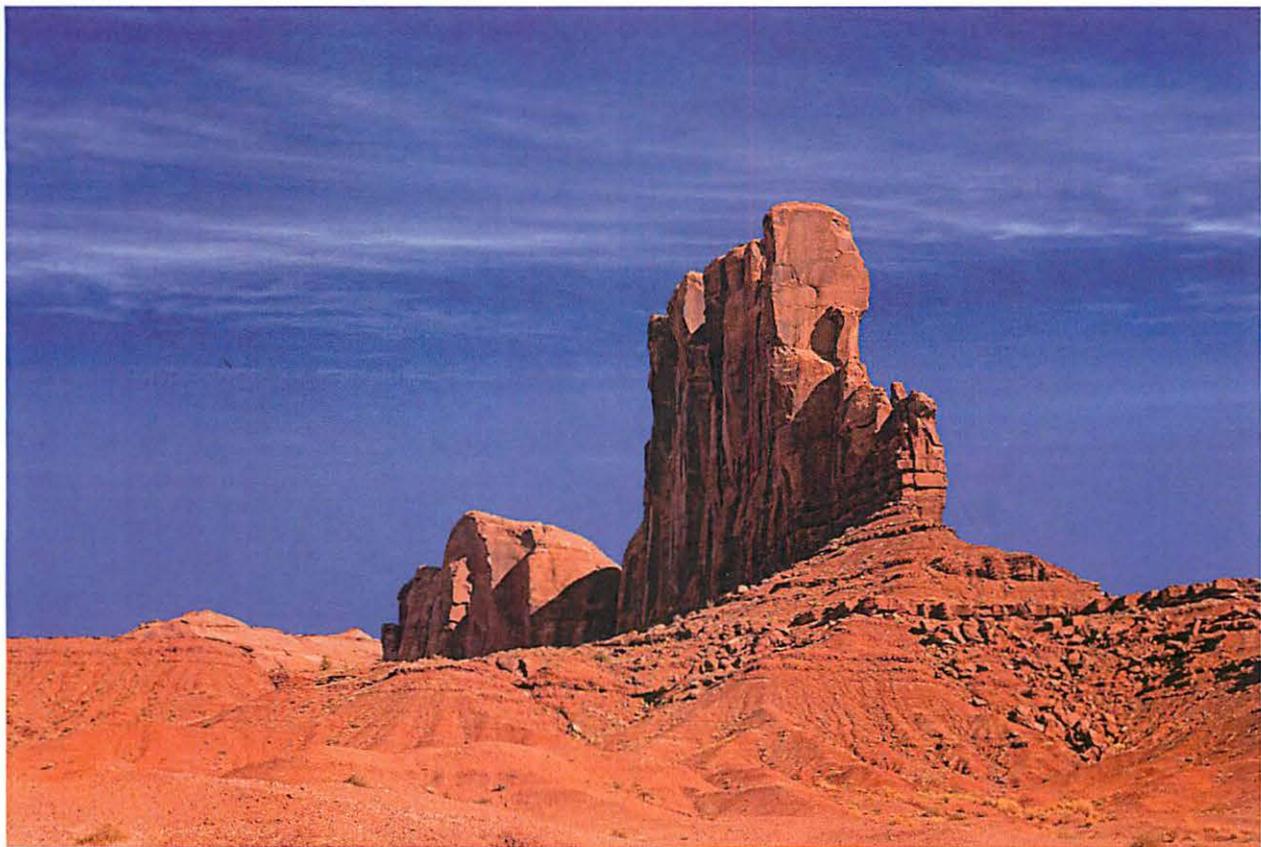


**UNITED STATES DEPARTMENT OF THE INTERIOR  
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT**

**Kayenta Mine  
SMCRA Permit AZ-0001E Renewal  
Finding of No Significant Impact  
Navajo County, Arizona**

**September 2017**



**U.S. Department of the Interior  
Office of Surface Mining Reclamation and Enforcement  
Program Support Division  
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Peabody Western Coal Company (PWCC) submitted a timely application to the Office of Surface Mining Reclamation and Enforcement (OSMRE) to renew Permit AZ-0001E for the Kayenta Mine under the 30 CFR 774.15(a) and (b)(1) (the Renewal). The Kayenta Mine Permit Area is located on approximately 44,073 acres of land leased within the boundaries of the Hopi and Navajo Indian Reservations in northern Arizona, approximately 20 miles southwest of the town of Kayenta, in Navajo County (about 125 miles northeast of Flagstaff, Arizona). The request for the Renewal proposes to continue mining operations in coal resource areas (CRAs) N-9, J-19, and J-21 from July 6, 2015 through July 5, 2020. The proposed mining during the Renewal period will create 842 acres of surface disturbance and 1,583 acres will be regraded in the three CRAs on Navajo Indian Reservation lands. While the Renewal will develop jointly held Navajo and Hopi coal resources, no surface disturbance will occur on Hopi Indian Reservation lands. The proposed Renewal does not include any revisions to the mining and operations plan or the addition of any new mining areas. For the proposed five year Renewal period, coal mining operations are assumed to continue at the recent historical pace and existing facilities will be used for ongoing operations.

