



IN REPLY REFER TO

United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P. O. Box 46667
Denver, Colorado 80201-6667

AZ-0001D

July 17, 2009

Gary W. Wendt, Manager
Environmental
Peabody Western Coal Company
P.O. Box 650
Navajo Route 41
Kayenta, Arizona 86033

Re: **Removal** of sedimentation pond N11-G2 and **revision of ponds N11-G and N11-G1**
Office of Surface Mining (OSM) project AZ-0001-D-J-66
Administrative Records Management System (ARMS) No. and 09/05/11-03

Dear Mr. Wendt:

The Office of Surface Mining Reclamation and Enforcement (OSM) completed a review of Peabody Western Coal Company's (PWCC's) May 7, 2009, proposal for the Black Mesa Mine Complex permit AZ0001D (OSM project AZ-0001-D-J-66, ARMS No. 09/05/11-03). PWCC proposed removal of sedimentation pond N11-G2 and revision of downstream sedimentation ponds N11-G and N11-G1 to control runoff.

OSM processed these proposals as a minor permit revision application under the regulations at 30 CFR 750.12(c)(1)(ii) and 30 CFR Part 774.13.

As set forth in the enclosed findings and "technical evaluation" document, OSM finds that the proposed minor permit revision application complies with the requirements of the Surface Mining Control and Reclamation Act of 1977 and the implementing Federal regulations. In accordance with 30 CFR 750.12(c)(1)(ii) and 774.13(c), **I approve this proposed minor revision to permit AZ-0001D.**

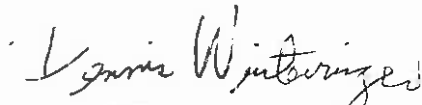
By this letter, I request that PWCC and the agencies receiving copies of the May 7, 2009, submission now update the approved application according to PWCC's instructions.

As set forth in the Indian Lands Program at 30 CFR 750.12(c)(1)(iii), PWCC, or any person with an interest which is or may be adversely affected, may appeal this decision under the procedures of 30 CFR Part 775 and 43 CFR Part 4.

**TAKE PRIDE
IN AMERICA** 

If you have any questions, please contact me by telephone at 303-293-5048 or by e-mail at dwinterringer@osmre.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "Dennis Winterringer". The signature is fluid and cursive, with the first name "Dennis" and last name "Winterringer" clearly distinguishable.

Dennis Winterringer, Leader
Black Mesa Complex Team

Enclosures

cc: BIA-Navajo Region
BIA-Western Region
Forest Lake Chapter House
Hopi Tribe Office of Mining & Mineral Resources
Hopi Tribe Office of Realty Services
Navajo Nation Minerals Department
OSM-Albuquerque Area Office
OSM-Farmington Area Office

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT (OSM)

Approval of Application for Minor Permit Revision

Project AZ-0001-D-J-66

Permit AZ0001D

Peabody Western Coal Company (PWCC)

Black Mesa Complex

On May 7, 2009, PWCC submitted under the Indian Lands Program an application for minor revision of Black Mesa Complex permit AZ0001D (project AZ-0001-D-J-66, ARMS No. 09/05/11-03). PWCC proposed removal of sedimentation pond N11-G2 and revision of downstream sedimentation ponds N11-G and N11-G1 to control runoff.

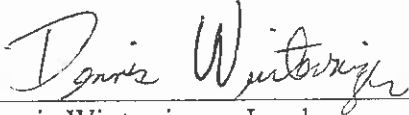
Based on its review of the permit revision application, OSM has determined that:

1. Reclamation as required by the Surface Mining Control and Reclamation Act of 1977, as amended, (SMCRA) and the Indian Lands Program at 30 CFR Chapter VII, Subchapter E can be accomplished under the reclamation plan contained in the permit application, as revised.
2. The revision application is accurate and complete, and the applicant has complied with all requirements of SMCRA and the Indian Lands Program for the permit revision.
3. No other approval requirements at 30 CFR 750.12(c)(3)(ii)(C) and 773.15 are applicable to this permit revision application.
4. Environmental Reevaluation and Finding of No Significant Impact Under the National Environmental Policy Act.
 - a. The proposed permit revision would not result in any additional environmental impacts beyond those identified in OSM's November 2008 environmental impact statement for the Black Mesa Complex permit approval.
 - b. The November 2008 environmental impact statement adequately addresses the impacts of the mine.
 - c. The approval of this permit revision application would not significantly impact the quality of the human environment under section 102(2)(C) of the National Environmental Policy Act of 1969, 42 U.S.C. 4332(2)(C). Therefore, an environmental impact statement is not required.

