Atchees Wash Abandoned Mine Reclamation Project is not associated with any Native American Religious sites or Traditional Cultural Properties. | David Christensen | 8/19/2015 |
| NP | Designated Areas: Areas of Critical Environmental Concern | Not present in the project area per the VFO RMP and GIS review. | Rick Goshen | 8/19/2015 |
| NP | Designated Areas: Wild and Scenic Rivers | None present as per RMP/ROD & GIS Layer review. | Rene Arce | 8/11/2015 |
| NP | Designated Areas: Wilderness Study Areas | The proposed project area does not fall within a Wilderness Study Area (WSA) as per RMP/ROS & GIS layer Review. The project does however, fall within a BLM Natural area. These areas are managed to preserve, protect and maintain wilderness characteristics present within that area. Wilderness characteristics include: size, naturalness, outstanding opportunities for solitude or primitive recreation, and supplemental values. The proposed action would not negatively impact the overall naturalness of the area because it would substantially unnoticeable under all alternatives. | Rene Arce | 8/11/2015 |
| NI | Environmental Justice | No minority or economically disadvantaged communities or populations would be disproportionately adversely affected by the proposed action or alternatives because none are present in or adjacent to the project area. | Rick Goshen | 8/19/2015 |
| NP | Farmlands (prime/unique) | Prime or unique farmlands must be irrigated to be designated as such. None of the lands in the project area are irrigated, therefore there are no prime or unique farmlands in the project area. | Rick Goshen | 8/14/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|---------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------|
| NI | Fuels/Fire Management | The treatment would reduce the hazard of unwanted wildfires burning in mineshafts and tailing piles. The proposed ground disturbance activities may increase the amount of invasive species; primarily Bromus tectorum. Bromus tectorum may become established through soil disturbance and may increase fire frequency in those areas. Applying the Green River District Reclamation Guidelines to any surface disturbing areas should help prevent additional hazardous fuels. | Blaine Tarbell | 8/4/2014 |
| NI | Geology/Minerals/Energy Production | There is no impact on the geology/minerals/energy production. | Rick Goshen | 8/19/2015 |
| NI | Invasive Plants/Noxious Weeds, Soils & Vegetation | Soils: The soils within the project area are mapped as Badlands-Walknolls-Rock Outcrop complex within a Semi-Desert Shallow Loam ecological site. These soils are typically channery loam material throughout with a sandy loam soil profile further down in the profile. A weathered bedrock feature usually occurs around 2 to 12 inches down in the profile. These soils usually derive from colluviums from sandstone and limestone features, and have a high runoff potential since they are mainly clay type soils. Clay type soils are typically have slower infiltration rates than sandy soils. The current proposed action will not affect these soils to a degree that would require detailed analysis since the project is not planning on disturbing native soils, only close an existing pit with native soils that will be seeded with a native seed mix. This will result in a positive affect by creating an environment that will reduce overall erosion and stabilize the site for the long term. In accordance with the Green River Reclamation Guidelines, compliance with requirements of the Guidelines will be a COA for all BLM authorizations within the jurisdiction of the Green River District Office. Compliance with the COA will prevent impacts to soils and vegetation and prevent the spread of Invasive and noxious weeds to the extent that detailed analysis is not necessary. | Soils: James Hereford II | 8/19/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|---------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------|
| NI | Lands/Access | <p>The proposed area is located within the Vernal Field Office Resource Management Plan area. Current land uses, within the area identified in the proposed action and adjacent lands, consist of existing oil and gas development, wildlife habitat, recreational use, and sheep and cattle ranching. No existing land uses would be changed or modified by the implementation of the proposed action.</p> <p>There are no other right-of-way holders in the project area, therefore no notice letters have been sent.</p> <p>Master Title Plats have been reviewed for conflicts with Public Water Reserves. No Public Water Reserves were identified in the project area.</p> | Denise Ohler | 8/18/2015 |
| NI | Lands with Wilderness Characteristics (LWC) | <p>The proposed project falls within the White River BLM Natural area. These areas are managed to preserve, protect and maintain wilderness characteristics present within that area. Wilderness characteristics include: size, naturalness, outstanding opportunities for solitude or primitive recreation, and supplemental values. The proposed action would not negatively impact the overall naturalness of the area due to the restorative nature of the proposed action, which would most likely benefit the apparent naturalness of the area. Under the fence alternative, the project would be substantially unnoticeable.</p> | Rene Arce | 8/11/2015 |
