

RECORD OF DECISION

San Juan Mine Deep Lease Extension Mining Plan Modification

San Juan County, New Mexico

Office of Surface Mining Reclamation and Enforcement

April 2019

1. INTRODUCTION

Westmoreland San Juan Mining, LLC (SJCC) submitted a mine permit application package (PAP) on January 22, 1998, to the New Mexico Mining and Minerals Division (MMD) for a new permit area (NM-99144), known as Deep Lease Extension (DLE, project, or project area), at the San Juan Mine, an existing underground coal mine in Waterflow, New Mexico (NM). SJCC, a subsidiary of Westmoreland Coal Company (Westmoreland), is the operator of the San Juan Mine and the project proponent. As proposed by SJCC, the new permit area would add 4,465 acres and approximately 53.6 million tons of recoverable Federal coal to the San Juan Mine, extending the operational life of the mine by 10 - 15 years. The DLE is located on public land that is federally managed by the Bureau of Land Management (BLM). Surface impacts would include subsidence, which occurs progressively behind the longwall mining area, resulting in a surface expression that generally ranges from four to eight feet and areas for construction of gob vents, rescue chambers, ventilation shafts, and access roads in the DLE. Postmining land use in the project area includes grazing land and wildlife habitat.

To analyze environmental impacts of this proposed federal mining plan modification, the United States Department of the Interior (DOI), Office of Surface Mining Reclamation and Enforcement (OSMRE) Western Region Office prepared an Environmental Impact Statement (EIS) for the San Juan Mine DLE Project. The DOI BLM Farmington Field Office, New Mexico MMD, U.S. Environmental Protection Agency (EPA), and U.S. Fish and Wildlife Service (USFWS) acted as cooperating agencies. The EIS meets the respective requirements of the National Environmental Policy Act (NEPA) (42 United States Code (USC) § 4321 et seq.); the Council on Environmental Quality's (CEQ) NEPA regulations (40 Code of Federal Regulations (CFR) Parts 1500 to 1508); DOI's NEPA regulations (43 CFR 46) and Department Manual 516; and the OSMRE NEPA Handbook. The applicable statutes and regulations for the OSMRE, as well as the decisions to be made, are described in the Final EIS (FEIS). The opportunity for public input was provided during public scoping and after issuance of the Draft EIS (DEIS). Responses to these comments are provided in Appendix B of the FEIS, and the FEIS adequately and accurately assesses the environmental impacts of the proposed mining plan action.

This document constitutes the Record of Decision (ROD) of the OSMRE Western Region Office, documenting its selected alternative in accordance with NEPA (40 CFR 1505.2). OSMRE will prepare a Mining Plan Decision Document (MPDD) for the DOI Assistant Secretary for Land and Minerals Management (ASLM) with its recommendation about the proposed federal mining plan modification for the project area. A MPDD will be prepared because SJCC's proposed project includes leased Federal coal and requires a modification to SJCC's Federal mining plan. The ASLM will decide to approve, disapprove, or conditionally approve the mining plan modification for the project area.

The OSMRE's original NEPA analysis and the ASLM's 2008 decision for the DLE were challenged in *WildEarth Guardians v. U.S. Office of Surface Mining et al.*, Case 1:14-cv-00112-RJ-CG (D.N.M. 2016). In the legal proceedings, the OSMRE requested and received a voluntary

remand, as approved by the U.S. District Court for the District of New Mexico on August 31, 2016. The court-approved voluntary remand required the OSMRE to prepare an EIS that rigorously analyzes the reasonably foreseeable impacts of the mining plan modification, including examination of air quality impacts. The OSMRE must complete the EIS and ROD, and the MPDD must be signed by the ASLM by August 31, 2019.

Therefore, in addition to the NEPA guidelines cited above, this EIS has been prepared in accordance with the Court's order and the NEPA regulations listed in Section 1 of the FEIS. It evaluates the potential impacts of mining within the DLE area per the Mining Plan Modification approved by the ASLM in 2008, including the indirect impacts (including air quality) of combustion of the total volume of coal to be mined for power generation. This EIS also analyzes the impacts of other reasonable alternatives, including the No Action alternative.

The EIS considers both current and future operations at the San Juan Mine and the indirect effects of combustion of the coal. Mining of the DLE was initiated upon ASLM's approval of the Mining Plan Modification in 2008; therefore, the timing of the Court's order requires that the EIS include both a retrospective and prospective analysis component. For the retrospective component (2008-2017), the EIS addresses mining at a rate of approximately 6 million tons per year (tpy) and indirect effects of combustion at the Generating Station Units 1, 2, 3, and 4, with Units 1 and 4 equipped with selective non-catalytic reduction (SNCR) emission control devices beginning in January 2016. For the prospective component (2018-2033), which considers compliance with the revised State Implementation Plan (SIP) for Regional Haze, the EIS addresses mining at a rate of approximately 3 million tpy and the indirect effects of combustion at the Generating Station Units 1 and 4 equipped with SNCR emission control devices.

2. BACKGROUND

The San Juan Mine began as a surface mining operation in 1973 to supply coal to the adjacent Generating Station. San Juan Mine is the exclusive supplier of coal to the Generating Station, until their contract expires in 2022. The first surface coal lease for the mine was granted on September 29, 1972, to the Public Service Company of New Mexico (PNM), Tucson Electric Power Company (TEP), and Western Coal Company. The mine began as a surface operation using truck and shovel and dragline mining techniques to mine coal on BLM, State of New Mexico, and private lands.

In 2001, the ASLM approved a Mining Plan Modification for the San Juan Mine to allow the San Juan Mine to transition from a surface mining operation to an underground longwall mining operation. Following approval, SJCC began mining underground in 2002 in the Deep Lease area pursuant to Federal Coal Lease NM-028093, which was approved by the BLM in 1980, and approved by the ASLM on January 11, 2001.

In 1998, the BLM issued its decision record for the Proposed Coal Leasing Area RMP Amendment/Environmental Assessment, which amended the 1988 Farmington RMP to include Federal Coal Lease NM-99144 for the San Juan Mine's DLE (BLM/FFO 1998). With the addition of the DLE to the Deep Lease area, the total surface acreage of the leased area at San

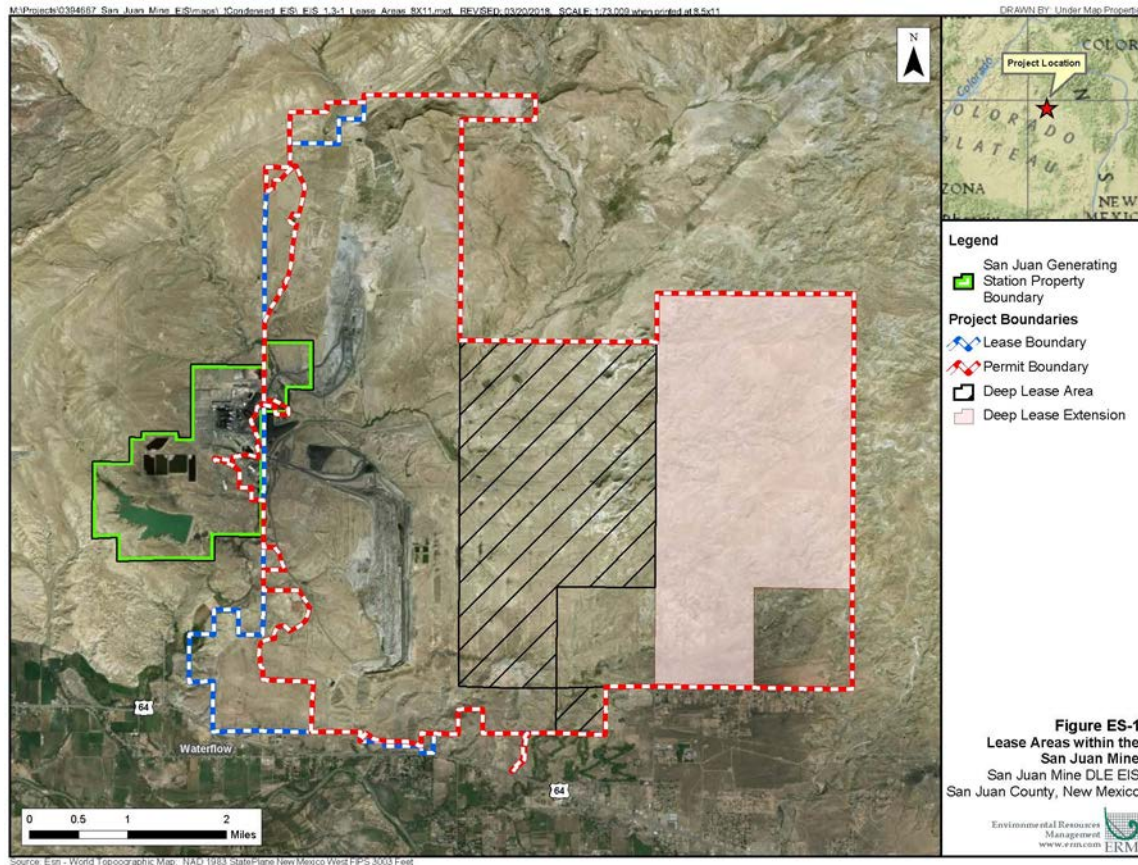
Juan Mine (Surface, Deep Lease, New Mexico State Leases, and DLE) is 18,509 acres. Subsequently, the SJCC submitted a proposed Mining Plan Modification to begin mining within the DLE. The New Mexico MMD approved the PAP for the DLE Mining Plan Modification on October 22, 1999, and the Mining Plan Modification was approved by the ASLM on January 17, 2008. Pursuant to the court-approved voluntary remand, the DOI is reevaluating the impacts of mining in the DLE, not the Deep Lease area, as part of the Proposed Action for this EIS.