Pursuant to Section 506(d)(1) of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), as amended, and 30 CFR 774.15 of the regulations promulgated thereto, any valid permit shall carry with it a right of successive renewal upon expiration with respect to areas within the boundaries of the existing permit. Under SMCRA and the adopted regulations, OSMRE must approve a complete and accurate application for permit renewal unless it finds that the criteria for approval as defined by 30 CFR 774.15(c) are not met.

#### **A. Statement of Environmental Significance of the Proposed Action**

The undersigned person has determined that the renewal of Kayenta Mine Permit AZ-0001E would not have a significant impact on the quality of the human environment under section 102(2)(C) of the National Environmental Protection Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4332(2)(C) and therefore, an environmental impact statement (EIS) is not required. This finding of no significant impact (FONSI) is based on OSMRE's environmental impacts analysis of the proposed action within an environmental assessment (EA), which identifies and discusses potential effects that are stated below.

#### **B. Reasons**

The FONSI is based on the attached EA that analyzes the potential environmental impacts of renewing the Kayenta Mine permit for the period of July 6, 2015 through July 5, 2020. This EA was prepared by a consulting firm and incorporates OSMRE's input. During the development of the draft EA, OSMRE independently reviewed the document to ensure compliance with 43 CFR 46.320 and all relevant provisions of the Council on Environmental Quality (CEQ) regulations, and other program requirements. This independent review of the EA included OSMRE's evaluation of all environmental issues discussed therein. OSMRE subsequently adopted the EA and takes full responsibility for the scope and the content of this document.

Data, information, and maps presented within this EA were gathered from a number of sources, including OSMRE, PWCC, the US Geological Survey (USGS), the US Fish & Wildlife Service

(USFWS), the Navajo Nation and the Hopi Tribe. OSMRE has evaluated the information presented within this EA and has determined that the proposed action would cause no significant adverse environmental effects that would not be mitigated in accordance with the eight standard permit conditions within the federal regulations at 30 CFR 773.17, the standard permit terms and specifications of the permit application package (PAP), and one existing retained Special Permit Condition pertaining to the monitoring plan for the Mexican spotted owl.

The attached EA considers a reasonable range of alternatives to the proposed action, discusses the potential environmental effects of the proposed action and provides sufficient evidence and analysis for this FONSI.

Based upon OSMRE's review of the attached EA and the supporting documents, I have determined that the proposed action is not a major federal action that will have a significant effect on the quality of the human environment individually or cumulatively with other actions within the region. No environmental effects meet the definition of significance in context or intensity, as defined within the federal regulations at 40 CFR 1508.27. Therefore, an EIS is not required. This finding is based on the context and intensity of the project as described in the following paragraphs.

**Context:** The renewal of the Kayenta Mine permit is a site-specific action directly involving lands within the PWCC coal permit area that does not in and of itself have international, national, or regional importance. The three CRAs subject to this Renewal are entirely within the Kayenta Mine Permit Area where coal mining has occurred since 1970. Surface coal mining and reclamation activities in the three CRAs were previously authorized under SMCRA with issuance of the Kayenta Mine permanent program permit.

**Intensity:** The following discussion is organized around the 10 Significance Criteria described within the federal regulations at 40 CFR 1508.27. The following have been considered in evaluating intensity for this proposal:

*1) Impacts that may be both beneficial and adverse:*

The attached EA has analyzed and disclosed both beneficial and adverse effects of the proposed action. Changes in surface water quality would be short and minor since the restoration of channel geometry, morphology, or location resulting from the destruction and reconstruction of drainage channels and the use of sediment control structures to manage discharge of surface water from the mine areas would not alter surface flows into regional drainages (EA Section 4.7.1). Furthermore, OSMRE requires PWCC to monitor water quality in proposed permanent impoundments in order to determine whether the impounded water is suitable on a permanent basis to support livestock grazing and wildlife habitat at final bond release. If the data indicate a proposed permanent impoundment does not meet the performance standards at 30 CFR 81 6.49(b), including applicable Tribal water quality standards, OSMRE will require PWCC to reclaim the impoundment.

SMCRA regulations at 30 CFR 816.41 (h) specifically require PWCC to replace water supplies that have been adversely impacted by mining. OSMRE evaluates the potential for material damage due to proposed mining activities and sets threshold limits for determining when

material damage has occurred to a natural resource (EA Section 4.7.1.3). PWCC's operation of the Kayenta Mine has been designed to prevent material damage to the quality of the N-Aquifer water. Water quality of the PWCC wellfield will continue to be assessed on a quarterly basis by OSMRE to ensure that the N-Aquifer continues to meet applicable water quality standards.