| NI | Livestock Grazing & Rangeland Health Standards | <p>Livestock Grazing: The proposed project is located within the Olsen AMP Sheep Grazing Allotment. The allotment is seasonally permitted from November 1 to June 15 with up to 9268 AUMs. The proposed project will have minimal affects to livestock operations. The proposal is consistent with multiple use of public lands and other oil & gas activities in the area. It is not anticipated that this proposal would negatively impact grazing operations. There are no known range improvements in this allotment that would be impacted by this proposal.</p> | Craig Newman | 08/21/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|---------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------|
| | | <p>Rangeland Health Standards: This proposal is within the Olsen AMP Allotment. This proposal is not expected to affect Rangeland Health Standards in this allotment.</p> | | |
| NI | Paleontology | <p>A field survey was carried out by BLM geologists R. Goshen and J. Snyder on 8/18/2015. The surface formation in the project area is Quaternary alluvium (PFYC 2). Bedrock outcropping adjacent to the project area (100 m) is Member A of the Eocene Uinta Formation (Sprinkel, 2009) which is likely to occur at depths greater than 3 m in the project area and which would remain unaffected.</p> <p>No paleontological resources were discovered and no mitigation measures are recommended.</p> | Justin Snyder | 8/18/2015 |
| NI | Plants: BLM Sensitive | <p>Soils models show that there is suitable habitat for the following UT BLM sensitive plant species in the Project Area, per BLM GIS data: Graham's penstemon (<i>Penstemon grahamii</i>), and Graham's catseye (<i>Cryptantha grahamii</i>). However, Google Earth and aerial imagery show that the calcareous white shale deposits that are typical habitat for these two species are not present in the Project Area. In addition, habitat models for Graham's penstemon show no to low potential for this species to occur in the Project Area. The nearest documented occurrence is located approximately 10 miles from the Project Area, per BLM GIS data review. The nearest documented occurrence of Graham's catseye is approximately 13.5 miles from the Project Area. Based on this information, no impacts to BLM sensitive plant species would occur as a result of the Proposed Action.</p> | Christine Cimiluca | 8/19/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|---------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------|
| PI | Plants: Threatened, Endangered, Proposed, or Candidate | The proposed project is located within potential habitat for Uinta Basin hookless cactus (<i>Sclerocactus wetlandicus</i>), per BLM GIS review. The nearest known occurrence of the species is located approximately 4.9 miles from the Project Area, per BLM GIS review. U. of Wyoming habitat models show low-medium potential for the species to occur in the Project Area. Suitable habitat for other TEPC plant species is not present in the Project Area, per BLM GIS data, habitat models, and Google Earth/aerial imagery review. | Christine Cimiluca | 8/19/2015 |
| NP | Plants: Wetland/Riparian | No inventoried wetlands or riparian areas are present in the Project Area, per BLM GIS review. Google Earth and aerial imagery reinforce that wetland and riparian areas are not present; ephemeral drainages are present. | Christine Cimiluca | 8/19/2015 |
| NI | Recreation | The proposed project is located adjacent to the White River special recreation management area (SRMA). Recreational activities for the project area include but are not limited to hiking, hunting, 4x4 vehicle and off highway vehicle (OHV) use. Motorized use is limited to designated roads and trails as per Vernal RMP 2008. Implementation of the proposed action would not negatively affect recreational opportunities within the project area. | Rene Arce | 8/11/2015 |
| NI | Socio-Economics | No impact to the social or economic status of the county or nearby communities would occur from this project due to its small size in relation to ongoing development throughout the basin. | Rick Goshen | 8/14/2015 |
| NI | Visual Resources | The proposed project falls within a Visual Resource Management, (VRM) class IV and adjacent to VRM class II (approximately .33 miles). The objective of VRM class IV is to provide management activities that require major modifications to the existing character of the landscape. The level of change to the landscape can be high. The management activities may dominate the view and may be the major focus of the viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repetition of the basic visual elements of form, line, color, and texture. The proposed | Rene Arce | 8/11/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|---------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|
| | | action would not negatively impact the visual resource of the area. | | |
| NI | Wastes (hazardous/solid) | No chemicals subject to reporting under SARA Title III in amounts greater than 10,000 pounds would be used, produced, stored, transported, or disposed of annually in association with the project. Trash and other waste materials would be cleaned up and removed immediately after completion of operations. The pit liner would be trimmed or folded and buried so that it will not reemerge at a later date. | Rick Goshen | 8/14/2015 |
