

1. INTRODUCTION

BHP Navajo Coal Company (BNCC) proposes to meet its coal supply obligations through July 6, 2016 by:

1. Implementing a mine plan revision to develop coal reserves located in a portion of Area IV North within BNCC's existing Navajo Mine coal lease and mine permit area located on the Navajo Nation Indian Reservation, San Juan County, in northwestern New Mexico (Navajo Mine).
2. Continuing to mine in Area III of the Navajo Mine.
3. Realigning the Burnham Road through Areas III and IV North of the Navajo Mine.

In addition, BNCC proposes to consolidate several existing Clean Water Act (CWA) Nationwide Permits (NWP) for operations in Area III and Area IV North, and for impacts to waters of the United States (WUS) associated with the proposed realignment of Burnham Road into a single Individual Permit (IP). This Environmental Assessment (EA) has been prepared to assess the potential environmental consequences of the proposed mining, reclamation, and road realignment activities, to ensure the public is involved in the process, and to assist decision makers by disclosing the potential effects of proposed activities in both Area IV North and Area III. This EA addresses all the federal actions proposed in support of pre-2016 mining under the current coal supply agreement. Post-July 6, 2016 mining activities would be associated with a new and different coal supply agreement, which at present is unknown, and therefore would be addressed, in a separate National Environmental Policy Act (NEPA) analysis at the appropriate time.

This EA was prepared in accordance with the requirements of NEPA of 1969 and the Council on Environmental Quality (CEQ) regulations implementing NEPA. The U.S. Department of the Interior (DOI) Office of Surface Mining Reclamation and Enforcement (OSM) is the lead federal agency responsible for development of this EA because it has the decision-making authority regarding the proposed mine plan revision under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). As such, this EA follows OSM's 516 DM 13, which is the department manual guiding OSM's implementation of the NEPA process. The OSM is responsible for approval or denial of the proposed Area IV North mine plan revision. The cooperating agencies for this EA are the U.S. Army Corps of Engineers (USACE), the Bureau of Land Management (BLM), and the Bureau of Indian Affairs (BIA). The USACE is responsible for the issuance of an IP in accordance with the CWA for impacts to WUS in Areas IV North and III and along the proposed Burnham Road realignment. The BLM is responsible for assuring maximum economic recovery of the coal in accordance with their Resource Recovery Protection Plan (R2P2), and the BIA, along with OSM, is an authorizing agent for realignment of the Burnham Road.

1.1 Project Background

The following sections provide a brief overview of historical mine operations at Navajo Mine and describe recent regulatory reviews and approvals as they relate to the currently proposed mining activities. This background information is important as it puts the current proposals in context with past

mine operations and permitting actions, and helps the public to understand the regulatory process associated with the proposed mine plan revision and associated permitting.

1.1.1 Navajo Mine

The Navajo Nation granted a 24,000-acre coal lease (Navajo Tribal Coal Lease 14-20-603-2505) in July 1957 to BNCC's predecessor, Utah Construction and Mining Company. The lease and associated right-of-ways have since increased to approximately 33,600 acres through a series of subsequent lease revisions and amendments. The entire lease area is located within the Navajo Nation Indian Reservation boundaries. The surface and mineral rights within the lease and permit areas are held in trust by the United States for the benefit of the Navajo Nation. The DOI exercises the trust responsibility for the United States. The lease is located south of the San Juan River at Fruitland, New Mexico and extends in a southerly direction for approximately 25 miles. The northern portion of the lease is narrow (one mile) but the southern portion widens to approximately four miles. The lease is subdivided into six administrative areas known as Areas I, II, III, IV North, IV South, and V (Figure 1.1-1). BNCC delivers coal from the Navajo Mine to the Four Corners Power Plant (FCPP), which generates and supplies electricity to customers in New Mexico, Arizona, Texas, and southern California.

Mining activities are complete in Area I at the north end of the lease area. A total of 4,078 acres were disturbed in Area I, of which 3,614 acres have been reclaimed. These mining activities took place in the early 1960s through the 1970s. Mining in Area II is currently permitted by OSM in the Hosteen/Yazzie Pit. Mining is projected to be completed in Hosteen/Yazzie by the end of 2011. From approximately the early 1970s until the present, a total of 5,179 acres were disturbed in Area II, of which 2,877 acres have been reclaimed. Within Area III, there are two active pits, Lowe and Dixon (Figure 2.1-1). Since approximately the early 1980s, a total of 3,730 acres have been disturbed in Area III, of which 1,434 acres have been reclaimed. Under the current permit, mining in the Lowe Pit will be completed prior to 2013, while Dixon Pit will continue to operate until approximately 2016. In Area IV North, approximately 216 acres of vegetation was cleared, which included approximately 32 acres of power lines and associated access roads, and approximately 20 acres of ancillary road were constructed following the 2005 OSM authorization to mine in Area IV North. Total surface disturbance associated with these activities was approximately 268 acres. No other mining activities have been conducted by BNCC within Area IV North. Also, no mining activities have been conducted by BNCC in the approximately 13,000 acres that comprise Areas IV South or V of Navajo Mine lease area.

Areas disturbed within Areas I, II, and III that have not yet been reclaimed consist of approximately 1,800 acres of various essential infrastructure such as a rail line to the coal handling facilities, a road network, electric utilities infrastructure, stormwater and drainage controls, and a variety of equipment and maintenance shops. These infrastructure facilities will be reclaimed once all mining at Navajo Mine is complete.