With the 2008 Mining Plan Modification, the total permitted area for mining (Surface, Deep Lease, New Mexico State Leases, and DLE) comprises 17,740 acres. The difference between the leased and permitted acreage is due to portions of San Juan Mine achieving final bond release, which has reduced the acreage from the permitted area while remaining within the leased area. The SJCC proposes to continue longwall mining within the DLE through 2033. Between 2008 and 2017, the SJCC mined approximately 6 million tpy to supply the Generating Station. Beginning in 2018, the rate of mining was reduced by about half due to shutdown of Units 2 and 3, supplying approximately 3 million tpy to the Generating Station annually through 2033. Table 1 summarizes the lease areas and acres of disturbance at the San Juan Mine. Figure 1 shows the location of each of the lease areas within the San Juan Mine.

Table 1: Summary of Lease Areas

Resource Areas	Total Acreage	Disturbed Area (acres)	Reclaimed Area (acres)	Mining Period
Surface Mining Leases	8,519	5,105	3,195	1973-2001
Deep Lease	13,982	420	200	2002-Present
Deep Lease Extension	4,464.87	172	100	2010-Present
State Lease MC-0087	640	0	0	Not mined
State Lease MC-0088	646	53	46	2007-2011
State Lease HC-0004	257	12	7	2005-2006

Figure 1. Location of San Juan Mine Lease Areas



3. AGENCY AUTHORITY AND ACTION

This EIS satisfies the NEPA requirements of the court-approved voluntary remand to re-evaluate the environmental impacts of the PAP for the proposed Mining Plan Modification submitted by the SJCC to the New Mexico MMD on January 22, 1998. The New Mexico MMD approved the underground mining permit for the DLE in 1999, and the BLM approved the lease for the DLE in 1998. The Court's order has no bearing on these decisions or approvals; however, the OSMRE requested that both the BLM and the New Mexico MMD participate as Cooperating Agencies for this EIS.

In addition to this NEPA review, the OSMRE's Federal action requires two other consultations: Section 7 of the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA). These consultations were implemented in parallel to the NEPA process; each analysis provides useful information to the others, but they followed separate tracks and satisfied separate legal requirements.

3.1. LEAD AGENCY – OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

The OSMRE is the Lead Agency directing EIS preparation for the Project. The OSMRE will make a recommendation to the ASLM about decisions on the proposed DLE Mining Plan Modification, specifically whether to approve, approve with conditions, or disapprove the proposed Mining Plan Modification, and associated reclamation activities, in the DLE of the San Juan Mine.

3.2. COOPERATING AGENCIES

As defined in the NEPA regulations, (40 CFR 1508.5), “cooperating agency” means any Federal agency other than a Lead Agency, which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation significantly affecting the quality of the human environment. A state or local agency of similar qualifications may, by agreement with the lead agency, become a cooperating agency. There are four Cooperating Agencies on this EIS, and each is providing technical assistance to the OSMRE in the development of this EIS: BLM, New Mexico MMD, USFWS, and EPA. The role of each is described in Table 2.

Table 2: Cooperating Agencies for the NEPA Process

Agency	Role
Bureau of Land Management	In 1998, the BLM issued a decision record for the Proposed Coal Leasing Area RMP Amendment/Environmental Assessment, which amended the 1988 Farmington RMP to include the Federal Coal Lease NM-99144 for the San Juan Mine’s DLE for the proposed maximum economic recovery of coal. The BLM also approved the surface lease for the lands occupied by the San Juan Mine, which are located on Federal land overseen by the BLM. The BLM also approved the Resource Recovery and Protection Plan and consulted with the OSMRE and provided comments on the OSMRE’s original 2008 decision. The BLM provided technical assistance to the OSMRE in the preparation of this EIS and consulted with the OSMRE along with the New Mexico State Historic Preservation Officer (SHPO) to identify and evaluate potential impacts to cultural resources under Section 106 of the NHPA.
New Mexico Mines and Minerals Division	The New Mexico MMD approved the PAP for the Mining Plan Modification for the DLE in 1999. The New Mexico MMD provided technical assistance to the OSMRE in the preparation of this EIS.
U.S. Fish and Wildlife Service	As Lead Agency, the OSMRE is required to consult with the FWS under Section 7 of the ESA before making any decision about the Project. The ESA consultation was conducted concurrent with the NEPA process, and the FWS participated as a cooperating agency in the EIS process. In 2005, OSMRE consulted with and provided a BA to FWS for the Mining Plan Modification. FWS provided a letter of concurrence on July 7, 2005.
U.S. Environmental Protection Agency	The EPA Region 6 participated as a cooperating agency in this EIS process and provided technical assistance in air and water quality to the OSMRE in the preparation of this EIS.

4. PURPOSE AND NEED

The purpose of the Proposed Action is established by the Mineral Leasing Act of 1920, as amended, which requires the evaluation of SJCC's proposed Mining Plan Modification for the DLE to continue underground mining and reclamation operations to develop Federal coal lands included in Federal Coal Lease NM-99144. The OSMRE is the agency responsible for making a recommendation to the ASLM to approve, disapprove, or approve with conditions the proposed Mining Plan Modification under 30 CFR Part 746. The ASLM will decide whether the Mining Plan Modification is approved, disapproved, or approved with conditions. Mining cannot continue in the DLE beyond August 31, 2019 (the deadline of voluntary remand) without this approval.

The purpose of this action is to evaluate the environmental effects of coal mining on the proposed portions of Federal Coal Lease NM-99144 within the San Juan Mine, which will assist the OSMRE in developing a recommendation to the ASLM whether to approve, disapprove, or approve with conditions the Federal Mining Plan Modification. ASLM approval of the Federal Mining Plan Modification is necessary to mine the coal.

The need for this action is to provide the SJCC the opportunity to mine the Federal coal obtained under Federal Coal Lease NM-99144 (issued by the BLM in 1998) located at the San Juan Mine.

The applicant's objective for the Project (proposed Mining Plan Modification) is to allow continued operations at the San Juan Mine within the DLE through 2033. The Project would be accomplished in a manner consistent with the approved BLM lease agreement, the BLM Resource Recovery and Protection Plan, and all pertinent Federal and state regulations.

5. DECISION

The NEPA Implementing Regulations (40 CFR 1502.14(e)) requires the OSMRE to identify an alternative from among those analyzed in the FEIS as the agency preferred alternative. Three alternatives were analyzed in the FEIS: Alternative A– Proposed Action, Alternative B – Continuation of San Juan Mine Operations Following Generating Station Shut-Down in 2022, and Alternative C – No Action. The OSMRE has selected Alternative B as the agency's preferred alternative. The preferred alternative incorporates all practicable means to avoid or minimize environmental harm.

In compliance with 40 CFR 1505.2(b), the following sections briefly describe the preferred alternative, other alternatives considered, and the environmentally preferable alternative. Chapter 2 of the FEIS includes detailed descriptions of the alternatives. The OSMRE's rationale for its selection of Alternative B is provided in Section 5.5, Basis for Decision.

5.1. DESCRIPTION OF THE SELECTED ALTERNATIVE

In this alternative, the OSMRE would recommend to the ASLM that the DLE be approved, and it is assumed that coal would be supplied to the Generating Station until 2022 and the remaining annual production from 2023 through 2033 would go to the open market, including a possible future buyer of PNM's share of the Generating Station. In December 2018, PNM and other owners of the Generating Station released a decision to close the plant in 2022. Therefore, Alternative B is selected as the preferred alternative.

If a mine does not have an identified generating station as the market, the OSMRE has analyzed coal combustion effects using a "typical" local generating station. This approach allows for a reasonable approximation of the potential combustion-related effects. In the case of the San Juan Mine DLE, the analysis of the combustion-related effects at the Generating Station through 2033 in this EIS would provide such a reasonable level analysis in the event of shutdown and the San Juan Mine identifying a new market for its coal.

Under this alternative, it is assumed that mining, coal preparation and crushing methods at the San Juan Mine would remain consistent with methods employed under the Proposed Action.

Additionally, given the high level of uncertainty associated with projecting the potential post-June 2022 SJCC clients, it is assumed that the average rate of coal mined from the San Juan Mine would remain consistent with the Proposed Action rate of approximately 3 million tpy.

Using the Generating Station as the "typical" local generating station for approximation of potential combustion-related effects under Alternative B assumes that any coal combustion would be within the emission profiles analyzed in this EIS for the indirect effects of the Proposed Action. Specifically, assumptions for this Alternative include the following:

1. The potential future combustion of coal would be with similar types of emission controls, Coal Combustion Residue (CCR) handling and storage, and air emission profiles for all air pollutants.
2. The potential future use of coal would be with similar types and scales of transport from the mine to the location of combustion.

These assumptions reflect a higher level of uncertainty relative to the assessment of the indirect effects of coal combustion under Alternative B as compared to under the Proposed Action, because the potential use after 2022 is not known. If the alternate use after 2022 falls outside the bounds of the analysis in this EIS (less emission control, new form of transit, new use), then the OSMRE or another federal agency with an action associated with the new use (such as approval of a new rail line or spur) would conduct an independent or supplemental NEPA analysis to analyze new impacts or impacts outside the bounds of those analyzed in this EIS.

Under this alternative, all of the direct mining-related effects, and the indirect effects of coal combustion, would be the same as those for the Proposed Action.

5.2. ENVIRONMENTALLY PREFERRED ALTERNATIVE

An environmentally preferred alternative (40 CFR 1505.2(b)) is one that has the least impact on the physical and biological environment and that best protects, preserves, and enhances historic, cultural, and natural resources. As shown in **Appendix A – Summary of Impacts Table**, Alternative C, the “No Action Alternative,” would result in the least amount of impact on the physical and biological environment and best meets that definition of environmentally preferred.

5.3. BASIS OF DECISION

The OSMRE has based its decision to select Alternative B on a thorough review of the FEIS, review of public and agency concerns received on this Project, consultation with cooperating and regulatory agencies, consultation with interested tribes, and the project record. The OSMRE also considered the intensity of impacts expected for each of the analyzed alternatives. The OSMRE determined that implementation of Alternative A would no longer be technically feasible due to the announced closure of the Generating Station. As described in the following sections, Alternative B meets the Project’s purpose and need (**Section 4.0**) and is consistent with all applicable regulatory requirements (**Section Error! Reference source not found.**), while minimizing potential impacts (**Section Error! Reference source not found.**). Alternative B also addresses the issues of concern identified during the scoping process. The effects on surface and groundwater quality and quantity are not expected to be significant (see FEIS, **Section 4.5 Water Resources/Hydrology**). There are no jurisdictional wetlands or non-wetlands in the Project area (see FEIS, **Section 4.5 Water Resources/Hydrology**).