| NI | Water: Floodplains | The 100 year Atchee Wash floodplain exists within the project area. Care should be taken when working around and within floodplain sediments. These sediments are typically unconsolidated and prone to movement. The proposed project will not affect these floodplain sediments since the project is not proposing to affect or alter the natural drainage that feeds this floodplain system. | James Hereford II | 8/19/2015 |
| NI | Water: Groundwater Quality | No impact to groundwater should be expected based on the following: <ul style="list-style-type: none"> • The project involves movement of surficial alluvium and would not directly interact with groundwater. • The potential for spills is small and any potential impact negligible (fuel and other liquids of limited volume leaked from vehicles and earth moving equipment likely to be on site for one day). | Justin Snyder | 8/18/2015 |
| NI | Water: Hydrologic Conditions (stormwater) | The current hydrologic conditions of the area reflect what is typical in a high desert ecosystem. Most of the drainages in the area are dry ephemeral washes that flow water during runoff events and seasonal fluctuations in precipitation events. During these times the washes will often exhibit flash flood properties since the nature of the soils in the area are mainly clay type soils. We know that clay soils have slower infiltration rates than sandy soils based on the properties of clays and sands. The current proposed action will not alter or affect the current hydrologic conditions in the area to a degree that would require detailed analysis since it has not been proposed to alter or affect the hydrology of the area. | James Hereford II | 8/19/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|---------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------|
| NI | Water: Surface Water Quality | Surface water quality will not be affected to a degree that would require detailed analysis since no perennial surface waters are proposed to be affected. Most of the drainages including Atchee Wash are dry ephemeral washes that flow during precipitation events and seasonal runoff. | James Hereford II | 8/19/2015 |
| NP | Water: Waters of the U.S. | No perennial waters of the U.S. will be affected by the proposed action as per GIS review and on the ground investigations taken place earlier this year. Although ephemeral washes that are tributaries to major waters of the U.S. like the Green River are protected as waters of the U.S under the Clean Water Act. This project will not contribute to increased erosion since its plan is too close and open pit. The open pit as it sits with no reclamation is more prone to erosion then the proposed projects reclamation, which would provide native vegetation and later biological soil crust development that will reduce erosion rates on this site. | James Hereford II | 8/19/2015 |
| NI | Wild Horses | The project is not located within an established Herd Area, however, there may be horses present occasionally. These animals are not considered “ <i>wild horses</i> ”. | Dusty Carpenter | 09/15/2015 |
| NI | Wildlife: Migratory Birds (including raptors) | The project area is located within migratory bird nesting and foraging habitat. There are no documented raptor nests within 1/2 mile of the project area. Impacts are not anticipated to disturb habitat to a degree where loss of individuals may occur or cause temporary disturbance to where intra-specific and intra-specific competition between species would result. | Brandon McDonald | 08/31/2015 |
| NI | Wildlife: Non-USFWS Designated | The BLM does not identify crucial habitat for wildlife within the project area. Impacts to general wildlife would be temporary displacement but would be of short term and not to a degree analysis is further needed. | Brandon McDonald | 08/31/2015 |
| NP | Wildlife: Threatened, Endangered, Proposed or Candidate | In review of a field visit and district files there are no threatened, endangered, proposed, or candidate species (including their associated habitats) within the project area. | Brandon McDonald | 08/31/2015 |

| Determination | Resource/Issue | Rationale for Determination | Signature | Date |
|---------------------------|------------------------|-------------------------------------------------|------------------|-------------|
| NP | Woodlands/ Forestry | No Forest or Woodland present per review of GIS | David Palmer | 8/14/2015 |
| FINAL REVIEW: | | | | |
| Reviewer Title | Signature | Date | Comments | |
| Environmental Coordinator | Stephanie Howard | 9/17/2015 | | |
| Authorized Officer | Jerry Kenczka | 9/17/2015 | | |

Appendix D. Pure Live Seed Mixture

| Seed Type | Quantity |
|------------------------------|----------------------|
| Indian Ricegrass (Nezpar) | 3.00 lbs/acre |
| Sandberg Bluegrass | 1.00 lb/acre |
| Bottlebrush Squirreltail | 1.00 lb/acre |
| Great Basin Wildrye | 0.50 lbs/acre |
| Crested Wheatgrass (Ephraim) | 1.00 lb/acre |
| Shadscale | 1.50 lbs/acre |
| Fourwing Saltbrush | 1.00 lb/acre |
| Total | 9.00 lbs/acre |