Between 1971 and January 2008, BNCC placed coal combustion byproducts (CCB) from the FCPP in mined-out pits or ramps in Area I and Area II at Navajo Mine. This activity was in accordance with the Navajo Nation lease agreement and the approved OSM SMCRA permit (SMCRA Permit Chapter 12 section 12.2.8 and Chapter 11 section 11.2.5.1.5). BNCC does not have any current agreements or plans to place CCB materials in the mine backfill for future reclamation within the permit boundary. CCB

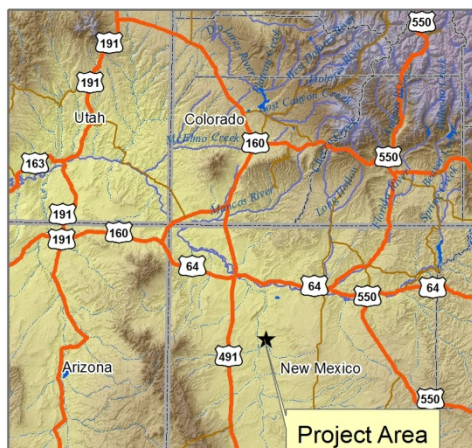
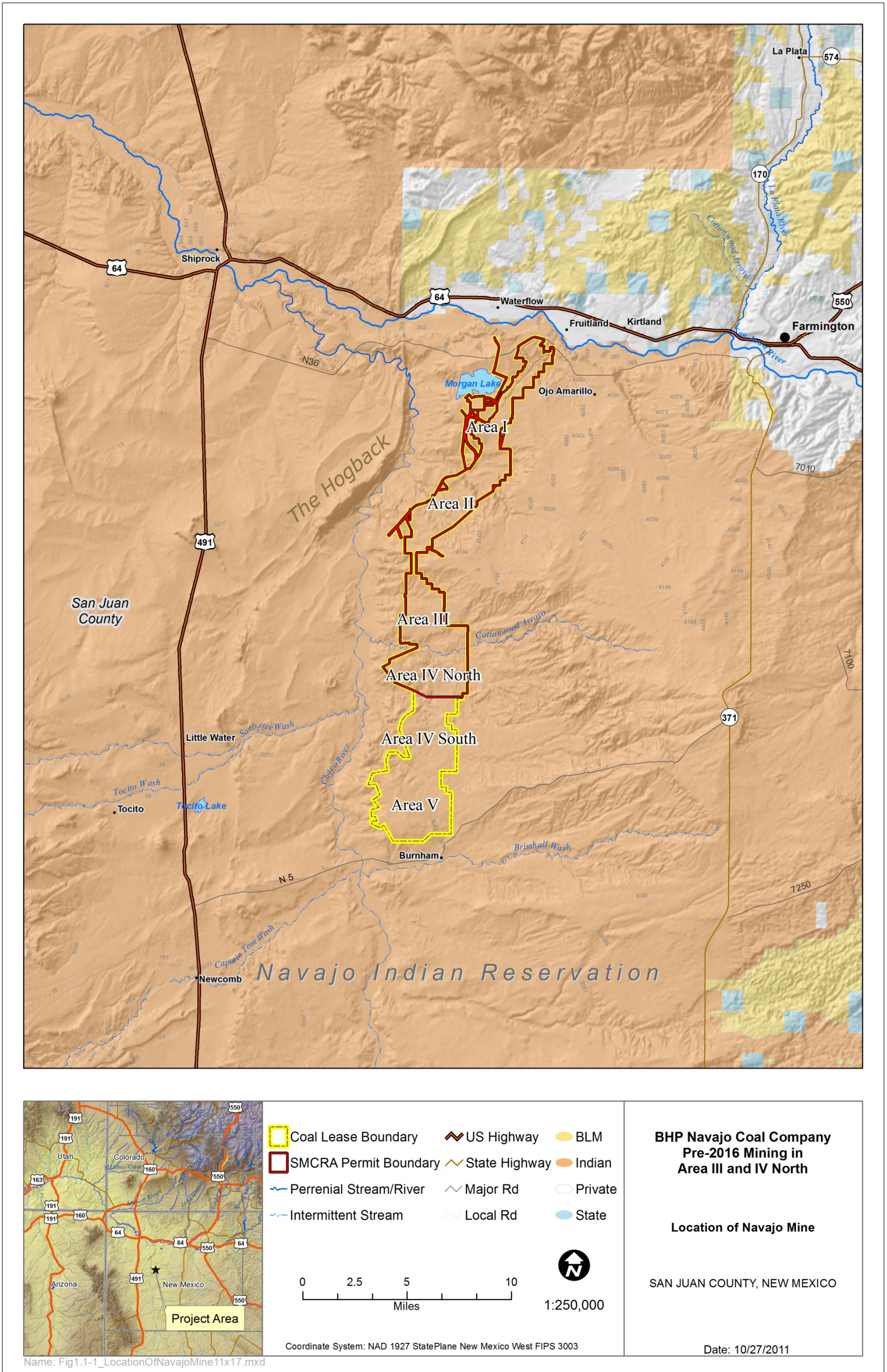
disposal is not included in BNCC's requested approvals considered in this EA. Arizona Public Service Company is responsible for and manages the disposal of all CCB material generated at its facility.

The Federal SMCRA permit (NM-0003F) to mine coal at Navajo Mine was renewed for five years on September 8, 2010. The current coal reserves and coal supply contract allow mining to continue at its current rate through July 2016. The current OSM permit authorizes mining on about 18,520 acres of the Navajo Mine. Presently about 13,255 acres have been disturbed by mining operations described above and approximately 7,925 acres have been reclaimed. The remaining disturbed areas will be reclaimed on an annual basis in coordination with OSM.