FWS concurred with the OSMRE’s determination that implementation of the project “may affect, not likely to adversely affect” the Colorado Pikeminnow, Razorback Sucker, Southwestern Willow Flycatcher, Yellow-billed Cuckoo, Mancos milkvetch, and Mesa Verde cactus (see FEIS, **Section 4.8 Special Status Species**). The OSMRE analyzed potential impacts of Alternative B on climate change and determined that there would be no significant impacts to climate (see FEIS, **Section 4.2 Climate Change**). The OSMRE analyzed potential impacts of coal combustion climate and environmental resources and determined that impacts would not be significant (see FEIS, **Section 4.2 Climate Change**). The OSMRE analyzed potential impacts of Alternative B on human health and determined that impacts are not expected to be significant (see FEIS, **Section 4.16 Health and Safety**). The OSMRE described reclamation practices that would be implemented under Alternative B in **Section 2.1.1.5 Reclamation and Coal Combustion Residuals** of the FEIS.

The FEIS meets the standards for an adequate EIS under CEQ regulations. The OSMRE, as lead agency, has taken responsibility for the preparation of the FEIS and has determined that all stakeholders’ concerns, comments, and suggestions provided during the NEPA process have been satisfactorily addressed, and all identified issues and potential impacts have been adequately analyzed and disclosed.

During the FEIS review period, OSMRE received two public comments: one letter from EPA and a combined letter from Sierra Club, San Juan Citizens Alliance, WildEarth Guardians, Western Environmental Law Center, Center for Biological Diversity, and the Coalition for Clean Affordable Energy. The letter from EPA stated that they had no additional comments. The combined letter from Sierra Club *et al.* stated that OSMRE was required to analyze a “Just Transition” Alternative in the EIS. OSMRE did not carry the “Just Transition” Alternative forward for further analysis because it did not meet our purpose and need and would not be economically feasible. A detailed description of why the “Just Transition” Alternative was not carried forward for further analysis is in FEIS Section 2.2.4.

The OSMRE’s decision to select Alternative B as the agency preferred alternative will be implemented through issuance of this ROD, my recommendation to approve the MPDD to the ASLM, and the ASLM’s approval, if given.

5.3.1. Selected Alternative Compliance with Federal Laws and Executive Orders

The OSMRE considered all applicable statutory and regulatory requirements necessary for approval of the proposed project. The following sections document the selected alternative’s compliance with applicable statutory and regulatory requirements.

5.3.1.1. SMCRA/State-Federal Cooperative Agreement/Mineral Leasing Act

The OSMRE is of the DOI primarily charged with administration of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The SMCRA establishes a program of cooperative federalism that allows the states to enact and administer their own regulatory programs within limits established by Federal minimum standards and with prescribed backup enforcement authority by the OSMRE (30 USC 1253). New Mexico MMD operates an approved state program under SMCRA and therefore has primary jurisdiction over the regulation of surface coal-mining and reclamation operations on non-Federal and non-Indian lands within the state. See 30 CFR 931.10, 931.15, and 931.30. Under 30 USC 1273(c), a state with a permanent regulatory program approved by the DOI Secretary, such as New Mexico MMD, can elect to enter into a cooperative agreement for state regulation of surface coal mining and reclamation operations on Federal lands within the state. OSMRE granted New Mexico MMD this authority, and New Mexico MMD regulates permitting and operation of surface coal mines on Federal lands within New Mexico under the authority of New Mexico Surface Mining Act of 1978 (NMSA).

The State-Federal Cooperative Agreement (Agreement) between New Mexico MMD and the OSMRE (codified in 30 CFR 931.30) outlines the decision process for obtaining the environmental approvals necessary to mine Federal coal in New Mexico. Under the Agreement, New Mexico MMD reviews an operator’s (in this case, SJCC’s) PAP to ensure the permit application complies with the permitting requirements and that the surface coal mining operation would meet the performance standards of the approved New Mexico program as outlined in NMSA. New Mexico MMD makes a decision to approve or deny the permit application

component of the PAP in accordance with NMSA. Once the New Mexico MMD informs the OSMRE of a permit revision occurring for leased Federal coal and/or Federal surface, the OSMRE reviews the PAP to ensure that it complies with the coal lease, the MLA, and other applicable Federal laws and their attendant regulations. Then, in consultation with the BLM, the OSMRE must determine if the action requires the preparation of a MPDD. If a MPDD is deemed necessary, pursuant to 30 CFR part 746, the OSMRE prepares and submits to the ASLM a MPDD recommending approval, disapproval, or approval with condition(s) of the proposed mining plan.

Finding

The OSMRE finds that the selected alternative complies with SMCRA, the State-Federal Cooperative Agreement, and the MLA based on the OSMRE's review of the PAP and state mining permit approved by New Mexico MMD. OSMRE has prepared a MPDD to submit to the ASLM recommending approval of the proposed mining plan.

5.3.1.2. Endangered Species Act

A Biological Assessment (BA) was prepared by the OSMRE and submitted to FWS in May 2018 in compliance with Section 7 of the Endangered Species Act, which requires that Federal agencies consult with FWS regarding potential impacts to endangered and threatened species prior to making a decision. The Biological Assessment evaluated potential effects of mining and coal combustion on endangered and threatened species within the FWS-approved area of analysis. Based on this evaluation, the OSMRE concluded that implementation of the Project “may affect, not likely to adversely affect” the Colorado Pikeminnow, Razorback Sucker, Southwestern Willow Flycatcher, Yellow-billed Cuckoo, Mancos milkvetch, and Mesa Verde cactus (see FEIS, Section 4.8 Special Status Species). The OSMRE also concluded that implementation is “not likely to adversely modify” either fish species critical habitat or cuckoo proposed critical habitat. FWS's review of the Proposed Action included assessment of direct effects at the San Juan Mine DLE and indirect effects from the combustion of coal at the Generating Station. FWS also reviewed the indirect effects through changes in hydrology or water quality of mining operations activities on Colorado Pikeminnow and Razorback Sucker critical habitat. Based on FWS review of the information provided in the Biological Assessment and its own assessment, on June 25, 2018, FWS responded to OSMRE's request for informal consultation with a letter of concurrence, concurring with the OSMRE's determinations and concluding the Section 7 consultation process.

Finding

The OSMRE finds that the selected alternative complies with the Federal Endangered Species Act based on the coordination with FWS described above. The OSMRE has completed the Section 7 Consultation process for this project which has determined that the Project “may affect, not likely to adversely affect” the species evaluated.

5.3.1.3. Clean Air Act

This Clean Air Act requires states to develop plans to implement, maintain, and enforce primary and secondary ambient air quality standards for any criteria air pollutants, and calls for Federal agencies to prevent deterioration of air quality. Effects on air quality as a result of this Project were analyzed and showed that this Project will have minor impacts on air quality. The annual emissions for operations from non-fugitive sources at the San Juan Mine are below thresholds to require a New Mexico Environment Department (NMED) Title V permit. The substantive air quality related standards and work practices are provided for San Juan Mine in the state mining permit, issued pursuant to the SMCRA and NMSA.

Finding

The OSMRE finds that the selected alternative complies with the Clean Air Act based on review of the effects of air quality in comparison to NMED thresholds and the air quality related standards and work practices set forth in the state mining permit issued pursuant to the SMCRA and NMSA.

5.3.1.4. Clean Water Act

The Clean Water Act regulates discharges of pollutants into waters of the U.S. and the quality standards of surface waters. The EPA has adopted regulations to implement its water quality program, 40 CFR parts 122, 125, 127, and 129. Authority to implement the water quality program is vested with the EPA and states with authorized programs. Clean Water Act Sections 401, 402, and 404 are applicable to the Project.

Section 401 requires that any applicant pursuing a Federal permit to conduct any activity that may result in a discharge of a pollutant must obtain a water quality certification (or waiver). The NMED Surface Water Quality Bureau issues water quality certifications for activities that occur within New Mexico on non-tribal lands. On March 1, 2017, the NMED issued a letter conditionally certifying all Nationwide Permits, with the exception of Nationwide Permit 37 – Emergency Watershed Protection and Rehabilitation. The conditional certification requires that all Nationwide Permits in the state must meet a series of conditions to avoid discharges to the maximum extent possible and pre-construction notification to NMED for specific activities. Mining activities within the DLE are permitted under Nationwide Permit 50 – Underground Coal Mining Activities, which is covered by the conditional certification from the NMED.

Section 402 established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources. New Mexico has its own Water Quality Act at NMSA § 74-6-1 et seq. and the state regulates discharges to its “waters,” which is defined to include both surface and groundwater (NMSA § 74-6-2.H). EPA has not delegated responsibility for the NPDES program to New Mexico.

SJCC holds two NPDES permits for the San Juan Mine. NPDES Permit No. NM0028746, issued by the EPA in 2013, serves as the primary permit in protection of surface water resources on the San Juan Mine. The NPDES permit allows SJCC to discharge stormwater from the mine, at specified locations, while maintaining certain water quality standards if discharges do occur. The

discharge locations (outfalls) for San Juan Mine are generally associated with stormwater detention basins within the San Juan Mine lease area. The detention basins are designed to retain runoff from a 100-year/6-hour storm event to minimize discharges of stormwater from the mine lease under the NPDES permit. When discharges occur from one or more of the outfalls, SJCC is required to meet water quality standards that are specified in the permit. In addition, the NPDES permit allows SJCC to discharge treated sanitary waste to Shumway Arroyo from Outfall 009. These discharges require monitoring but do not have specific water quality limitations.