In CRAs, topsoil and suitable subsoil will be removed and replaced immediately for reclamation following backfilling and regrading or stockpiled for use after mining operations (EA Section 4.3). Topsoil stockpiles are protected from wind and water erosion by seeding the stockpiles and placing berms around the perimeter of the stockpile. Slope reclamation operations generally include regrading, smoothing, and slope contouring to approximate the original topographic contours, taking into consideration the need to minimize erosion and support the post-mining land uses of livestock grazing, wildlife habitat, and cultural plants. In the short term, soil erosional stability will be maintained by an effective and permanent vegetative cover established during reclamation. Although the reclaimed land cannot be restored to pre-mining productive use immediately due to the long timeframe required for plant establishment in the arid climate, soil productivity will be maximized by reclamation procedures that create a suitable four-foot-deep plant root zone over the entire reclaimed area and establishing a diverse and permanent vegetation cover.

Reclamation will establish on the areas mined during the Renewal period all-purpose rangeland and wildlife habitat composed primarily of native species (EA Section 4.8). The reclamation vegetation will be dominated by grasses and shrubs and scattered groupings of trees. The conversion of existing vegetation communities to the reclaimed vegetation community will affect less than one percent of the total available acres of plant communities in the lease area. Reclaimed sites will transition to a stable vegetation community. Wildlife habitat will be established in the reclaimed areas and will include small, periodic clusters of exposed rock, water features, and clusters of planted pinon, juniper, forbs, and shrubs. Cultural plant sites (i.e., plants important to American Indian cultural traditions) would be established on select sites within reclamation areas. These would be developed in areas with a mesic aspect and on coarse-textured skeletal soils and rocky substrates similar to native areas supporting piñon-juniper woodland and historic cultural collection sites. These sites, combined with native shrubland and piñon-juniper planting areas, will comprise approximately five percent of reclaimed lands.

All criteria pollutant direct impacts will demonstrate compliance with all NAAQS (worst-case maximum 77.5% of 24-hr PM<sub>10</sub> standard, minor impact) (EA Section 4.5). Indirect impacts from the Navajo Generating Station (NGS) demonstrates compliance dissipating rapidly within 1 km (99% of 1-hr NO<sub>2</sub> standard). Direct greenhouse gas (GHG) emissions will be a negligible long-term impact on Arizona (0.16%) and U.S. (0.0042%) total annual GHG emissions throughout all phases of the project. Indirect long-term GHG impacts will be negligible on U.S. (0.82%) and global (0.04%) annual GHG emissions. This impact will occur until mining concludes at the end of 2019. Visible haze will not change from the current conditions, but would continue to December 2019. Exposure concentrations for contaminants of potential concern (COPCs) in air will be extremely low to negligible. All criteria pollutants from the mine will also be negligible. The indirect impacts of all criteria pollutants from the NGS will be negligible to minor. The indirect effect of deposition of COPCs (including arsenic and mercury) from the NGS will be negligible, because deposition represents less than one percent of the baseline soil concentration.

Employment, benefits, and economic contributions from PWCC to the community (EA Section 4.15) are expected to continue at current levels through December 22, 2019 (end of active mining) and reduced levels from December 22, 2019 to July 5, 2020. The number of people employed at the Kayenta Mine during the Renewal period is anticipated to stay the same (317) through December 22, 2019, and the annual amount paid in salaries to the employees will be similar to the 2014 value of approximately \$61 million. PWCC will contribute an additional \$731 million to the local economy and community.

None of the environmental effects from the proposed action discussed in the EA are considered to be significant.

*2) The degree to which the proposed action affects public health or safety:*

Effects from the proposed action that could affect health and safety include traffic, air quality, water quality, and noise. As discussed in the health and safety section (EA Section 4.17) neither the type nor quantity of any wastes generated and disposed of by the mine would change and impacts on public health and safety will be negligible. The direct and indirect health effects, as modeled by Human Health Risk Assessments for the Renewal and NGS operations, will be negligible. The potential effects on traffic volumes and the existing transportation network will be negligible (EA Section 4.14). As noise and vibration levels will remain at or near current levels, the impacts will be negligible (EA Section 4.6).