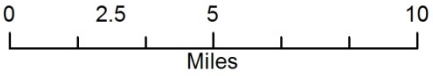
Currently, BNCC produces approximately 8.5 million tons of coal annually in accordance with contractual obligations with the FCPP. As a mine mouth plant, FCPP was designed and constructed specifically to burn coal from Navajo Mine. Therefore, BNCC must meet coal quality specifications for heating value, sulfur, and ash content so it can be burned in FCPP without damaging the power plant. The quality of the coal that BNCC delivers to FCPP cannot deviate from the narrow range of contractual specifications even though the quality of the coal from Navajo Mine varies more broadly depending on the chemical characteristics of the coal, which vary between locations and seams. Specifically, the heating value of the coal within Navajo Mine can vary from 7,800 to 9,500 Btu per pound with a contractual minimum of 8,500 Btu per pound. Therefore, to meet contractual obligations, BNCC must blend coal from multiple locations and seams to create a coal blend that meets the target heating value. To meet FCPP contractual obligations, BNCC maintains about 1.0 million tons of coal as working inventory available for coal blending. This represents about a 1.5-month reserve supply of coal. This model is based on 50 years of mine operations and represents the amount needed to create the target coal blend to meet contractual obligations.

Further, the Navajo Mine lease and BLM's R2P2 provisions require that BNCC achieve maximum economic recovery criteria of the Navajo coal resource. This minimizes or eliminates operations plans that can "sterilize" coal or eliminate opportunities to recover coal in any part of the Navajo Mine. These requirements constrain mine operations to consider maximum economic recovery—rather than least-cost recovery. However, these requirements also take into account the need to retain contingency reserves to ensure a steady supply of sufficient quantities and quality of coal.

Figure 1.1-1. Location of Navajo Mine



- Coal Lease Boundary
- SMCRA Permit Boundary
- Perennial Stream/River
- Intermittent Stream
- US Highway
- State Highway
- Major Rd
- Local Rd
- BLM
- Indian
- Private
- State



1:250,000

Coordinate System: NAD 1927 StatePlane New Mexico West FIPS 3003

**BHP Navajo Coal Company
Pre-2016 Mining in
Area III and IV North**

Location of Navajo Mine

SAN JUAN COUNTY, NEW MEXICO

Date: 10/27/2011

Name: Fig1.1-1_LocationOfNavajoMine11x17.mxd

In order to continue to meet mine lease terms with the Navajo Nation and contractual coal tonnage delivery obligations with the FCPP through July 6, 2016, mining must continue moving southward to unmined areas within the lease and SMCRA permit areas. Since the 1960s, this gradual progression southward has been accomplished utilizing three to four active draglines in three to six permitted mine pits. Over its operational history, BNCC has maintained three to five open pits to ensure it can meet coal quality and quantity obligations in a timely and prudent manner. Having at least three active pits accommodates dragline logistics, allows for source flexibility, and provides necessary options for mixing coal to achieve required coal quality. This flexibility is vital to operations as it mitigates unforeseen events that can affect access to active pits and/or reserve stockpiles. For example, derailments of the coal hauling train can result in the isolation of particular producing pits; highwall failures in active pits can close down pits to mining activities, and draglines can be immobilized for mechanical reasons or accidents, which can stop mining activities in the pit until dragline repairs are made. The risks of highwall failures and immobilized draglines are why operations plan rarely contemplate two draglines in a single pit.

Additionally, as pits are typically mined from west to east, costs associated with higher strip ratios on the east side of the mine increase as the coal seams trend deeper. The strip ratio is the ratio between overburden that must be removed and the coal to be mined. The higher the strip ratio, the more overburden must be removed, which takes more time and increases the cost to produce each ton of coal. While pre-stripping can address that to some extent, it does so at greatly increased cost, inefficiency, and logistical difficulties. These operational criteria are described in more detail in the IP application package and 404(b)(1) alternatives analysis attached as Appendix A.

1.2 Regulatory Background

1.2.1 Surface Mining Control and Reclamation Act Permitting

OSM is responsible for ensuring compliance with SMCRA on Indian Lands 25 CFR 211.5 and 30 CFR 750. SMCRA objectives are, among other things, to assure that surface coal mining and reclamation operations are conducted in an appropriate manner to protect landowners, society, and the environment; to assure provision of the coal supply essential to the Nation's energy requirements, and to its economic and social well-being; and to strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy (30 USC 1202).

OSM issued the first SMCRA permit for the Navajo Mine in 1989. Since then, the permit has been renewed and the life of operations permit area has been extended to include the currently permitted 18,520 acres of the mine, including the areas proposed for mining in Areas III and IV North. Although Area IV North is included within the permitted area, OSM must approve a mine plan specifying sequence and timing of mining before mining can occur there. That mine plan is the subject of the Proposed Action currently pending before OSM, and is the subject of this EA.

The proposed mine plan revision analyzed in this EA represents a significantly smaller project than was analyzed by OSM in 2005 (NM-0003-F-R-01). OSM approved a previously proposed mine plan for all of Area IV North on October 7, 2005 (NM-0003-F-R-01) after completing an EA and acquiring necessary cultural and biological clearances. On June 13, 2007, Dinè Citizens Against Ruining Our Environment (Dinè C.A.R.E.) and San Juan Citizens Alliance challenged OSM's approval in the U.S. District Court of

the District of Colorado in *Diné C.A.R.E. v. Klein* (Civil Action No. 07-cv-1475-JLK). On October 28, 2010, Judge John L. Kane issued a decision vacating OSM's approval of the mine plan and remanded the matter back to OSM. BNCC immediately ceased all mine preparation activities in Area IV North, pursuant to OSM's instructions. Between the 2005 OSM approval and the ruling in 2010, some infrastructure was constructed and initial pit development began in preparation of mining in Area IV North. Approximately 268 acres of the 3,800-acre resource area were disturbed for mine pit development and infrastructure in preparation of mining activities. Of that total, disturbance of about 216 acres was for preparation of the area to be mined including developing the crossing of Cottonwood Arroyo, and about 52 acres was disturbed for power lines and ancillary roads.

