

Permit No NN0028193  
**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, 33 U.S.C. 1251 et seq.,  
(the "Act"),

BHP Billiton Navajo Coal Company  
P.O. Box 1717  
Fruitland, New Mexico 87416-1717

is authorized to discharge from a facility located at Navajo Mine, 6 miles southwest of  
Farmington, San Juan County, New Mexico,

Latitude: 36° 42' - 43' N  
Longitude: 108° 24' - 25' W

to receiving waters named Morgan Lake, the Chaco River, and the San Juan River, in accordance  
with effluent limitations, monitoring requirements and other conditions set forth herein, and in  
the attached EPA Region 9 "Standard Federal NPDES Permit Conditions," dated June 3, 2002.

This permit shall become effective on: April 7, 2008 .

This permit and the authorization to discharge shall expire at midnight, 4/6/2013 .

Signed this 5th day of March 2008 .

For the Regional Administrator

/s/

Alexis Strauss, Director  
Water Division

**SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

**1. OUTFALL NOs. 004, 006, 007, 008, 011, 013, 016, 19: Mine Drainage**

During the period beginning on the effective date of this permit and lasting through date of expiration, the permittee is authorized to discharge mine drainage from Outfall Numbers 004, 006, 007, 008, 011, 013, 016 and 019 to the Chaco River.

Such discharges shall be limited and monitored by the permittee as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

Table 1: Mine Drainage Effluent Limitations and Monitoring Requirements

<b>Effluent Parameter</b>	<b>Units</b>	<b>Daily Average</b>	<b>Daily Maximum</b>	<b>Monitoring Frequency (1)</b>	<b>Sampling Type</b>
Flow	MGD	--	--	Once/Day (2)	Calculated
Total Suspended Solids (TSS)	mg/l	35	70	1/occurrence	Discrete
Iron, total	mg/l	3.5	7	1/occurrence	Discrete
Arsenic	mg/l	--	--	1/occurrence (3),(4)	Discrete
Boron	mg/l	--	--	1/occurrence (3),(4)	Discrete
Cadmium	mg/l	--	--	1/occurrence (3),(4)	Discrete
Lead	mg/l	--	--	1/occurrence (3),(4)	Discrete
Selenium	mg/l	--	--	1/occurrence (3),(4)	Discrete
Sulfate	mg/l	--	--	1/occurrence (3)	Discrete
Total Dissolved Solids (TDS)	mg/l	--	--	1/occurrence (3)	Discrete
pH	std. units	between 6.0 to 9.0		1/occurrence	Discrete

NOTES:

- (1) Samples shall be taken once during each occurrence or once every 24 hours if the duration of the occurrence is greater than 24 hours.
- (2) Based upon pumping rates.
- (3) Monitoring only. No set effluent-based limits.
- (4) Measure both total and dissolved constituent.

**2. OUTFALL NO. 002 - Coal Storage, Coal Preparation and Ancillary Area Runoff**

During the period beginning on the effective date of this permit and lasting through date of expiration, the permittee is authorized to discharge from Outfall Number 002.

Such discharges shall be limited and monitored by the permittee as specified below. Samples shall be collected prior to mixing with any other waste source stream and/or discharge to surface waters. Outfall No. 002 discharges to Morgan Lake. Minor releases of water from the irrigation line for routine maintenance and winterization are specifically excluded from the provisions of this NPDES permits.

Table 2: Coal Storage, etc Effluent Limitations and Monitoring Requirements

<b>Effluent Parameter</b>	<b>Units</b>	<b>Average Monthly</b>	<b>Daily Maximum</b>	<b>Monitoring Frequency (1)</b>	<b>Sampling Type</b>
Flow	MGD	--	--	Once/Day (2)	Calculated
Total Suspended Solids (TSS)	mg/l	35	70	1/occurrence	Discrete
Iron, total	mg/l	3.5	7	1/occurrence	Discrete
Manganese, total	mg/l	2	4	1/occurrence	Discrete
Arsenic	mg/l	--	--	1/occurrence (3),(4)	Discrete
Boron	mg/l	--	--	1/occurrence (3),(4)	Discrete
Cadmium	mg/l	--	--	1/occurrence (3),(4)	Discrete
Lead	mg/l	--	--	1/occurrence (3),(4)	Discrete
Selenium	mg/l	--	--	1/occurrence (3),(4)	Discrete
Sulfate	mg/l	--	--	1/occurrence (3)	Discrete
Total Dissolved Solids (TDS)	mg/l	--	--	1/occurrence (3)	Discrete
pH	std. units	between 6.0 to 9.0		1/occurrence	Discrete

NOTES:

- (1) Samples shall be taken once during each occurrence or once every 24 hours if the duration of the occurrence is greater than 24 hours.
- (2) Based upon pumping rates.
- (3) Monitoring only. No set effluent-based limits
- (4) Measure both total and dissolved constituent.