Section 404 regulates the discharge of dredge and fill materials into waters of the U.S., which include oceans, bays, rivers, streams, lakes, ponds, and wetlands. Before any actions that may affect surface waters are implemented, a delineation of jurisdictional waters of the U.S. must be completed, following U.S. Army Corps of Engineers (USACE) protocols, to determine whether a project area contains wetlands or other waters of the U.S. that qualify for protection under the CWA, and then, if necessary, a CWA permit obtained.

In 2015, SJCC applied to the USACE and obtained coverage under Nationwide Permit 50, which authorizes discharges of dredged or fill material into non-tidal waters of the U.S. associated with underground coal mining and reclamation operations provided the activities are authorized or are currently being processed as part of an integrated permit processing procedure, by the OSMRE, or by states with approved programs under Title V of the SMCRA of 1977. The discharge must not cause the loss of greater than 0.5 acre of non-tidal waters of the U.S., including the loss of no more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream beds the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in minimal adverse effects. This Nationwide Permit does not authorize discharges into non-tidal wetlands adjacent to tidal waters. This Nationwide Permit does not authorize coal preparation and processing activities outside of the mine site.

Finding

The OSMRE finds that the selected alternative complies with the Clean Water Act because the mine would continue to operate in accordance with the NPDES permit and Nationwide Permit approved by NMED and USACE.

5.3.1.5. National Historic Preservation Act

Section 106 of the NHPA and its implementing regulations under 36 CFR part 800 require all Federal agencies to consider effects of Federal actions on cultural resources eligible for or listed in the National Register of Historic Places. Traditional cultural properties are also protected under Section 106 of the NHPA. The OSMRE has required stipulations, provided in Appendix B of this ROD, be implemented for the San Juan Mine DLE.

Finding

The OSMRE finds that the selected alternative complies with the NHPA based on the coordination with SHPO and the tribes described above. The OSMRE has completed the Section 106 Consultation process for this project and, coordinated with the BLM Farmington Field

Office, as the surface owner, to remain the lead agency for Section 106 into the future to insure that the stipulations in the ROD are implemented.

5.3.1.6. Executive Order 13175 Government-to-Government Consultation with Tribes

EO 13175 requires federal agencies to consult with American Indian tribal representatives and traditionalists on a government-to-government basis. The OSMRE conducted government-to-government tribal consultation concurrent with the Section 106 consultation described above in Section 5.3.16, National Historic Preservation Act.

Finding

The OSMRE finds that the selected alternative complies with EO 13175 based on the coordination with the tribes described above in Section 5.3.1.6. The stipulations included in the ROD address the concerns raised by tribes during government-to-government consultation.

5.3.1.7. Executive Order 12898 Environmental Justice

EO 12898 requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations when implementing their respective programs, including American Indian programs. OSMRE's analysis of environmental justice follows the CEQ's guidance on environmental justice and the EPA's guidance on environmental justice.

Throughout the NEPA process, a variety of steps have been taken to involve minority, low-income, and Tribal populations in a meaningful way, in accordance with Executive Order 12898. A high percentage of the population in the nine-county area surrounding the San Juan Mine is comprised of Native Americans. To account for this prevalent minority population, measures were taken to ensure that Native Americans were involved in the scoping process. Two of the scoping meetings occurred on tribal trust lands in Shiprock, New Mexico (Navajo Nation Reservation), and Towaoc, Colorado (Ute Mountain Ute Reservation), and interpreters were present at these meetings to allow for participants to provide an oral comment in their first language.

Effects of Alternative B on these minority and low-income populations were analyzed in the FEIS. The selected alternative would extend the life of the San Juan Mine by 10 to 15 years, delaying the onset of adverse economic impacts associated with mine closure, and possibly allowing time for other sectors to develop. The potential health risk to environmental justice populations within the coal combustion air quality deposition zone would be long-term but minor, and not represent a disproportionate major impact to the Native Americans living in this area. The Human Health Risk Assessment also found no disproportionate adverse impacts to low-income or minority populations related to public health and safety would result from the Proposed Action (see FEIS, Section 3.12.6, Environmental Justice - Environmental Consequences).

Finding

The OSMRE finds that the decision to select Alternative B was made in consideration of and is consistent with EO 12898.

5.3.2. Environmental Effects

The OSMRE's decision considered the environmental effects of each alternative. The intensity of effects for Alternative B (the selected alternative) and Alternative A were considered. All direct and indirect impacts, including their intensities, are described fully in **Chapter 4** of the FEIS, and cumulative impacts are described in **Chapter 4** of the FEIS. For a summary comparison of effects by all resources analyzed in the FEIS, see **Table A-1** in **Appendix A** of this document, which also is included in **Table ES-4** of the FEIS.

5.4. OTHER ALTERNATIVES CONSIDERED

5.4.1. Alternative C- No Action Alternative (Environmentally Preferred Alternative)

5.4.1.1. Description of Alternative

Under the No Action Alternative, the OSMRE would recommend that the ASLM not approve the Mining Plan Modification for the DLE at the San Juan Mine. Mining within the DLE would cease on August 31, 2019, and the SJCC would continue reclamation activities of past surface mining operations (Juniper Pit) and all surface disturbance from underground mining operations.

Mining could legally continue in the Deep Lease without the DLE; however, as a practical matter for an underground mine of this type, this alternative assumes that all mining would cease at the San Juan Mine after the completion of the second-to-last panel of the 400 district due to technical, economic, and other considerations. Specifically, the final panel of the 400 district is divided between the Deep Lease area and DLE. Coal quality varies throughout each longwall panel, as the panel length generally ranges from 2 to 3.5 miles. The panel length used by the San Juan Mine allows higher quality coal to be mined and stockpiled in either Juniper or Northfield coal stockpiles. As the lower quality coal is mined and delivered to the surface, blending can occur between the high-quality stockpiled coal and low-quality coal to ensure the product delivered to the Generating Station meets the requirements of the contract. Within the last panel of the 400 district, the lower quality coal is found on the Deep Lease area portion. Without the higher quality coal from the DLE side to blend with the low-quality coal, the Generating Station likely could not burn the lower BTU range of coal without risking damage to its boilers. Moreover, accessing the state lease located in Township 30 North, Range 14 West, Section 32, requires mining portions of the DLE to set up the infrastructure for a longwall operation. Without the approval to mine the DLE, the state lease coal could not be feasibly or safely mined.

Following cessation of mining, any coal remaining in the coal stockpiles would be delivered to the Generating Station. Stockpiles of coal from the San Juan Mine would allow the Generating Station to continue operations using coal from the San Juan Mine through approximately August

2020 (assuming an August 2019 disapproval such that mining ceases in the DLE in August 2019 and continues in the Deep Lease through December 2019, 6-month supply in SJCC stockpiles and 2 month-supply in Generating Station Force Majeure Stockpiles). CCR from the Generating Station would be placed in Juniper Pit in accordance with the reclamation plan for as long as the Generating Station continues to operate using coal from the San Juan Mine; however, upon shutdown of the Generating Station, without the additional CCR to use in reclaiming Juniper Pit, more disturbance of native or reclaimed areas would be required to fill the pit and complete the final design. This additional disturbance would result from the net loss of approximately 1.5 million cubic yards of CCR. Displacing this loss of CCR material with spoil material would require 15 feet of material to be removed over 60 acres of reclamation or native ground. Because this scenario is not part of the current reclamation plan, the plan does not account for designing proper drainage and creation of landforms, which could increase the acres needing to be disturbed to facilitate reclamation. Final regrade of former surface operations would be completed approximately ten years after the shutdown. Reclamation of the support facilities would also occur during this time. Once reclamation is complete, the areas would be monitored until a Phase III (i.e., final) bond release has been achieved on all formerly disturbed areas.

Under the No Action Alternative, SJCC would require approximately 110 employees to complete reclamation activities; all other employees would be laid off. In addition, an indirect effect of the No Action Alternative is that combustion of coal from the San Juan Mine at the Generating Station would cease in 2020.

5.4.1.2. Rationale for Not Selecting Alternative

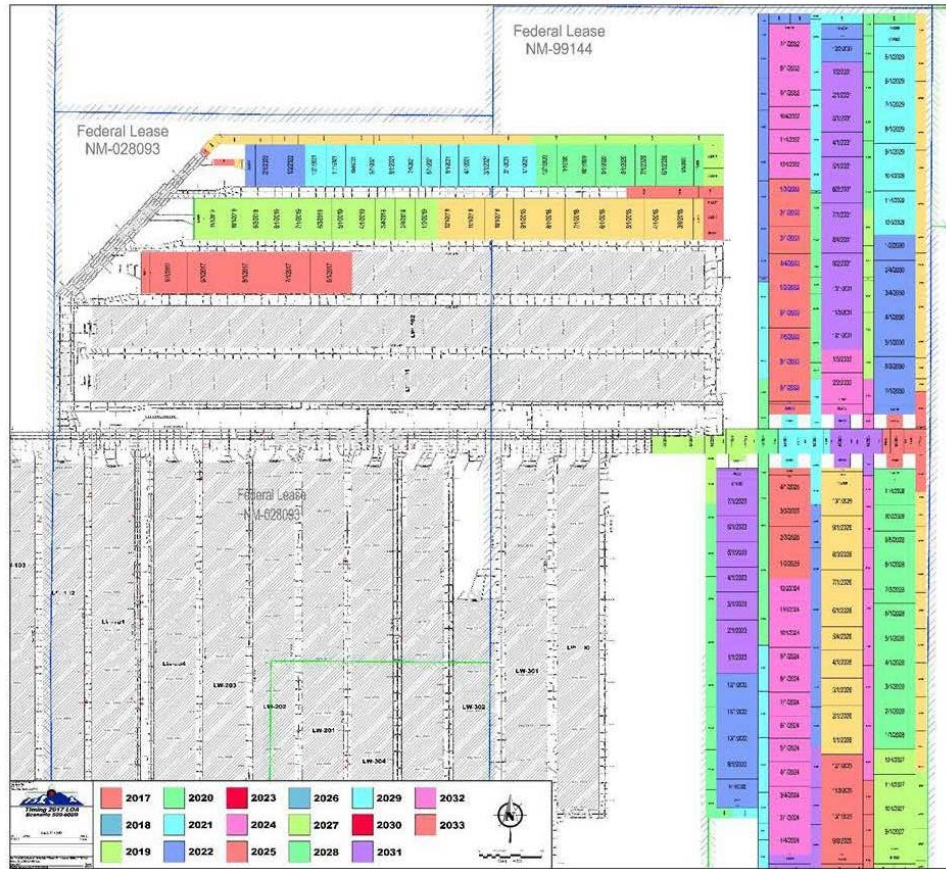
This Alternative was identified as the environmentally preferable alternative. OSMRE did not select Alternative C, No Action, because it does not meet OSMRE's purpose and need as well as the selected alternative. OSMRE's need for the action is to provide SJCC the opportunity to mine the federal coal obtained under Federal Coal Lease NM-99144.