1.2.2 Burnham Road Realignment Approvals

BNCC proposes to realign the existing Burnham Road (BIA 3005 and Navajo Road N-5082) through Area III and Area IV North to support mining activities and to improve safety. The realignment would promote safe and reliable use of the road by straightening the alignment, routing the road around existing and planned mining activities, and bringing the road into compliance with BIA road design standards. OSM regulations prohibit or limit surface mining operations within 100 feet of public roads (30 CFR § 761.11(d)). The northern portion of the proposed realignment is needed due to the road's close proximity to current mining operations. The remaining portions of the proposed realignment and accompanying road improvements would provide important safety and access for local Navajo residents and others using Burnham Road for local and through traffic, while avoiding proposed mining in Area IV North.

OSM previously approved the Burnham Road realignment as part of its 2005 approval of BNCC's mine plan for Area IV North, and again approved the realignment following preparation of another EA in 2008 (OSM 2005, 2008a). The BIA, as the public road authorizing agent for Navajo Nation public roads, approved the realignment in 2008 (BIA 2007), but that approval recently expired. In addition to the EAs prepared that addressed realignment of the road, the USACE completed jurisdictional determinations of several ephemeral washes crossed by the proposed alignment and issued BNCC a Nationwide Permit #14 (2007 00496-DUR) for road crossings of WUS that would result from construction of the realignment.

In accordance with these approvals and the 2001 OSM Dixon Extension decision, OSM granted BNCC permission to build the temporary Burnham Road reroute, which was completed in 2009, to avoid active mining in Area III. BNCC now proposes to permanently realign the road through Areas III and IV North, and has requested re-approval from OSM, BIA, and the USACE. Accordingly, this EA again addresses the impacts of the realignment. In addition, the court's order in *Diné C.A.R.E. v. Klein* ordered OSM to address the impacts of the Burnham Road realignment in its revised mine plan EA. This EA complies with that requirement.

1.2.3 Clean Water Act Permitting

Section 404 of the CWA requires a permit from the USACE prior to discharge of fill material into WUS. Surface coal mining would result in disturbance and fill in portions of several small ephemeral channels and tributary arroyos on the Navajo Mine, and therefore requires a CWA permit from the USACE. Navajo Mine operates under the authority of a variety of NWP's issued by the USACE. Table 1.2-1 lists recent NWP's issued by the USACE for mining activities in various areas of Navajo Mine and for the development of necessary infrastructure such as roads and utilities.

Table 1.2-1. Recent CWA Permits at Navajo Mine

Activity	Type of NWP	Date Issued	Action Number
Dixon Pit Extension	21	1/4/2002	2001-00473
Area IV North Mining	21	7/1/2005	2005-00272
Burnham Road Realignment	14	9/27/2007	2007 00496-DUR
Temporary Burnham Road Realignment	14	1/13/2009	SPA-2009-22-DUR
Mining Activities in Area IV North and Area III	21	4/27/2009	SPA-2008-520-DUR
Haul Road Crossing of Cottonwood Arroyo	14	9/27/2009	SPA-2007-00497-DUR
Mining Activities in Area II and III	21	4/8/2011	SPA-2011-00122-ABQ

All current mining activities are being conducted under the authority of NWP's. However, because the applicable NWP's require re-verification every two years and require reauthorization (with potential changes) every five years, BNCC has made an operational decision to pursue a consolidated IP to authorize fill in WUS associated with mining activities within Navajo Mine Areas III and IV North in support of pre-July 6, 2016 mining. Within this EA, approximately 1.7 acres of impacts to ephemeral washes are analyzed associated with mining in Area IV North (0.5 acre), Area III (1.1 acres) and associated with realignment of the Burnham Road (0.1 acre). For issuance of an IP, the USACE requires that a project avoid, minimize, and compensate for impacts to WUS. In order for the USACE to issue an IP, NEPA analysis and public interest evaluation are required. Accordingly, the USACE is a cooperating agency and will utilize this EA, along with its Section 404(b)(1) Alternatives Analysis in Appendix A and public interest evaluation, to assess alternatives and impacts of the Proposed Action.

1.2.4 Resource Recovery Protection Plan

Under 43 CFR 3882, the R2P2 requires that mining operations be conducted in a manner that achieves maximum economic recovery (MER) of the available coal resource. MER is a key consideration in determining coal mining limits and methods. The BLM approved the R2P2 prepared for the 2005 Area IV North mine plan revision. As the currently proposed Area IV North mine plan revision has a smaller mining footprint than was previously authorized by the OSM and BLM, the BLM must reconsider the R2P2. Accordingly, BLM is a cooperating agency and will utilize this EA to assess alternatives and impacts of the Proposed Action.