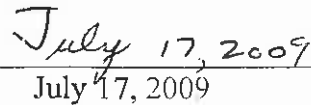
OSM provided copies of the May 7, 2009, submission to and solicited comments from the Bureau of Indian Affairs, Navajo and Western Regional Offices; Hopi Tribe, Office of Mining and Minerals Resources; Hopi Tribe, Office of Realty Services; Navajo Nation Minerals Department; and Forest Lake Chapter House of the Navajo Nation. It notified but did not provide application copies to the Bureau of Land Management, Arizona State Office; U.S. Fish

and Wildlife Service; Navajo Environmental Protection Agency; and Navajo Air Quality Control Program. In response to its request, OSM did not receive any comments on PWCC's application.

On the basis of the above determinations, I, in accordance with 30 CFR 750.12(c)(1)(ii) and 774.13(c), approve PWCC's proposed minor permit revision application for Black Mesa Complex permit AZ0001D (project AZ-0001-D-J-66).



Dennis Winterringer, Leader
Black Mesa Complex Team
Western Region
OSM



July 17, 2009

TECHNICAL EVALUATION OF PERMIT REVISION

Removal of Sediment Control Structure N11-G2

1. COMPANY: Peabody Western Coal Company (PWCC)

2. MINE/OPERATION: Black Mesa Complex

3. TRACKING SYSTEM INFORMATION.

A. Mine Information Project Planning System (MIPPS): AZ-0001-D-J66

B. Workload Assignment Tracking System (WATS): FPD08055

C. Administrative Records Management System (ARMS): 09/05/11-03

D. Letterhead date of submittal: May 7, 2009

4. TYPE OF APPLICATION/DOCUMENT REVIEWED.

- ☐ New permit application
- ☒ Permit revision application
- ☐ Permit renewal application
- ☐ Permit transfer, assignment, or rights sale application
- ☐ Other

5. EVALUATION.

A. Part of application/document reviewed: Drainage Area and Facilities Map

(1) Citation of applicable regulations:

30 CFR 780.25 *Reclamation Plan: Siltation Structures, Impoundments, Banks, Dams, and Embankments*

30 CFR 816.43 *Diversions*

30 CFR 816.46 *Hydrologic Balance: Siltation Structures*

30 CFR 816.49 *Impoundments*

(2) Evaluation of compliance with the requirements of the applicable regulations:

(a) Evaluation of compliance with the permit application requirements (30 CFR Parts 777 through 784):

In accordance with 780.25, the applicant is required to provide the following information for each siltation control structure:

- Certification by a Registered Professional Engineer.
- A description, map, and cross section of the structure, and its location.
- Hydrologic and geologic information required to assess the hydrologic impact of the structure.

Currently, sediment control structures N11-G2, N11-G1, and N11-G are in series to control runoff in the N11 coal resource area. N11-G is the most downgradient structure. Recent reclamation in the N11 area has both reduced the drainage to the N11-G ponds and changed the soil cover type. PWCC proposes the removal of N11-G2 and modification to sediment control structure N11-G due to changes in the drainage area and land cover type.

In compliance with 780.25, PWCC has submitted a description, location map, cross sections of the structure, necessary hydrologic information for evaluation, and a certification by a registered professional engineer.

(b) Evaluation of compliance with the performance standards (30 CFR Parts 816 and 817):

The performance standards under 30 CFR 816.46 state:

- Additional contributions of sediment to streamflow or runoff outside the permit area shall be prevented to the extent possible using the best technology currently available.
- All surface drainage from the disturbed area shall be passed through a siltation structure before leaving the permit area.
- The siltation structure shall be certified by a professional engineer.
- When the siltation structure is removed, the land on which the siltation structure was located shall be regraded and revegetated in accordance with the reclamation plan.
- The structure shall be designed, constructed, and maintained to:
 - Provide adequate sediment storage volume.
 - Provide adequate detention time to allow compliance with effluent limitations.
 - Contain or treat the 10-year, 24-hour precipitation event.
 - Minimize short-circuiting to the extent possible.
 - Include either a combination of principal and emergency spillways or a single spillway.

The submitted revision requests approval to revise the N11-G and N11-G1 Pond Design Reports, and requests to remove the upstream N11-G2 sediment control structure. The submitted design reports indicate that ponds N11-G and N11-G1 in series are adequate to control runoff from the disturbed area. The two ponds in series comply with the performance requirements in 30 CFR 816.