5.4.2. Alternative A – Proposed Action

5.4.2.1. Description of Alternative

Under the Proposed Action, the OSMRE would recommend approval of SJCC's Mining Plan Modification for the DLE at the San Juan Mine, which if the ASLM agrees with the OSMRE's recommendation, would authorize the recovery of approximately 53 million tons of Federal coal from 4,464.87 acres of Federal land through the year 2033. Specifically, coal would be recovered within the area covered by New Mexico MMD permit 14-01, in Township 30, North, Range 14 West, Sections 17, 18, 19, 20, 29, 30, and portions of 31 (Lots 1, 2, 3, and 4). Figure 2 displays the Deep Lease and DLE and shows which areas were mined between 2008 and June 2017, and which areas would be mined from 2019 to 2033, with coal provided to the Generating Station into 2033.

Figure 2. Areas Proposed for Mining by Year through 2033



Coal would be recovered using longwall mining (as described in detail in Section 2.1.1 of the FEIS). The San Juan Mine has a current contract with the Generating Station to supply coal through June 30, 2022. This alternative assumes that the supply contract will be extended to 2033, which was the operating assumption at the time of the Court’s order. The contracted tonnage per year from 2008 through the end of 2017 was approximately 6 million tons of coal. The contract was amended to approximately 3 million tons of coal per year beginning January 2018, after the shut- down of Units 2 and 3 at the Generating Station. No changes to the current workforce, as described in Section 2.1.1 of the FEIS, would occur under the Proposed Action.

5.4.2.2. Rationale for Not Selecting Alternative

In December 2018, PNM and other owners of the Generating Station released a decision to close the plant in 2022. Therefore, the assumption of Alternative A that the supply contract between the San Juan Mine and the Generating Station would be extended until 2033 is unlikely to occur, and Alternative A is not selected as the preferred alternative. Although feasible at the time of the Court order and OSMRE’s analysis, OSMRE has determined that implementation of Alternative A would no longer be technically feasible due to the December 2018 announcement of closure of the Generating Station.

5.5. ALTERNATIVES CONSIDERED BUT ELIMINATED

An alternative may be considered during the environmental analysis process, but not analyzed in detail. The agency must identify those alternatives and briefly explain why they were eliminated from detailed analysis (40 CFR 1502.14). An alternative may be eliminated from detailed study if:

- It is ineffective (does not respond to the purpose and need for the proposed action);
- It is technically or economically infeasible (considering whether implementation of the alternative is likely, given past and current practice and technology);
- It is inconsistent with the basic policy objectives for the management of the area;
- Its implementation is remote or speculative;
- It is substantially similar in design to an alternative that is analyzed; or
- It would result in substantially similar impacts to an alternative that is analyzed.

Alternatives specific to this analysis that were considered, but that would not be analyzed in detail, are discussed in Section 2.2 of the FEIS (Table 2.2-1) and included:

- Alternative D – Just Transition Alternative
- Alternative E – Alternative Panel Alignment
- Alternative F – Continue to Mine at 6 Million TPY Rate
- Alternative G – Modifications to Underground Mining Technique
- Alternative H – Relocation of Portals
- Alternative I – Alternative CCR Disposal Sites

6. PUBLIC INVOLVEMENT

6.1. SCOPING

The OSMRE issued a Notice of Intent to prepare an EIS in the *Federal Register* (FR) on March 22, 2017 (82 FR 14745). The scoping period began on March 22, 2017 and ended May 8, 2017. During the public scoping period, the OSMRE hosted five scoping meetings to inform interested parties of the Project and provide opportunity for comment on the scope of the EIS. Scoping meetings were held between April 10 and April 14, 2017, in Albuquerque, New Mexico; Towaoc, Colorado; Shiprock, New Mexico; Farmington, New Mexico; and Durango, Colorado. All meetings were held in an open house format, with information stations describing varying aspects of the Project located throughout the venue and subject matter experts available to answer questions and describe the process and analysis. During all scoping meetings, opportunity to comment in written and oral form via a court reporter was provided; translation services were provided for Navajo speakers at the Shiprock meeting and Ute Mountain Ute speakers at the Towaoc meeting.

During formal public scoping, the OSMRE sought input from the public, interested organizations, tribes, and government agencies. The OSMRE received a total of 3,556 comments during the scoping period. Seven key issues of concern were identified during scoping and were used to guide the EIS interdisciplinary team's alternatives development. Key issues of concern included: (1) potential for adverse effects to air quality from combustion of mined coal; (2) potential effects of the Project on climate change, and subsequent effects to other resource areas; (3) potential for the Project to adversely affect human health, through air emissions and effects to water quality; (4) potential for the Project to adversely affect drinking water quality; (5) potential effects to groundwater quality resulting from placement of CCR during reclamation; (6) potential loss of economic revenue from the operation of the San Juan Mine under the No Action Alternative; and (7) consideration of an alternative describing a transition away from coal-fired power.

6.2. DRAFT ENVIRONMENTAL IMPACT STATEMENT

The OSMRE conducted a 45-day public comment period on the DEIS, which began on May 25, 2018. The OSMRE provided notice of the comment period in the *Federal Register*, on agency websites, in local newspapers, and on local radio stations. During the public scoping period, the OSMRE hosted five public meetings to inform interested parties of the Project and provide opportunity for comment on the DEIS. Public meetings were held between June 25 and June 29, 2018, in Albuquerque, New Mexico; Towaoc, Colorado; Shiprock, New Mexico; Farmington, New Mexico; and Durango, Colorado. All meetings were held in an open house format, with information stations describing varying aspects of the Project located throughout the venue and subject matter experts, the OSMRE Project manager and OSMRE Western Region Manager available to answer questions and describe the process and analysis. During all public meetings, opportunity to comment in written and oral form via a court reporter was provided; translation services were provided for Navajo speakers at the Shiprock meeting and Ute Mountain Ute speakers at the Towaoc meeting. Substantive public comments received during the public comment period and agency responses are included in the FEIS **Appendix B, Comment Letters and Responses**.

6.3. ADDITIONAL INFORMATION

The FEIS and electronic copies of this ROD can be downloaded as PDFs from the OSMRE's webpage: <https://www.wrcc.osmre.gov/initiatives/sanJuanMine.shtm>. The FEIS is also available to view at the OSMRE Western Region, the BLM Farmington Field Office, the Navajo Nation Library, Albuquerque Main Library, Cortez Public Library, Durango Public Library, and the Farmington Public Library (addresses and hours of availability are below). For additional information about the Project or to request an electronic version of the FEIS, please contact the OSMRE Project Coordinator, Gretchen Pinkham, gpinkham@osmre.gov, (303) 293-5088.

Bureau of Land Management (BLM) Farmington
Field Office
6251 College Blvd., Suite A,
Farmington, NM, 87402
Between the hours of 9:00 a.m. and 4:00 p.m.
Monday through Friday (Closed Saturday
and Sunday)

OSMRE, Western Region
1999 Broadway, Suite 3320
Denver, CO 80202
Between the hours of 8:00 a.m. and 4:00 p.m.
Monday through Friday (Closed Saturday
and Sunday)

Navajo Nation Library
Highway 264 Loop Road,
Window Rock, AZ 86515
Between the hours of 8:00 a.m. and 5:00 p.m.
Monday through Saturday (Closed Sunday)

Albuquerque Main Library
501 Copper Ave NW,
Albuquerque, NM 87102
Between the hours of 10:00 a.m. and 6:00 p.m.
Monday through Saturday (Closed Sunday)

Cortez Public Library
202 N. Park Street,
Cortez, CO 81321
Between the hours of 9:00 a.m. and 7:00 p.m.
Monday through Thursday; 9:00 a.m. and 4:00 p.m.
Friday through Saturday (Closed Sunday)

Durango Public Library
1900 E. Third Ave,
Durango, CO 81301
Between the hours of 8:00 a.m. and 8:00 p.m.
Monday through Wednesday;
9:00 a.m. and 5:30 p.m. Thursday through
Saturday (Closed Sunday)

Farmington Public Library
2101 Farmington Ave,
Farmington, NM 87401
Between the hours of 9:00 a.m. and 9:00 p.m.
Monday through Thursday; 9:00 a.m. and 5:00 p.m.
Friday through Saturday; and, 1:00 p.m. and
5:00 p.m. on Sunday

7. APPROVAL

In consideration of the information presented above, I approve this OSMRE ROD and the selection of Alternative B (Continuation of San Juan Mine Operations Following Generating Station Shut-Down in 2022) as described in the FEIS (**Section 2.2.2**). The State of New Mexico has approved the DLE permit, which sets forth requirements to minimize environmental impacts that could potentially occur as a result of the Proposed Action. This action can be implemented following approval of the MPDD by the ASLM.

This ROD is effective on signature.

Approved by:



David Berry, OSMRE Western Region Director 4/22/14
Date

For additional information about the project, this ROD, or the FEIS, please contact the OSMRE Project Coordinator: Gretchen Pinkham, OSMRE Western Region, 1999 Broadway, Suite 3320, Denver, CO 80202, gpinkham@osmre.gov, (303) 293-5088.