1.2.5 Potential Closure of Four Corners Power Plant Units 1-3

BNCC's Proposed Action, specifically the proposed pre-2016 mine plan revision, is intended to produce enough coal to meet BNCC's contractual coal delivery obligations to FCPP through July 6, 2016. On October 19, 2010, the U.S. Environmental Protection Agency (EPA) proposed a federal implementation plan (FIP) under the Clean Air Act's (CAA) regional haze program that would require Best Available Retrofit Technology (BART) for FCPP. In particular, the proposed BART would require Units 1-5 to meet a weighted, plant-wide nitrogen oxide (NO_x) emission limit of 0.11 lb/MMBtu. Units 1-3 would be required to meet a particulate matter (PM) emission limit of 0.012 lb/MMBtu, and Units 4-5 would be required to meet a PM emission limit of 0.015 lb/MMBtu. Each unit would also need to meet a 10 percent

opacity limit. On February 9, 2011, EPA published a Supplemental Notice of Proposed Rulemaking that proposed an alternative emissions control strategy for FCPP in lieu of the originally proposed BART requirements. EPA's proposed "better-than-BART" alternative would require permanent closure of Units 1-3 by 2014 along with NO_x emission limits of 0.098 lb/MMBtu on Units 4-5 beginning July 31, 2018. Units 4-5 would still need to meet the originally proposed PM and opacity limits.

EPA's proposed alternative FIP for FCPP came in response to a November 2010 proposal from Arizona Public Service Company (APS), the operator and one of six co-owners of FCPP, which proposed the closure of Units 1, 2, and 3 by 2014 and installation of selective catalytic reduction (SCR) on Units 4 and 5 by 2018 to meet a NO_x limit of 0.11 lb/MMBtu.

The APS proposal was contingent upon final lease agreements with the Navajo Nation, final coal purchase agreements with BNCC, and federal and state approval of the acquisition by APS of Southern California Edison's ownership share in Unit 4 and Unit 5. Due to the uncertainty of the timing of EPA's final decision on its proposed rulemaking and in light of the many agreements and approvals that are needed before these modifications and closures would be pursued, the timing and implementation of the proposed shutdown of Units 1, 2, and 3 prior to July 6, 2016 are uncertain and speculative at this time.

In the event that APS implements the shutdown of FCPP Units 1, 2, and/or 3 prior to July, 2016, BNCC's Navajo Mine would likely transition to lower coal production levels in conjunction with that shutdown. FCPP Units 1, 2, and 3 combined accounts for approximately 30 percent of Navajo Mine's coal sales. Ultimately, lower coal production would result in reduced manpower requirements at Navajo Mine. In the event Units 1, 2, and 3 are shut down, coal demand at FCPP would be proportionately reduced from about 8.5 million tons per year to 6.2 million tons per year.

Nevertheless, even though coal production would be lower in the event of an early closure of Units 1, 2, and 3, mining in both Areas III and IV North would still be needed. In particular, production in the Dixon Pit in Area III at Navajo Mine would be developed more slowly due to the high strip ratio and higher operational costs. In any event and in light of the many uncertainties regarding timing and implementation of a potential shutdown of Units 1, 2, and 3 at the FCPP, BNCC must plan for and be ready to supply the full amount of coal required under the current contract through July 6, 2016. Therefore, regardless of whether any FCPP units are shut down prior to 2016, this EA analyzes the impacts associated with BNCC's coal delivery to FCPP under current coal demand and contractual delivery obligations through July 6, 2016. As such, the analysis considers a maximum impact scenario. If one or more FCPP units were to close, cumulative coal production would decline proportionally to the reduced demand and resulting reduction in impacts from mining would be similar in nature and magnitude in both Areas III and IV North as discussed in this EA.

1.2.6 Related Environmental Studies

Numerous environmental studies, NEPA documents, and permits have been completed and issued associated with the many regulatory actions reviewed by OSM and other involved regulatory agencies for the Navajo Mine over its 50 years of operations. These environmental analyses include regional analyses as well as studies that overlap this NEPA analysis. These studies have been the basis for the variety of permits and authorizations that have enabled the mine to continue to operate in its current manner. While some studies addressed topics unrelated to the currently proposed mine plan revision, such as the 2000

OSM EA that evaluated CCB disposal at Navajo Mine—other studies assessed mining impacts similar to, or the same as those addressed within this EA. Additionally, realignment of Burnham Road has been addressed in past EAs—including in a standalone EA (OSM 2008a) for which OSM issued a Finding of No Significant Impact (FONSI). Eleven environmental analyses were prepared for various activities at or near the Navajo Mine between 1976 and 2008. These reports are incorporated herein by reference to provide context and in some cases, duplicative impact analyses for this EA. These studies include:

1. Western Gasification Company (WESCO) Coal Gasification Project and Expansion of the Navajo Mine by Utah International, Inc., New Mexico. Final Environmental Impact Statement (EIS). U.S. Department of the Interior, Bureau of Reclamation (FES 76-2), 1976. The EIS evaluated the development of four coal gasification plants by WESCO, a joint venture, west of Area IV and Area V of the Navajo Mine lease and the mining of coal in Area IV and Area V by Utah International, Inc. for use in the WESCO project.
2. Proposed Modification to the Four Corners Power Plant and Navajo Mine, New Mexico. Final EIS. U.S. Department of the Interior, Bureau of Reclamation (FES 76-36), 1976. The EIS evaluated the modification of the FCPP to bring it into compliance with the existing air pollution control laws and regulations. It also evaluated the Navajo Mine proposal to amend its lease (amendment 4) by incorporating 3,224 acres to the west and east of its lease. This acreage was needed to fully utilize the coal resources of the lease and adjacent areas. The mining area included Areas I, II, and III of the lease.
3. San Juan River Regional Coal Environmental Impact Statement. U.S. Department of the Interior, Bureau of Land Management, March 1984. The EIS evaluated the effects of leasing additional and mining federal coal resources in northwestern New Mexico. Additional lease acreage at the Navajo Mine was included.
4. Environmental Assessment, Navajo Mine Permit Application, Permit No. NM-0003A, Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior, July 1989. The EA consolidated the impact assessment of the 1976 EIS (#2 above) and the regional EIS (#1 above) for purposes of describing and evaluating the projected impacts of mining within the 12,092-acre area pursuant to the proposed SMCRA Permanent Program Permit for Indian Lands at 30 CFR 750.
5. Environmental Assessment, Navajo Mine Permit Application, Permit No. NM-0003B, Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior, January 1991. The EA described and evaluated projected impacts of the 829-acre amendment to the existing mining operations to encompass 12,921 acres pursuant to a proposed SMCRA Permanent Program Permit for Indian Lands at 30 CFR 750.
6. Environmental Assessment, Navajo Mine Permit Application, Permit No. NM-0003C, Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior, May 1993. The EA described and evaluated the projected impacts of adding a 508 acre amendment to the existing mining operations to encompass 13,429 acres pursuant to a proposed SMCRA Permanent Program Permit for Indian Lands at 30 CFR 750.
7. Environmental Assessment, Coal Combustion Byproducts Disposal, Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior, July 2000. The EA described