**3. OUTFALL NOs. 001, 009, 010, 017, and 018: Western Alkaline reclamation, brushing and grubbing, topsoil stockpiling, and re-graded areas.**

During the period beginning on the effective date of this permit and lasting through date of expiration, the permittee is authorized to discharge from Outfall Numbers 001, 009, 010, 017 and 018.

Such discharges shall be limited and monitored by the permittee as specified below. The permittee must:

- a)* submit a site-specific Sediment Control Plan for EPA approval demonstrating that implementation of the Sediment Control Plan will result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. The Sediment Control Plan shall, at a minimum, identify Best Management Practices (BMPs), including design specifications, construction specifications, maintenance schedules, criteria for inspection, and expected performance and longevity of the BMPs.
- b)* demonstrate using watershed models that the implementation of the Sediment Control Plan will result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. The watershed model must be the same model that is being used to acquire the permittee's SMCRA permit.
- c)* design, implement, and maintain the BMPs in the manner specified in the approved Sediment Control Plan throughout the term of this permit.

As existing outfalls defined in this permit as "alkaline mine drainage" are reclaimed, the approved Sediment Control Plan may be updated to incorporate the newly reclaimed outfalls. A revised Sediment Control Plan and revised watershed model must be submitted to EPA and approved by EPA before it becomes effective. Revisions to the Sediment Control Plan must meet all requirements contained at 40 CFR Part 434.82, and 100% of the drainage area to an outfall must meet the definition of "western alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded areas" (as defined at 40 CFR 434.80) to be considered for coverage. EPA's approval of an updated Sediment Control Plan and reclassification of an existing outfall from "alkaline mine drainage" to a reclaimed area will be considered a minor modification to the permit.

**SECTION B. GENERAL DISCHARGE SPECIFICATIONS**

All Waters of the Navajo Nation shall be free from pollutants in amounts or combinations that, for any duration:

- 1 . Cause injury to, are toxic to, or otherwise adversely affect human health, public safety, or public welfare.
- 2 . Cause injury to, are toxic to, or otherwise adversely affect the habitation, growth, or propagation of indigenous aquatic plant and animal communities or any member of these communities; of any desirable non-indigenous member of these communities; of waterfowl accessing the water body; or otherwise adversely affect the physical, chemical, or biological conditions on which these communities and their members depend.
3. Settle to form bottom deposits, including sediments, precipitates and organic materials, that cause injury to, are toxic to, or otherwise adversely affect the habitation, growth or propagation of indigenous aquatic plant and animal communities or any member of these communities; of any desirable non-indigenous member of these communities; of waterfowl accessing the water body; or otherwise adversely affect the physical, chemical, or biological conditions on which these communities and their members depend.
- 4 . Cause physical, chemical, or biological conditions that promote the habitation, growth, or propagation of undesirable, non-indigenous species of plant or animal life in the water body.
5. Cause solids, oil, grease, foam, scum, or any other form of objectionable floating debris on the surface of the water body; may cause a film or iridescent appearance on the surface of the water body; or that may cause a deposit on a shoreline, on a bank, or on aquatic vegetation.
6. Cause objectionable odor in the area of the water body.
7. Cause objectionable taste, odor, color, or turbidity in the water body.
8. Cause objectionable taste in edible plant and animal life, including waterfowl, that reside in, on, or adjacent to the water body.

**SECTION C. BEST MANAGEMENT PRACTICES**

The permittee shall review and update their Storm Water Pollution Prevention Plan (SWPPP). The permittee shall develop enhanced good housekeeping provisions to their SWPPP to address onsite storm water management from coal and coal combustion byproducts and the protection of surface waters. The SWPPP shall, at a minimum, incorporate the following provisions:

*a. Residue Hauling Vehicles.* Inspect all residue hauling vehicles for proper covering over the load, adequate gate sealing and overall integrity of the container body. Repair as soon as practicable, vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

*b. Areas Adjacent to Disposal Pits and Minefills.* Describe and implement measures that prevent or minimize contamination of surface runoff from areas adjacent to disposal pits and minefills. Develop procedures to reduce ash residue that may be tracked on the access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

The permittee shall submit revised SWPPP to the permitting authority within three months of permit issuance for EPA review.