The technical assessment evaluated the following SEDCAD input variables for sediment control structure N11-G1:

- (1) Rainfall variable. A value of 2.1-inches was used for the 10-year 24-hour storm event. Design for the 10-year 24-hour storm event complies with regulatory requirement 30 CFR 816.46(c)(C). A SEDCAD input parameter of 2.1-inches for the 10-year 24-hour storm event for the structure is appropriate for the area.
- (2) SCS Curve Number. A weighted curve number of 78 was used as an input parameter in SEDCAD. The cover type consists of Pinon-Juniper, Sage Brush, and Reclaimed area. The weighted curve number was based on the type of cover and percentage of cover over the area. The extent of cover type was based on aerial photography obtained in 2008. A weighted curve number of 78 is appropriate based on site conditions.
- (3) Drainage Area. A drainage area of 706.49 acres was identified for sediment control structures N11-G and N11-G1 using topographic maps developed from aerial photography flown in 2008. Since the ponds are in series, the upgradient pond N11-G1 has a drainage area of 667.1 acres; however, the two ponds have a drainage area of 706.49 acres. A drainage area of 667.1 acres is appropriate for evaluation of sediment control structures N11-G1.
- (4) Time of Concentration. This input parameter was developed based on the elevation difference from the top of the watershed to the bottom of the watershed, and the water course length along that flow path. An elevation difference of 390.88 feet and a water course length of 1.676 miles were identified for the drainage basin to the N11-G ponds. These two variables yield a time of concentration equal to 0.473 hours. A time of concentration of 0.473 hours is appropriate for the drainage basin to the N11-G ponds.
- (5) Soil Erodibility. This input parameter was developed from a weighted average based soil group type, an erodibility factor for the soil group type, and the area of soil group type. A weighted erodibility factor of 0.17 was used to calculate the volume of sediment generated to the structure per year.
- (6) Stability. An upstream slope of 3:1 (horizontal to vertical) and a downstream slope of 5:1 were assumed for the design. These slopes are equal to or flatter than the proposed slopes developed in a stability analysis presented in Table 3-6, Attachment D, Chapter 6 of the permit application.

The two structures in series have a combined capacity that is greater than 20 acre-feet; therefore, the spillway was analyzed and designed for the 25-year, 6-hour storm event. The input variables for the spillway design were the same as those for the N11-G1 structure design with the exception of using a rainfall value of 1.9-inches to correspond with the 25-year, 6-hour storm event. Spillway design for the 25-year, 6-hour storm event complies with 30 CFR 816.49(a)(ii)(C).

The inlet channel to N11-G1 was analyzed to pass the 100-year, 6-hour storm event. The input variables for the inlet channel were the same as those for the N11-G1 pond design, with the exception of using a rainfall value of 2.4-inches to correspond with the 100-year, 6-hour storm event. Design for the 100-year, 6-hour storm event complies with 30 CFR 816.49(c)(ii).

The design of N11-G1 identifies the need for D50 of 6-inch rip-rap on the inlet channel and the spillway channel. The spillway channel width should be a minimum 56-foot in width.

The design variables for the downgradient adjacent sediment control structure N11-G are very similar to those for N11-G1 described above. However, since the structures are in series, structure N11-G has a smaller drainage area of 39.39 acres. Therefore, a drainage area of 39.39 acres was utilized in design of the 10-year 24-hour storm event, and the entire drainage area of 709.49 acres was utilized in design of the 100-year 6-hour storm event for spillway design. The spillway channel width should be minimum 84-feet in width for N11-G.

Structure N11-G also has a terrace diversion contributing flow directly into the impoundment. This terrace diversion was evaluated to pass the 10-year, 6-hour storm event in compliance with 30 CFR 816.43(c)(3).


Based on the above designs, N11-G1 will have a total storage capacity of 19.91 acre-feet, and N11-G a total capacity of 19.98 acre-feet. The combined storage capacity of 39.89 acre-feet is adequate to accommodate the 10-year, 24-hour storm inflow of 25.80 acre-feet. The sediment inflow rate to N11-G1 based on the above reviewed input parameters is estimated to be 3.37 ac-ft/yr, and estimated at 0.53 ac-ft/yr for N11-G. Based on these sediment accumulation rates, the combined sediment storage life is estimated to be 3.6 years before sediment needs to be cleaned out to maintain design capacity for the 10-year, 24-hour storm event.

(3) On the basis of the preceding evaluation, I conclude that:

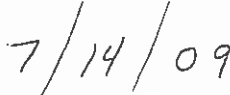
☒ This part of the application/document complies with the requirements of the applicable regulations.