APPENDIX A

Summary of Impacts Table

Table A-1: Impacts and Mitigation Measures of Alternatives by Resource Area

Alternative A – Proposed Action	Alternative B – Cont. Mining after Generating Station Shutdown in 2022	Alternative C – No Action
Air Quality		
Impact to air quality from emissions of criteria pollutants would be long-term and minor. Impacts on regional haze and visibility in Class I areas would be long-term, but minor.	Impacts would be comparable to the effects under the Proposed Action.	Emissions would be reduced, by about 90 percent or more. Air quality impacts from emissions of criteria pollutants would be positive, permanent, but minor.
Climate Change		
GHG emissions from the San Juan Mine are considered permanent but minor. The Proposed Action contribution relative to other sources would be minor but permanent.	GHG emissions and effects would be comparable to the effects under the Proposed Action (permanent and minor).	Overall GHG emissions would be reduced, by about 90 percent or more. Impacts would be positive, minor and permanent.
Geology and Soils		
Impacts of subsidence would be moderate but permanent. Surface disturbances to soil would be long-term but minor. Installation of roads in the DLE would result in minor and long-term impacts to geological resources. There would be no impacts to unique geologic features or mineral resources. Impacts to paleontological resources would be permanent and moderate.	Impacts to geological resources including soils, mineral resources, and paleontological resources would be identical to those for the Proposed Action.	Impacts to topography, soils, and paleontological resources would be less than the Proposed Action. Due to lack of CCR, additional surface disturbance would be required for reclamation resulting in long-term moderate impacts. This alternative would prevent the maximum recovery of the coal within the DLE; this is a long-term minor impact.
Archaeology/Cultural Resources		
<p>Impacts would be permanent and minor-to-major if cultural resources are impacted; implementation of the stipulations outlined in Appendix B of this ROD, including the following mitigation measures would reduce impacts to minor:</p> <ul style="list-style-type: none"> Any new surface infrastructure, such as access roads, drill pads, and ventilation shafts, must be designed to avoid historic properties and sites of unevaluated NRHP eligibility. If surface infrastructure cannot be sited to avoid cultural resources, additional archaeological investigations in the form of limited testing and/or data recovery for historic properties and sites of unevaluated NRHP eligibility must be completed. Monitoring of historic properties and sites of unevaluated NRHP eligibility shall be conducted within 30 to 90 days following subsidence. If monitoring suggests subsidence will cause adverse effects to a historic property(s), the applicant shall be required to develop and implement a treatment plan to avoid or mitigate negative impacts. 	<p>With implementation of the same mitigation measures, impacts would be the same as Alternative A.</p>	<p>No impacts to cultural resources from mining would occur after 2019, but due to lack of CCR, reclamation would result in greater surface disturbance which could affect cultural resources.</p> <p>Cultural resources located above areas previously mined could still be subject to subsidence impacts which could have moderate-to-major adverse impacts on any cultural resources. Implementation of avoidance and mitigation measures would reduce impacts to minor.</p>

Alternative A – Proposed Action	Alternative B – Cont. Mining after Generating Station Shutdown in 2022	Alternative C – No Action
Water Resources / Hydrology		
<p>The loss of the saline coal-seam aquifer is considered a moderate and permanent impact. Impacts to groundwater quantity in usable aquifers would be minor and long-term. Impacts to groundwater quality from placement of CCR in former surface mining pits would be permanent but minor. Impacts to surface water quality would be long-term and minor. There would be no impacts to surface water quantity in the San Juan River. Impacts to water quantity from subsidence would be minor and long-term.</p>	<p>Impacts to groundwater and surface water quantity and quality would be as described under the Proposed Action, with the exception that deposition of heavy metals from burning of coal mined in the DLE may occur within a different geographic location.</p>	<p>Short-term minor impacts to surface water quality could occur during demolition of mine facilities.</p> <p>Indirect impacts from coal combustion would cease and water quality in surface water bodies within the deposition area, would improve at least incrementally. Reclamation of mined lands would restore surface water drainage and natural groundwater flow; impacts to water quality would likely be minor but long-term.</p>
Vegetation		
<p>Mine facility construction would result in permanent, minor impacts to vegetation communities. Surface disturbance associated with vegetation removal could result in long-term and minor impacts to naturally occurring seed sources and short-term minor increases in potential for spread of noxious weeds. Potential impacts from fugitive dust would be short-term and minor. Impacts from coal combustion emissions would be long-term and minor.</p>	<p>Impacts would be as described for the Proposed Action. Any potential increase in transportation or related infrastructure could result in additional surface disturbing activities; however, exact impacts related to transportation are too speculative to be determined for purposes of this EIS.</p>	<p>Due to lack of CCR, reclamation would result in greater surface disturbance which would be a long-term moderate impact. Vegetation resources located above areas previously mined could still be subject to subsidence impacts which would have short-term minor impacts, although these impacts would be expected mostly for individual plants or small areas located along subsidence cracks.</p>
Wildlife and Habitats		
<p>Impacts from fugitive dust emissions and noise would be minor and short-term. Impacts from human activity associated with the San Juan Mine would range from minor to moderate. Impacts due to ground-disturbing activities are expected to be moderate to minor (depending on the species) and long-term for smaller terrestrial burrowing species. Impacts from habitat loss during the active mining and reclamation activities would be short-term and moderate. Potential impacts to aquatic biota from coal combustion would be minor and long-term. The effect of water use on aquatic species would be long-term and minor.</p>	<p>Potential impacts would be the same as described for the Proposed Action. Given the proportionally shorter duration as compared to the Proposed Action, potential impacts within the San Juan River and other perennial waterbodies within the deposition area are likely to be less than that of the Proposed Action. Any impacts beyond 2022 from deposition are unknown and dependent on the location of coal combustion.</p>	<p>Cessation of mining activities within the DLE would result in no impacts to wildlife resources, although reclamation would result in greater surface disturbance which could result in short-term minor effects to wildlife. Wildlife resources located above areas previously mined could still be subject to subsidence impacts. Potential impacts, within the deposition area, would be less than that of the Proposed Action (e.g. no impact after 2020).</p>

Alternative A – Proposed Action	Alternative B – Cont. Mining after Generating Station Shutdown in 2022	Alternative C – No Action
Special Status Species		
<p>There would be no impact on special status amphibians or their habitat. Mining would result in minor and long-term direct impacts to all special status species evaluated. No special status plants are known to occur within the mine. Potential impacts to special status plants outside of the DLE from fugitive dust would be short-term and minor. There would be no direct impact on special status fish or their habitat; indirect impacts to fish would be long-term and minor in portions of San Juan River within the deposition area. The potential risk to special status carnivorous, insectivorous, and herbivorous species from coal combustion emissions would be minor and long-term.</p>	<p>Impacts, including the indirect effects of coal combustion, would be identical to those for Alternative A, with the exception that the deposition area would be located in the vicinity of wherever the coal may be combusted following shutdown of the Generating Station in 2022. As a result, potential impacts to special status species from deposition are unknown beyond 2022 and dependent on the location of coal combustion.</p>	<p>Cessation of mining activities within the DLE would result in no impacts to special status species, including no adverse effects from the construction of surface facilities. Habitat for special status species located above areas previously mined would still be subject to subsidence impacts.</p> <p>Indirect impacts to listed fish in perennial surface waterbodies in the deposition area would cease in 2019. Potential impacts to fish are likely to be substantively less than that of the Proposed Action.</p>
Land Use, Transportation, and Agriculture		
<p>There would be no direct impacts to agriculture. Impacts to land use and roadways from subsidence would be permanent but minor. The Proposed Action would result in long-term minor increases in vehicle traffic.</p>	<p>Impacts would be the same as under Alternative A. Due to unknown market conditions and end users of the DLE coal after 2022, exact impacts related to transportation are too speculative to be determined for purposes of this EIS.</p>	<p>Impacts would be less than described for the Proposed Action, although short-term minor impacts to grazing, land use, and transportation would occur during demolition of mining facilities and ground-disturbance during reclamation.</p>
Recreation		
<p>Impact to recreation due to surface activities associated with mining would be short-term and minor. Indirect effects to visibility at local recreational areas is considered a long-term moderate impact. There would be no long-term or permanent impacts to recreational opportunities within the DLE.</p>	<p>Potential recreational effects would be similar as those described under the Proposed Action.</p>	<p>No impacts to recreational activities or facilities in the ROI would occur beyond 2019. Short-term impacts to recreational opportunities on the DLE due to surface activities associated with mining would be avoided as would permanent impacts to the recreational viewshed from subsidence.</p>
Social and Economic Values		
<p>No impacts would occur during the Project timeframe (mining through 2033). San Juan Mine would continue to provide economic revenue and jobs to economies of San Juan County, the region, and State of New Mexico during operation and reclamation.</p>	<p>Economic impacts would be similar to the Proposed Action because the operations under both scenarios would recover the same amount of coal.</p>	<p>This alternative would result in the loss 897 jobs and of \$356 million in annual economic activity for the Four Corners Region beginning in 2019, which would be a major and permanent impact.</p>
Environmental Justice		
<p>The Proposed Action would not result in disproportionate adverse effects to minority or</p>	<p>The potential for on-site and local effects to minority and</p>	<p>As the Proposed Action would not result in disproportionate adverse</p>

Alternative A – Proposed Action	Alternative B – Cont. Mining after Generating Station Shutdown in 2022	Alternative C – No Action
low-income populations.	low-income populations would be the same as under the Proposed Action.	effects to minority or low-income populations, neither would the No Action alternative. Potential for socioeconomic impacts would affect all residents in the region, as would the elimination of air emissions have a permanent minor positive effect on the entire population, including environmental justice populations.
Visual Resources		
Depending on Key Observation Point, impacts would be long-term and minor to moderate. Impacts to visual resources from subsidence would be permanent, but minor. Emissions from coal combustion would result in indirect moderate effects to visibility in the local area. Impacts at Class I areas would be minor as described in Air Quality.	Potential visual impacts would be the same as those described in the Proposed Action. It is not feasible to conduct a site-specific regional haze and visibility analysis without knowing the location of the power plant where the coal would be combusted after 2022, but potential effects resulting from coal combustion are assumed to be no greater than under the Proposed Action.	No adverse effect on visual resources as viewed from Key Observation Points would occur beyond 2019, and scenic quality is expected to gradually improve as the San Juan Mine area is reclaimed. The indirect effect of the No Action Alternative would be a permanent and moderate impact to improved visibility and haze in the region.
Noise and Vibration		
There would be no discernible impacts from ground-borne vibration associated with underground or surface activities in the San Juan Mine DLE. Impacts from noise would be long-term and minor.	Impacts would be similar to the Proposed Action. Transport of coal to the selected generation station may involve transport via existing regional transportation routes or by accessing a rail distribution site which could result in greater noise levels at the nearby residences.	There would be no noise associated with mining activities after August 2019.