and evaluated the projected impacts of CCB haulage operations from FCPP Unit 4 and Unit 5 and disposal in final pits and ramps on SMCRA Permanent Program lands and proposed modifications of the final surface configuration (FSC) of Area I and Area II.

8. Environmental Assessment, South Dixon Extension, Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior, October 2001. The EA described and evaluated the projected impacts of a change in mining sequence and an expansion of mining operations. The proposal was to disturb approximately an additional 708 acres. The temporary diversion of the North fork of Cottonwood Wash to the Middle fork of Cottonwood Wash; the temporary extension of the existing Lowe-Dixon Diversion to Cottonwood Wash and the permanent relocation the Burnham Road were also evaluated.
9. Environmental Assessment, Navajo Mine Area III Lowe-Dixon Surface Extension, Office of Surface Mining Reclamation and Enforcement, March 2005. The EA described and evaluated projected impacts of the proposed Incidental Boundary Revision (IBR). The proposal was to add a 500-foot buffer to the east and north boundaries of the existing Lowe Pit, which would increase the permitted area by 106 acres.
10. Environmental Assessment, Navajo Permit Application, Proposal to Mine Area IV North, Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior, October 2005. The EA described and evaluated projected impacts for mining Area IV North of the Navajo Mine lease. The revised mine plan with miscellaneous support activities covers a total of 3,800 acres. Decision remanded by Judge Kane, 2010.
11. Environmental Assessment, BHP Navajo Coal Company Proposed Burnham Road Realignment, Office of Surface Mining Reclamation and Enforcement, June 2008. The EA described and evaluated projected impacts for permanently realigning approximately 5.2 miles of the Burnham Road in Area III and Area IV North. OSM issued a FONSI for this action on December 13, 2007. In 2010, the U.S. District Court of the District of Colorado ruled that the impacts analyzed for the June 2008 EA also be included in the impacts analysis for the current Proposed Action. Decision remanded by Judge Kane, 2010.

1.3 Regulatory Framework and Necessary Authorizations

The proposed mine plan revision and IP requires approvals or permits by various federal agencies and the Navajo Nation. These agencies and their role in the proposed project are described below.

Table 1.3-1. Federal Action Agencies and Regulatory Authorities

Agency	Proposed Action	Authority
OSM	Approve mine plan revision under SMCRA, allowing mining and reclamation activities in a portion of Area IV North in accordance with the project purpose and need. Approval of Burnham Road realignment.	SMCRA, 30 USC §§ 1201 et seq.
USACE	Issue an IP under Section 404 of the CWA for discharge of fill material into WUS in support of mining operations in Areas III and IV North at Navajo Mine. Approval of Burnham Road realignment.	33 CFR 323 40 CFR 230
BIA	The SMCRA regulations require that a “public road authority” be designated,	SMCRA, 30 CFR

Agency	Proposed Action	Authority
	which would authorize the relocation of the road. Because the Burnham Road has historically been maintained by the BIA and is entirely within the Navajo Nation Indian Reservation, the BIA is recognized as the public road authority and can approve, deny, or approve with conditions the proposed relocation.	§761.14(c)
BLM	Approve the revised R2P2, which requires conducting mining operations in a manner that achieves MER of the available resource. MER is a key consideration in determining mining limits and methods.	43 CFR 3482.1(b)

In addition to the required federal authorizations that trigger NEPA compliance, several agencies within the Navajo Nation have regulatory review and approval authority. The Navajo Nation Department of Fish and Wildlife (NNDFW) issues a Fish and Wildlife Clearance letter concurring with the Biological Evaluation (BE) in accordance with Navajo Nation Code (NNC). The Navajo Nation Historic Preservation Department (NNHPD) issues a Cultural Clearance letter concurring with Section 106 compliance of the National Historic Preservation Act. The Navajo Nation Environmental Protection Agency (NNEPA) issues a Water Quality Certification (WQC) in accordance with its authority under Section 401 of the CWA.

In addition, OSM submitted the project BE to the U.S. Fish and Wildlife Service (USFWS), and coordinated with the U.S. Environmental Protection Agency (EPA) regarding compliance with the CWA Section 402 National Pollutant Discharge Elimination System (NPDES) program.

1.4 Purpose and Need

The four federal action agencies' statements of purpose for each of their Proposed Actions, and background information on project purpose and need, are provided below.