6. PRIMARY AND PEER REVIEWERS.

A. Primary reviewer:

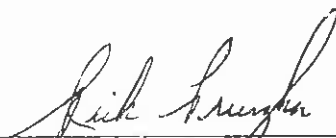


Paul Clark, Hydrologist

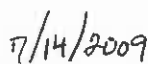


[Date]

B. Peer reviewer:



Rick Pruska, Hydrologist



[Date]



Peabody Western Coal Company

May 7, 2009

Mr. Dennis Winterringer
Office of Surface Mining
Reclamation & Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733

Re: Peabody Western Coal Company / Black Mesa Complex Permit AZ-0001D / N11-G & N11-G1 Pond Redesign / N11-G2 Pond Removal

Dear Mr. Winterringer:

Peabody Western Coal Company (PWCC) submits this revision for the Black Mesa Complex Permit AZ-0001D. This AZ-0001D permit revision seeks approval to revise the N11-G and N11-G1 Pond Design Reports and to request permission to remove the upstream N11-G2 pond. The revised N11-G and N11-G1 Pond Design Reports demonstrate these two ponds in-series are adequate to control runoff and that the N11-G2 Pond is no longer required. The removal of the N11-G2 Pond will facilitate the final backfilling and grading of the N-11 spoil slopes in this area of the reclamation. The most recent aerial photo of the N-11 area from 2008 was used for this design. PWCC will update and submit Drawings 85400, Sheet L-7 and 85405 after this revision is approved and new as-built drawings have been completed for the two ponds.

Eleven copies of the revised text and drawing, the notarized verification statement, and insertion instructions are enclosed. PWCC requests your prompt review and approval of this revision by June 10, 2009. This will allow sufficient time for remedial work and as-built certification before the summer monsoon season arrives.

Sincerely,

Gary W. Wendt
Manager Environmental
Black Mesa Complex

Gww
Encl.

C: G. Altsisi (PWCC)
D. Elkins (PWCC)
G. Jones (PWCC)

INSERTION INSTRUCTIONS

Peabody Western Coal Company Permit Revision
N11-G & N11-G1 Pond Redesign and N11-G2 Pond Removal
Black Mesa Complex Permit AZ-0001D
May 7, 2009

<u>Volume</u>	<u>Chapter</u>	<u>Description</u>
6	-----	Replace the existing N11-G Design Report and Exhibit 1 (N11-G, N11-G1, N11-G2, & N11-G3 Sedimentation Ponds Sheets 1 of 3) with the revised N11-G Design Report and Exhibit 1 (Proposed N11-G&G1 Sedimentation Pond – Remedial Design).
6	-----	Replace the existing N11-G1 Design Report and Exhibit 1 (N11-G, N11-G1, N11-G2, & N11-G3 Sedimentation Ponds Sheet 1 of 3) with the revised N11-G1 Design Report.
6	-----	Delete the existing N11-G2 Design Report including Exhibit 1 (Proposed N11-G2 Sedimentation Pond – Remedial Design).

VERIFICATION

I verify under oath that the information contained in this application for a permit, revision, renewal, bond release, or transfer, sales or assignments of permit rights is true and correct to the best of my information and belief.

Signature of Responsible Official Gary W. Wendt

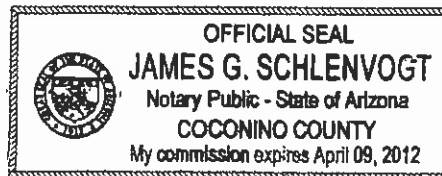
Title Manager, Environmental Date May 7, 2009

SUBSCRIBED AND SWORN TO BEFORE ME BY Gary W. Wendt

This 7th Day of May, 2009

NOTARY PUBLIC James G. Schlenvogt

MY COMMISSION EXPIRES April 9, 2012



U.S. Department of the Interior
OFFICE OF SURFACE MINING
Western Regional Coordinating Center
P.O. Box 46667
Denver, Colorado 80201-6667
May 13, 2009

Notification/Transmittal

AZ-0001

Copies attached:

TO:	OSM Albuquerque Field Office (AFO-AZ) (AZ01)	1 Copy Sent
	BLM Arizona State Office (AZ02)	No Copy Sent
	U.S. Fish and Wildlife Service AZ (AZ50)	No Copy Sent
	BIA - Western Regional Office (AZ03)	1 Copy Sent
	BIA Navajo Regional Office (AZ04)	1 Copy Sent
	Hopi Tribe-Office of Realty Services (AZ05)	1 Copy Sent
	Navajo Nation Minerals Department AZ (AZ10)	2 Copies Sent
	The Hopi Tribe-Ofc of Mining & Min Res (AZ11)	1 Copy Sent
	Navajo Environmental Protection Agency (AZ12)	No Copy Sent
	Navajo Air Quality Control Program (AZ13)	No Copy Sent
	Forest Lake Chapter House (AZ14)	1 Copy Sent
	✓ OSM-Farmington Area Office (AZ15)	1 Copy Sent