Alternative A – Proposed Action	Alternative B – Cont. Mining after Generating Station Shutdown in 2022	Alternative C – No Action
Hazardous and Solid Waste		
<p>The chemical volumes required for the operations would not trigger EPCRA reporting. Therefore, any impact from an accidental release or spill of these materials would be minor. The potential for impacts from a release or spill is considered long-term.</p>	<p>Impacts relative to hazardous wastes and materials would remain materially the same as described for the Proposed Action.</p>	<p>Impacts associated with reclamation activities would be materially the same as those described for the Proposed Action. Impacts related to hazardous waste and solid waste would be minor, short-term and associated with disposal of demolition materials.</p>
Health and Safety		
<p>Given the Proposed Action would not present new or increase the existing safety risks at the mine and given the facility’s better than industry average safety violation rate, the Proposed Action would have a minor impact on worker safety. Potential impacts related to DPM are considered long-term but minor. Potential impacts to public health from coal combustion would be long-term but minor.</p>	<p>Impacts on worker safety would remain the same as for Alternative A. Impacts on public health in region of influence would be positive relative to Alternative A due to the removal of a large source of air pollution.</p>	<p>The health benefits of removal of the air emissions would be the same as described for Alternative B; however, the adverse economic impacts would be greater than described for Alternative B. Because of the association between health and socioeconomic status, lower levels of employment and economic activity would likely result in lower health for the local population due to issues like poorer nutritional status and more difficulty in accessing health care.</p>

APPENDIX B

Section 106 Cultural Resources Stipulations

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The OSMRE hereby prepares these stipulations for the phased resolution of adverse effects during the San Juan Mine Deep Lease Extension operation, mining, reclamation and all related activities in San Juan Mine Deep Lease Extension Area of Potential Effect (APE). Pursuant to 36 CFR 800.8(c), an agency official may use the process and documentation required for the preparation of an Environmental Impact Statement (EIS)/Record of Decision (ROD) to comply with Section 106 in lieu of the procedures set for in 36 CFR 800.3 through 800.6 if the agency official has notified the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) in advance that it intends to do so and the following standards are met:

- The agency official must identify consulting parties either pursuant to 35 CFR 800.3(f) or through the NEPA scoping process with results consistent with 36 CFR 800.3(f).
- The agency official must identify historic properties and assess the effects of the undertaking on such properties in a manner consistent with the standards and criteria of 36 CFR 800.4 through 800.5, provided that the scope and timing of these steps may be phased to reflect the agency official's consideration of project alternatives in the NEPA process and the effort is commensurate with the assessment of other environmental factors.
- The agency official must consult about the effects of the undertaking on historic properties with the SHPO and Indian tribes that might attach religious and cultural significance to affected historic properties, other consulting parties, and the ACHP, where appropriate, during NEPA scoping, environmental analysis, and the preparation of NEPA documents.
- The agency official must involve the public in accordance with the agency's published NEPA procedures.
- The agency official must develop in consultation with identified consulting parties alternatives and proposed measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the Draft EIS.
- The agency official must submit the Draft EIS or EIS to the SHPO, Indian tribes that might attach religious and cultural significance to affected historic properties, the ACHP, and other consulting parties prior to or when making the document available for public comment.

The OSMRE hereby affirms that the preceding standards have been met, and no consulting parties have objected to the OSMRE's affirmation of having met the preceding standards. The consulting parties for the purposes of these stipulations include: OSMRE, Bureau of Land Management (BLM), SHPO, the New Mexico State Land Office (SLO), San Juan Coal Company (SJCC), and the Hopi Tribe. The EIS includes a complete list of Indian tribes, representatives of local governments, and other individuals or organizations sought out for consultation. OSMRE is proceeding with the [approval or denial] of the undertaking pursuant to 36 CFR 800.8(c)(4)(i)(A). OSMRE requires the following stipulations through the ROD in lieu of a programmatic agreement as referenced under 36 CFR 800.6(a)(1)(i)(C). The agency official has notified the ACHP pursuant to 36 CFR 800.8 and the ACHP has not notified the agency official of any intent to participate pursuant to 36 CFR 800.6.

STIPULATIONS

Stipulation 1. The Area of Potential Effect, Identification of Historic Properties, and Evaluation of Historic Properties for Eligibility

- A. OSMRE, in consultation with the New Mexico SHPO, the BLM, and other Consulting Parties has established the APE, as defined at 36 CFR 800.16(d). For the San Juan Mine Deep Lease Extension Project, the APE includes the public lands project area located in Sections 17-20 and 29-31 in Township 30 North, Range 14 West. For the purposes of Section 106 only, the State Trust Land Section 32 of Township 30 North, Range 14 West is included in the APE based on consultation with the SHPO, because the mining of this section is dependent upon the mining of the Deep Lease Extension and therefore OSMRE's preparation of the decision whether to approve the mining plan within the Deep Lease Extension has the potential to affect historic properties on this State Trust Land Section.
- B. OSMRE, has initiated consultation with Indian tribes, pursuant to 36 CFR 800.2(c)(2)(ii). OSMRE acknowledges that while some tribes may have the ability to respond and participate more quickly than others, the lack of response from any given tribe does not preclude its later involvement in the undertaking. Therefore, OSMRE has taken steps to include Indian tribes in the Section 106 process and may include later comments from Indian tribes about the identification of historic properties
 1. Continued consultation with Indian tribes subsequent to the Record of Decision for the Deep Lease Extension project may yield the knowledge of additional historic properties. OSMRE will consider any future comments from such Indian tribes that wish to later comment and consult with the SHPO and BLM, as necessary. Phased identification and evaluation about later-identified historic properties is appropriate pursuant to 36 CFR 800.8(b)(2).
 2. If an Indian tribe later consults to define its interest in participation in the phased identification of historic properties, the phased application of the criteria of adverse effect, or the phased resolution of adverse effect, OSMRE will consult with the Indian tribe and the consulting parties. OSMRE will determine the level of effort appropriate and necessary and notify the SJCC and BLM regarding treatment plan reviews.
- C. SJCC has conducted re-evaluations of through its contractor, San Juan County Museums Association Division of Conservation Archaeology, to re-evaluate historic properties within the DLE and the adjacent State Trust Land section in 2017 and 2018. OSMRE has consulted and gained eligibility comments or concurrence with the SHPO and BLM, and consulted with and had no objection from the New Mexico State Land Office about eligibility and completeness.

Stipulation 2. Determination of Effect and Adverse Effect of the Project on Historic Properties

- A. Through consultation with the SHPO, OSMRE has found that the project is likely to have an adverse effect on historic properties and the assessment of adverse effects must be phased pursuant to 36 CFR 800.5(a)(3).
- B. OSMRE requires the continuation of a monitoring plan for the effects of subsidence to historic properties.
 1. OSMRE, BLM, and SHPO have concurred with the monitoring plan for the effects of subsidence to historic properties. The subsidence monitoring plan shall continue, as approved. Any modification to the subsidence monitoring plan may be implemented through consultation between OSMRE, BLM, SHPO, and upon consideration of the comments from any other consulting party.
- C. SJCC must design any new surface infrastructure, such as access roads, drill pads, and ventilation shafts, to avoid historic properties and sites of unevaluated NRHP eligibility. Historic properties will be marked with barrier fences at a 75-foot offset from each site boundary to create a site buffer. SJCC will not temporarily avoid a site in the interim when adverse effects and resolution of adverse effects are likely to be necessary from any reasonably foreseeable future disturbance.
 1. When avoidance is not possible, SJCC must notify the responsible land management agency (BLM for public lands; SLO for State Trust Lands) and develop a treatment plan pursuant to Stipulation 4 or Stipulation 5.

Stipulation 3. Responsibilities of Federal Agencies, Other Responsible Agencies and Project Proponents

- A. OSMRE, through preparation of the mining plan decision document, is the lead federal agency for the current re-assessment of impacts under NEPA and effects to historic properties under Section 106.
 1. During the BLM leasing process, OSMRE participated with BLM as a cooperating agency. BLM used regulations that were current at the time. The regulations allowed for mitigation of affected historic properties to be conducted as a means to reach a “no adverse effect” determination. Current regulations have the equivalent process as a finding of “adverse effect” with the corresponding historic property mitigation as the means to resolve adverse effects. OSMRE relied upon the previous process in the decision that was voluntarily remanded.
 2. Through implementation of these stipulations, OSMRE modernizes the language and consultation requirements of the previous mitigation process, while maintaining the validity of BLM’s prior leasing responsibilities.