*3) Unique characteristics of the geographic area such as proximity to historical or cultural resources, park lands, prime farmlands, wild and scenic rivers, or ecologically critical areas:*

There are no park lands, prime farmlands, wild and scenic rivers, or ecologically critical areas within the area that will be disturbed by surface mining in the three CRAs. The potential effects on cultural resources (EA Section 4.10) are not significant because permit terms require PWCC to report the discovery of any previously unrecorded cultural resources that might be made during the Renewal period and to suspend work in the vicinity to protect discoveries until OSMRE determines appropriate disposition. The permit terms also require PWCC to address the potential effects on sacred and ceremonial sites that might be identified during the five-year Renewal period. Under the permit terms, PWCC will address any human remains that might be disturbed in accordance with the Native American Graves Protection and Repatriation Act and the Navajo Nation Policy for the Protection of Jishchaa: Gravesites, Human Remains, and Funerary Items.

*4) The degree to which the impacts on the quality of the human environment are likely to be highly controversial:*

No anticipated effects have been identified that are scientifically controversial. As a factor for determining within the meaning of 40 CFR 1508.27(b)(4)—whether or not to prepare a detailed environmental impact statement—“controversy” is not equated with “the existence of opposition to a use.” *Northwest Environmental Defense Center v. Bonneville Power Administration*, 117 F.3d 1520, 1536 (9th Cir. 1997). The term “highly controversial” refers to instances in which “a

substantial dispute exists as to the size, nature, or effect of the major federal action rather than the mere existence of opposition to a use.” *Hells Canyon Preservation Council v. Jacoby*, 9 F.Supp.2d 1216, 1242 (D. Or. 1998).

The proposed action will authorize the continued operation of coal mining and reclamation activities at historical production rates within the Kayenta Mine Permit Area. The proposed Renewal does not include any revisions to the mining and operations plan or the addition of any new mining areas. The effects of surface coal mining and reclamation in this area are well known and documented with over 30 years of monitoring and Federal approvals of the permit renewal have been made for several decades.

5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:*

The conditions present within the CRAs are similar to other previously mined areas within the Kayenta Mine Permit Area. The permit terms and conditions have been shown to be effective in minimizing impacts to protected and sensitive wildlife and plant species when properly implemented. The effects of surface coal mining and reclamation in this area are well known and documented with over 30 years of monitoring. Therefore the effects are not highly uncertain and do not involve unique or unknown risks.

6) *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:*

The site specific NEPA analysis associated with this proposal would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration. SMCRA regulations provide that a mining permit may not be renewed for a period greater than five years, and any future renewal period will be considered under the same statutory criteria as applied to this renewal application and subject to additional NEPA analysis. (30 CFR 774.15).

7) *Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts:*

The attached EA contains a cumulative impact analysis which assesses the effects of other past, present, and reasonably foreseeable future actions in the region where direct and indirect effects of the proposed action may overlap and combine to form collectively significant effects. As analyzed in the EA, the proposed action does not incrementally contribute to a significant cumulative effect.

8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources:*

Through the Black Mesa Archaeological Project, OSMRE completed Section 106 requirements for the entire Kayenta Mine Permit Area. PWCC also conducted a Data Quality Assessment

Survey in 2016 as part of the currently-suspended Navajo Generating Station-Kayenta Mine Complex EIS (EA Section 2.2). Therefore, the proposed Renewal does not require additional Section 106 consultations to address the effects of coal mining on recorded properties eligible for the National Register. Potential direct and indirect impacts to cultural resources, human remains, and sacred and ceremonial sites are anticipated to be long term but minor. It is expected that continued implementation of the standard conditions and permit terms satisfactorily mitigate any such impacts.

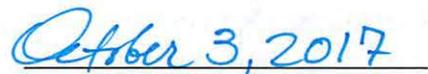
- 9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973:*

The proposed action is expected to have “no effect” on two federally listed species considered in the effects analysis, as there are no surface-disturbing activities proposed in or near suitable habitat for these species. Eleven federally listed species; Mexican Spotted Owl, Southwestern Willow Flycatcher, Western Yellow-billed Cuckoo, Bonytail, Colorado Pikeminnow, Humpback Chub, Razorback Sucker, Brady Pincushion Cactus, Fickeisen Plains Cactus, Navajo Sedge, and Welsh’s Milkweed; received determinations of “may affect, not likely to adversely affect”. OSMRE prepared a Biological Assessment and is currently undergoing Informal Section 7 consultation with the USFWS for the proposed action. OSMRE will complete Section 7 consultation prior to its decision on the proposed action.

- 10) *Whether the action threatens a violation of Federal, State, local or tribal law or requirements imposed for the protection of the environment:*

This action is consistent with Navajo Nation, Hopi Tribe, Federal, state, and local laws and other requirements for the protection of the environment. OSMRE has reviewed the application and determined that it meets all requirements of section 506(d)(1) of SMCRA and 30 CFR 774.15. All applicable agencies were properly notified of the proposed action and given appropriate comment time to respond.

  
Mychal Yellowman, Manager  
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Program Support Division  
Western Region, OSMRE

  
Date