1.4.1 OSM Statement of Project Purpose

The purpose of and need for the proposed significant permit revision to mine coal in Area IV North is to continue to provide a coal supply in accordance with BNCC's contract obligations with the FCPP through July 6, 2016, and permanently reroute the Burnham Road to eliminate existing public safety hazards and maximize recovery of the Navajo Nation's coal resource. The Burnham Road realignment will also provide road improvements on the remainder of the proposed reroute for the benefit of local residents and communities.

1.4.2 USACE Statement of Project Purpose

The USACE has determined the basic and overall project purposes for the proposed discharge in WUS under Section 404(b)(1) of the CWA are as follows. The basic project purpose includes revision of the current mine plan and public transportation safety. The overall project purpose is continued operation of the BNCC mine through July 6, 2016 to meet contractual obligations with the FCPP, while maintaining safe, reliable public access to the Burnham Chapter area.

1.4.3 BIA's Statement of Project Purpose

BIA is the public road authorizing agent regarding the realignment of the Burnham Road. The BIA will issue a Road Relocation Permit. The original permit was issued in September 2008 requiring construction by December 21, 2009. The BIA will use the information contained in this EA to decide on re-issuing the expired permit. Should the relocation be approved, the road would be incorporated into the BIA road inventory and maintained by the BIA. The purpose of the proposed realignment of the Burnham Road is to eliminate public safety hazards and maximize recovery of the Navajo Nation's coal resource. The Burnham Road realignment will also provide road improvements on the remainder of the proposed re-route for the benefit of local residents and communities.

1.4.4 BLM's Statement of Project Purpose

The BLM has approval authority regarding the proposed resource recovery and protection plan (R2P2). The purpose is to provide for maximum economic recovery of the available coal resource.

1.4.5 Background on Project Purpose and Need

1.4.5.1 Mining to Fulfill Coal Supply Contract Obligations

BNCC's proposed mining in Areas III and IV North of the Navajo Mine is needed to supply sufficient quantities and quality of coal to meet BNCC's contract obligations to the FCPP through July 6, 2016—the date when the current coal sales contract between BNCC and the owners of the FCPP expires—and to comply with requirements under BNCC's lease with the Navajo Nation for maximum economic recovery to the Navajo Nation from production of coal.

To accomplish these objectives, BNCC must obtain OSM's approval of a revised mine plan for a portion of Area IV North. The proposed mine plan revision addresses the methods and timing of mining within an approximately 704 acre portion of Area IV North in order to produce, in conjunction with ongoing mining operations—the necessary quantity and quality of coal to meet BNCC existing contract requirements with FCPP. BNCC supplies approximately 8.5 million (M) tons of appropriate quality coal annually. BNCC must therefore be able to supply 43.6 (M) tons of appropriate quality coal in the next five years to fulfill its contractual obligations through July 6, 2016. As described in Section 1.1, currently permitted mining activities at Navajo Mine are ongoing in Areas II and III. These current activities have the maximum potential to produce 30.8 (M) tons of coal between now and when the BNCC coal delivery contract with FCPP expires. The proposed mine plan revision for a portion of Area IV North is needed to produce the additional approximately 12.7 M tons of appropriate quality coal required by the contract. BNCC estimates that would require mining and ancillary facilities on 830 acres within Area IV North (refer to Figure 2.1-1).

It is the purpose of this Act—[30 U.S.C. 1202] SEC. 102(f)—to assure that the coal supply essential to the Nation's energy requirements, and to its economic and social well-being is provided and strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy.

1.4.5.2 Need for USACE Permit

Because several arroyos and washes cross Areas III and IV North of the Navajo Mine, mining will affect WUS and will require a USACE permit under Section 404 of the CWA. BNCC has elected to apply for a CWA IP from the USACE (refer to Section 1). This action would consolidate the various NWP's under which the mine currently operates into a single IP for purposes of mining prior to 2016. A separate IP would be sought for mining that may be proposed under a potential post-2016 coal supply agreement. BNCC's objective is to comply with USACE requirements to avoid and minimize fill in WUS to the extent practicable, and to mitigate unavoidable impacts to aquatic resources.

1.4.5.3 Need for R2P2

The R2P2 regulations require BNCC to conduct mining operations in a manner that achieves MER of the available coal. MER is a key factor in determining the location and configuration of mine pits, strip layouts and infrastructure locations. All resources within the Area IV North lease boundary are economically recoverable using surface mining methods. Under the R2P2 regulations, stripping limits are established that maximize recovery of the resource while allowing sufficient space between the perimeter of the stripping area and the lease boundary for surface infrastructure (roads, power and water lines, coal stockpiles) and spoils placement, as well as retention of contingency reserves.

1.4.5.4 Need for Burnham Road Realignment

BNCC seeks to realign a public road (BIA 3005—Burnham Road—also known as Navajo Road N-5082). The northern portion of the proposed realignment is necessary due to the road's close proximity to current mining operations in Area III. In addition, the remaining portions of the proposed realignment through Area IV North and accompanying road improvements would provide important safety and access benefits for local Navajo residents and others using Burnham Road for local and through traffic.

1.4.5.5 Project Benefits

Since coal mined at the Navajo Mine is held in trust by the United States for the benefit of the Navajo Nation, mining provides important benefits to the Nation, including royalties and tax revenues, and employment opportunities for tribal members. The objective of the proposed project is to continue to provide those benefits to the Navajo Nation.

1.4.6 Summary

In summary, the BNCC's objectives are to:

1. Provide sufficient quantities and quality of Navajo coal in accordance with BNCC's coal supply contract through July 6, 2016.
2. Eliminate the safety hazards and disruptions associated with blasting and mining activities along the portion of the Burnham Road in proximity to proposed pre-2016 mining activities, and efficiently and effectively provide safety, access, and other road improvements on the remainder of the proposed Burnham Road realignment for the benefit of local residents and communities.