FROM: A. MCGREGOR, Mine Coordinator *Am Mcgregor*
Office of Surface Mining Reclamation and Enforcement
Western Regional Coordinating Center, Program Support Division

The Office of Surface Mining Reclamation and Enforcement (OSM) has received the following materials. If noted above, a copy of these materials is being forwarded with this memorandum. Please review the attached materials. If you have any questions or comments, please contact me at 303-293-5040.

OSM ID: 09/05/11-03 for the BLACK MESA-KAYENTA Mine
Project: AZ-0001-D-J-66 N11-G2 pond removal
Sent by: PEABODY WESTERN COAL COMPANY Dated: 05/07/09
Materials: Loose Pages and Maps
Descript: 1--POND REMOVAL AND POND REDESIGN
A Permit Revision UNDER REVIEW by OSM

These materials are related to a pending permitting action. Please SUBMIT YOUR WRITTEN COMMENTS BY JUNE 15, 2009.

INDIAN TRIBAL GOVERNMENT--These materials are being sent pursuant to 30 CFR 750.12(b). The transmittal of these materials initiates the consultation on protection of the non-coal resources required under 30 CFR 750.6(a)(4). OSM will contact you to complete consultation if your written comments and any special requirements relating to the non-coal resources are not received by the date specified above. If this material involves wildlife habitat as a postmining land use, YOUR WRITTEN APPROVAL IS REQUIRED on the minimum stocking and planting arrangements for trees and shrubs under 30 CFR 816.116(b)(3)(i).

BUREAU OF INDIAN AFFAIRS--These materials are being sent pursuant to 30 CFR 750.12(b). The transmittal of these materials initiates the consultation required under 30 CFR 750.6(a)(2) and (4). OSM will consider the consultation to be completed if your written comments, special requirements relating to the protection of non-coal resources, and recommendations are not received by the date specified above. YOUR RECOMMENDATION TO OSM IS REQUIRED UNDER 30 CFR 750.6(d)(2).

BUREAU OF LAND MANAGEMENT--These materials are being sent pursuant to 30 CFR 750.12(b). The transmittal of these materials initiates the consultation required under 30 CFR 750.6(a)(2) and (5). OSM will consider the consultation to be completed if your written comments and recommendations are not received by the date specified above. IF AN ACTION BY BLM IS REQUIRED UNDER 25 CFR CHAPTER I OR THE LEASE(S), A COPY OF YOUR DECISION SHOULD BE SENT TO OSM.

OSM FIELD OFFICE--This material is for your review with respect to inspection and enforcement concerns.



Peabody Western Coal Company

May 7, 2009

Mr. Dennis Winterringer
Office of Surface Mining
Reclamation & Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733

09-05-11-03

Re: Peabody Western Coal Company / Black Mesa Complex Permit AZ-0001D / N11-G & N11-G1 Pond Redesign / N11-G2 Pond Removal

Dear Mr. Winterringer:

Peabody Western Coal Company (PWCC) submits this revision for the Black Mesa Complex Permit AZ-0001D. This AZ-0001D permit revision seeks approval to revise the N11-G and N11-G1 Pond Design Reports and to request permission to remove the upstream N11-G2 pond. The revised N11-G and N11-G1 Pond Design Reports demonstrate these two ponds in-series are adequate to control runoff and that the N11-G2 Pond is no longer required. The removal of the N11-G2 Pond will facilitate the final backfilling and grading of the N-11 spoil slopes in this area of the reclamation. The most recent aerial photo of the N-11 area from 2008 was used for this design. PWCC will update and submit Drawings 85400, Sheet L-7 and 85405 after this revision is approved and new as-built drawings have been completed for the two ponds.

Eleven copies of the revised text and drawing, the notarized verification statement, and insertion instructions are enclosed. PWCC requests your prompt review and approval of this revision by June 10, 2009. This will allow sufficient time for remedial work and as-built certification before the summer monsoon season arrives.

Sincerely,

Gary W. Wendt
Manager Environmental
Black Mesa Complex

Gww
Encl.

C: G. Altsisi (PWCC)
D. Elkins (PWCC)
G. Jones (PWCC)