- B. BLM, as a result of its leasing stipulations and land management responsibilities, is the responsible federal agency under Section 106 of the NHPA, for implementation of the continued monitoring plan, phased application of the criteria of adverse effect, and conducting consultations for the resolution of adverse effects, as applicable. In a letter dated September 25, 2018, BLM confirmed these responsibilities.
- C. The New Mexico SLO is responsible for the administration of State Trust Lands. OSMRE's recommendation and the Department of the Interior's decision whether to approve the proposed mining plan modification has the potential to affect historic properties in the State Trust Land section 32 discussed in the APE. OSMRE has no authority or jurisdiction over the management of State Trust Lands; therefore, the SLO remains the land managing authority for the resolution of adverse effects within its domain. The SLO agreed with this approach.
- D. The New Mexico Energy, Minerals and Natural Resources Department (EMNRD) administers the permit for SJCC to mine coal in the DLE APE and the entire San Juan Mine. SJCC must notify EMNDR of all cultural resource activities pursuant to this decision and these stipulations and comply with any reporting and permitting requirements imposed by EMNDR.
- E. SJCC must be responsible for communicating with BLM, EMNDR, OSMRE, SHPO and or SLO, as appropriate regarding compliance with these stipulations. These responsibilities must transfer to any successor of SJCC.
1. SJCC must prepare copies of monitoring reports, treatment plans, and treatment reports and mark them for the appropriate addressees. This stipulation specifically includes treatment plans marked for the BLM to transmit to the Hopi Tribe for comment, as well as any other tribe that OSMRE may later designate pursuant to these stipulations.
 2. SJCC must transmit all prepared documents pursuant to these stipulations for historic properties located within the DLE sections of the APE to the BLM for the BLM to circulate to the appropriate consulting parties.
 3. SJCC must transmit all prepared documents pursuant to these stipulations for historic properties located on State Trust Lands within the APE to the SLO and OSMRE.
 4. SJCC must develop cultural resources awareness training and ensure that appropriate SJCC personnel complete that training. Appropriate personnel will include surface-working crew members who will be in position to impact cultural resources. At a minimum, the training will include the topics of cultural resource identification, discovering human remains or historic properties and consequences for damaging cultural resources. SJCC will consult with BLM, SHPO, EMNRD, and OSMRE in developing the training.

Stipulation 4. Resolution of Adverse Effects on BLM-managed Public Lands

- A. Avoidance is the preferred mitigation. When SJCC determines that avoidance of a historic property is not possible or if the subsidence monitoring reveals adverse effects, SJCC must notify the BLM pursuant to these stipulations and the existing BLM lease as soon as is practical. The notice must include at a minimum: the nature of the surface action or disturbance, the nature of the historic property(ies) affected, and the type of treatment that will be proposed.
1. SJCC may opt to include a complete treatment plan at this stage of consultation.
 2. SJCC may alternatively opt to consult with the BLM for guidance about appropriate treatment and subsequent development of a treatment plan.
- B. The BLM, pursuant to 36 CFR part 800 and the existing lease, will consult with SHPO and pursuant to 36 CFR 800.6 will must consult with the Hopi Tribe and any Indian tribe added pursuant to Stipulation 1(B), providing 30 days for comments on the treatment plan(s). BLM in a letter dated September 25, 2018 acknowledges that through the prior leasing process, with OSMRE as a cooperating agency, concurrence from OSMRE to the BLM for individual potential mitigation activities is not required.
1. If no party comments or no changes to the treatment plan are requested, BLM will notify SJCC to proceed with the treatment plan.
 2. If a party comments and requests changes, BLM will consider the comments, impose at its discretion any necessary changes to SJCC and upon receipt of an updated treatment plan, request concurrence from the SHPO within 30 days.
- C. Treatment Plan(s) must:
1. Be consistent with the Secretary of the Interior’s Standards and Guidelines, as amended and annotated (https://www.nps.gov/history/local-law/arch_stnds_0.htm);
 2. Be consistent with the “Procedures for Performing Cultural Resource Fieldwork on Public Lands in the Area of New Mexico BLM Responsibilities,” BLM Manual Supplement H-8100-1, New Mexico, Oklahoma and Texas;
 3. Describe the properties to be affected by mining and associated operations and the nature of those effects;
 4. Identify the significant values of the properties within relevant historic contexts, as defined in NRHP Bulletin 16 (How to Complete the NRHP Registration Form); and
 5. Specify any measures to avoid, reduce, or mitigate adverse effects on those significant values.

- D. If mining and related activities remain unchanged, nothing in these stipulations will be construed to require OSMRE to reconsider or require further treatment or other steps to resolve adverse effects for historic properties considered previously in Section 106 consultations relating to activities in the DLE APE.

Stipulation 5. Resolution of Adverse Effects on State Trust Lands

- A. Cooperating consultation between BLM and OSMRE about the 1998 BLM lease and the subsequent voluntarily remanded OSMRE preparation of the Mining Plan Decision Document did not include the State Trust Lands Section 32 that is currently included in OSMRE's APE. The APE was determined through consultation with the SHPO under the EIS to include the SLO section 32. Therefore, BLM has no NHPA responsibility over Section 32 and OSMRE cannot defer to BLM as responsible federal agency for any monitoring for adverse effects, phased application of the criteria of adverse effect, or resolution of adverse effect.
- B. Pursuant to New Mexico state law, the SLO is the agency with jurisdiction over State Trust Lands. If SJCC must adversely affect historic properties on Section 32 that do not overlap jurisdiction onto BLM-managed public lands, SJCC will consult with OSMRE, the SHPO, and the SLO to determine the appropriate steps to resolve adverse effects. T
1. Archaeological investigations designed to mitigate adverse effects to cultural properties on State Trust Land Section 32 shall require a project-specific permit in accordance with CPRC rule 4.10.16 NMAC – Permits to Conduct Archaeological Investigations on State Land.
 2. Treatment plan(s) shall be consistent with CPRC rule 4.10.16 NMAC – Standards for Excavation and Test Excavation.

Stipulation 6. Discovery and Treatment of American Indian Remains and Cultural Objects

When an unmarked human burial or unregistered grave is encountered during operation and maintenance activities, SJCC will ensure that work is halted within 100 feet of the discovery to protect the remains and any and all human remains, sacred objects, and objects of cultural patrimony will be treated with dignity and respect.

- A. BLM-managed public lands: Upon discovery, SJCC will comply with applicable laws, regulations, and guidelines including the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (25 USC 3001[3]; 43 CFR part 10), and ACHP Policy Statement Regarding the Treatment of Burial Sites, Human Remains and Funerary Objects (February 23, 2007).
- B. New Mexico State Trust Land Section 32: Upon discovery, SJCC will comply with the New Mexico Cultural Properties Act (N.M. Stat. Part 18-6-11.2, as amended through 2005) and implementing regulation 4.10.11, NMAC. The ACHP Policy Statement Regarding the Treatment of Burial Sites, Human Remains, and Funerary Objects (February 23, 2007) must also be followed.

Stipulation 7. Confidentiality

The distribution of sensitive information about the locations and nature of inventoried historic properties must be limited as provided for by Section 304 of the NHPA, 36 CFR 800.11(c), and Section 9(a) of the Archaeological Resource Protection Act (ARPA), 16 USC 470hh(a); and regulations implementing the Surface Mining Control and Reclamation Act (30 CFR 773.6(d)(3)(iii)).

Stipulation 8. Unanticipated Discoveries

If during mining operations unidentified prehistoric or historic resources including traditional cultural properties are discovered on BLM-managed public lands, the operator must ensure that work is halted within 100 feet of the discovery and the resources are not disturbed and must notify New Mexico EMNRD, OSMRE, and BLM. The operator must take such actions as are required by the EMNRD, in coordination with OSMRE and/or BLM.

If during mining operations unidentified prehistoric or historic resources including traditional cultural properties are discovered on SLO-managed State Trust Lands, the operator shall ensure that the resources are not disturbed and shall notify EMNRD, OSMRE and the SLO. The operator shall take such actions as are required by the EMNRD, in coordination with OSMRE and the SLO.

Stipulation 9. Curation

- A. The BLM will curate any artifacts, materials, and records resulting from archaeological identification and mitigation conducted on public lands under their jurisdiction in accordance with 36 CFR Part 79 and NAGPRA (25 USC 3001[3]; 43 CFR Part 10). SHPO recommends curation at the Museum of Indian Arts and Culture; the curation facility is up to the discretion of the BLM.
- B. On BLM-managed public lands, BLM will determine the disposition of human burials, human remains, and funerary objects in accordance with NAGPRA (25 USC 3001[3]; 43 CFR Part 10).
- C. Any artifacts, materials, and records recovered from BLM jurisdiction will be curated at the expense of SJCC.
- D. All artifacts recovered from lands owned, controlled, or operated by the State of New Mexico, including associated records and documentation, will be curated at the Museum of New Mexico, Museum of Indian Arts and Culture, at the expense of SJCC.
- E. On State Trust Land, the SHPO will determine the disposition of human burials, human remains, and funerary objects in accordance with the Section 18-11-2 of the Cultural Properties Act and implementing rule 4.10.11 NMAC.

Stipulation 10. Professional Qualifications and Permits

SJCC must ensure that all historic preservation work pursuant to this decision is conducted by or under the supervision of a person or persons meeting the Secretary of the Interior's Professional Qualifications Standards (36 CFR part 61), and in accordance with all required permits including those required for work on public lands, and State Trust Lands within the State of New Mexico.

Stipulation 11. Dispute Resolution

Should any consulting party object to any actions proposed or carried out pursuant to these stipulations, the party must notify the BLM and OSMRE in writing. Specifically open to dispute under these stipulations are the phased results of identification of historic properties as they pertain to Indian tribes that ascribe religious or cultural significance, phased application of the criteria of adverse effect as it applies to subsidence monitoring and currently unknown future surface activities, and the phased resolution of adverse effects.

- A. If the dispute is about the phased determination of whether a property is eligible, OSMRE must follow 36 CFR 800.4(c)(2) to determine whether a property is eligible.
- B. If the dispute is about the phased application of the criteria of adverse effect, BLM will follow 36 CFR 800.5(c)(2) to work through a disagreement with finding.
- C. If the dispute is about the phased resolution of adverse effects and the BLM and SHPO cannot agree, BLM will follow 36 CFR 800.7 for failure to resolve adverse effects.
- D. For any other disputes, OSMRE or BLM will follow the appropriate regulations within 36 CFR part 800.

Stipulation 12. Amendments

These stipulations may be superseded and thereby amended through the execution of an encompassing San Juan Mine Programmatic Agreement if such an agreement specifically states that it supersedes these stipulations for the DLE and OSMRE, BLM, and SHPO at a minimum are signatories to the agreement.

Stipulation 13. Duration

Unless amended pursuant to Stipulation 12, these stipulations must remain in effect for the entirety of mining and reclamation in accordance with the currently evaluated mining plan within the DLE.