3. Provide important coal royalty and tax revenues directly to the Navajo Nation inasmuch as the coal mined at Navajo Mine is held in trust by the United States for the benefit of the Navajo Nation.
4. Provide important employment opportunities for the Navajo Nation and other communities surrounding the Navajo Mine.

1.5 Issues Identified through Public Workshops and Conferences

1.5.1 Public Workshops

In April of 2011, two public workshops were held at the Tiis Tsoh Sikaad (Burnham) and Nenanhezad Chapter Houses on the Navajo Nation near the project site. The USACE and OSM personnel made presentations and a series of 14 posters was displayed. Technical personnel from OSM, the USACE, the Navajo Nation Surface Mining Program, BIA, and BLM along with a Navajo-English translator and a court reporter were available to answer and record questions and comments, and comment forms were available for written comments.

The workshops were advertised in three area newspapers and two radio stations for two weeks prior to the workshops. In addition, an informational flyer announcing the workshops was posted at several public locations and businesses in the area and at eight neighboring chapter houses.

1.5.2 Comment Summary

A summary of comments received during and after the public workshops is provided in Table 1.5-1. Eighteen individuals commented, which provided 87 individual comments. Seventeen individuals provided verbal comments to a court reporter at the public workshops, and OSM received one letter co-authored by representatives from the San Juan Citizen's Alliance, Diné Citizens Against Ruining Our Environment, and Center for Biological Diversity.

Table 1.5-1. Comment Summary

Resource Area	Number of Comments	Comments Received
NEPA Process	18	Request extension of public comment period Request public hearings EIS is required for project, mine acreage chosen to avoid preparation of EIS Project purpose and need not identified Analysis should include connected actions including burning coal at FCPP
Public Outreach	15	Request to provide area chapter houses with additional project information More public notices of the workshops needed More interpreters needed at workshops Workshop format was not appropriate Meeting time inconvenient Request to have all documents translated in Navajo

Resource Area	Number of Comments	Comments Received
Dust and Air Quality	14	Concern for impacts on human health, water resources, and livestock that drink water that contains coal dust. Recommendation of air monitoring of dust levels at the mine and surrounding area Request for cumulative air impact analysis
Health	6	Concern for regional health impacts related to exposure to dust and air pollutants Request for a comprehensive health analysis
Water	6	Concerns about dust contaminating livestock water and nearby surface water Recommendation that OSM update their Cumulative Hydrologic Impact Assessment (CHIA) Concern that the wetland mitigation project is not close enough to the Project Area Concern about impacts to groundwater from past coal combustion waste (CCW) disposal at the mine
Biological	6	Information on species that occur in the area Mercury pollution and CCW disposal would have an indirect and cumulative impact on two fish species Concerns about whether the USFWS is being consulted Concern over delays in reclamation, invasive species, dust, and habitat loss
Cultural	4	Concern for unmarked graves in the area Clay from nearby waterways is used by elders Request for a detailed analysis of mitigation measures for cultural resources in the Project Area
Economics	4	All comments were all in support of the project and indicated that moving forward with development would benefit the local economy and the Navajo people through jobs, revenues, education, and local community support
Waste Management	2	Concerns about CCW disposal and management
Geology/Paleo	1	Statement that there is a high diversity of paleontological resource in the area
Land Use	1	An individual inquired about different land lease areas near the project site and was concerned about timing of their release back to the people of the Navajo Nation
Noise	1	Concern was expressed about the noise and vibration that occurs at the mine
Soil	1	Concern that strip mining destroys topsoil, prehistoric items, and affects vegetation growth
Burnham Road	1	The road is unfinished through Chaco Wash and promised improvements are not yet in place
Environmental Justice	1	Request that the project “raise the bar” on environmental justice compliance

Resource Area	Number of Comments	Comments Received
Other	6	<p>Shepherds that may need to set up new camps</p> <p>Request for agency memoranda of understanding and the project's communications protocol document</p> <p>Concerns about contemporaneous reclamation and the project reclamation bond</p> <p>Mitigation of impacts to tribal member rights and customary use areas</p>

1.5.3 OSM Informal Conference

OSM conducted the informal conference on June 15, 2011 at the Nenanzhad Chapter house. The conference was advertised in area newspapers and public service announcements on regional radio stations, and with flyers posted at chapter houses and in other public locations on the Navajo Nation Reservation, as well as in Farmington, NM. The comments period began with the publication of a legal notice of the project on March 24, 2011 and comments were being taken through June 30, 2011.

One hundred and one individuals signed the attendance sign-in sheet and 19 individuals provided public testimony during the conference. Eighteen testified in support of the permit revision and cited positive impacts on employees and their families, as well as to local and regional socioeconomics as their reasons for supporting the permit renewal. The one individual that did not support the permit renewal indicated that she was a resident near the mine and did not receive the support from BNCC she expected related to water supply, and also cited concerns about coal dust in the area affecting human and livestock health. In addition, OSM received four emails and one letter during the comment period. Three emails stated support for the permit renewal citing job security and regional economic benefits. The fourth email cited BNCC management issues and the opinion that BNCC is not complying with original agreements regarding mining made with the Navajo Nation in the 1960s. The letter was submitted by the Navajo Nation Historic Preservation Department – Traditional Culture Program (NNHPD-TCP), which questioned whether the proposed project would impact two Navajo traditional cultural resources—the Hogback and the San Juan River.