**SECTION D. PERMIT REOPENER**

Should any of the monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursions above water quality criteria, the permit may be reopened for the imposition of water quality based limits and/or whole effluent toxicity limits. Also, this permit may be modified, in accordance with the requirements set forth at 40 CFR Parts 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

**SECTION E. MONITORING AND REPORTING**

1. Reporting of Monitoring Results

Monitoring results shall be reported on Discharge Monitoring Report (“DMR”) forms (EPA No. 3320-1) to be supplied by the EPA Regional Administrator, to the extent that the information reported may be entered on the forms. The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with the limitations and requirements of the permit.

- a. Monitoring results obtained during the previous year shall be summarized for each month and submitted on forms to be supplied by the EPA Regional Administrator, to the extent that the information reported may be entered on the forms. The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with the limitations and requirements of the permit. Unless otherwise specified, discharge flow shall be reported in terms of the average flow over that 30 day period. These reports are due January 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator at the following addresses:

Environmental Protection Agency  
Attn: WTR-7  
75 Hawthorne Street  
San Francisco, CA 94105

Navajo Nation EPA  
P.O. Box 339  
Window Rock, AZ 86515

- b. For effluent analyses, the permittee shall utilize an EPA-approved analytical method with a Method Detection Limit (MDL) that is lower than the effluent limitations (or lower than applicable water quality criteria if monitoring is required but no effluent limitations have been established.) MDL is the minimum concentration of an analyte that can be detected with 99% confidence that the analyte concentration is greater than zero, as defined by the specific laboratory method listed in 40 CFR Part 136. The procedure for determination of a laboratory MDL is in 40 CFR Part 136, Appendix B.
- c. If all published MDLs are higher than the effluent limitations (or applicable criteria concentrations), the permittee shall utilize the EPA-approved analytical method with the lowest published MDL.
- d. The permittee shall develop a Quality Assurance (QA) Manual/QA Plan. The purpose of the QA Manual is to assist in planning for the collection and analysis of

samples and explaining data anomalies if they occur. As appropriate and applicable, the QA Manual shall include the details enumerated below. The QA Manual shall be retained on the permittee's premises and be available for review by USEPA or Navajo Nation EPA upon request. The permittee shall review its QA Manual annually and revise it when appropriate. Throughout all field sampling and laboratory analyses, the permittee shall use quality assurance/quality control (QA/QC) procedures as documented in their QA Manual.

- i. Project Management including roles and responsibilities of the participants; purpose of sample collection; matrix to be sampled; the analytes or compounds being measured; applicable technical, regulatory, or program-specific action criteria; personnel qualification requirements for collecting samples.
  - ii. Sample collection procedures; equipment used; the type and number of samples to be collected including QA/QC samples (i.e., background samples, duplicatives, and equipment or field blanks); preservatives and holding times for the samples (see 40 CFR Part 136.3).
  - iii. Identification of the laboratory to be used to analyze the samples; provisions for any proficiency demonstration that will be required by the laboratory before or after contract award such as passing a performance evaluation sample; analytical method to be used; required QC results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken by the permittee or the laboratory as a result of problems identified during QC checks.
  - iv. Discussion of how the permittee will perform data review and requirements for reporting of results to USEPA or Navajo Nation EPA to include resolving of data quality issues and identifying limitations on the use of the data.
- e. Sample collection shall be performed as stated in the QA Manual. The QA Manual shall include a discussion on the preservation and handling, preparation and analysis of samples as described in the most recent edition of 40 CFR Part 136.3, unless otherwise specified in this permit.



2. Monitoring and Records

Records of monitoring information shall include:

- a. Date, exact location, and time of sampling or measurements performed, preservatives used;
- b. Individual(s) who performed the sampling or measurements;
- c. Date(s) analyses were performed;
- d. Laboratory(ies) which performed the analyses;
- e. Analytical techniques or methods used;
- f. Any comments, case narrative or summary of results produced by the laboratory. These should identify and discuss QA/QC analyses performed concurrently during sample analyses and should specify whether they met project and 40 CFR Part 136 requirements. The summary of results must include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results, sample receipt condition, holding times, and preservation.
- g. Summary of data interpretation and any corrective action taken by the permittee.
- h. Effluent limitations for analytes/compounds being analyzed.

3. Twenty Four-Hour Reporting of Noncompliance

The permittee shall report any compliance which may endanger human health or the environment. This information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances to the following persons or their offices:

CWA Compliance Office Chief  
USEPA (415) 972-3505  
&  
Navajo Nation EPA  
Attn: Patrick Antonio  
(520) 871-7185

If the permittee is unsuccessful in contacting the person above, the permittee shall report by 9 a.m. on the first business day following the noncompliance. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the time it is expected to continue; and steps or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

## **SECTION F. INSPECTION AND ENTRY**

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and such other documents as may be required by law, to perform inspections under authority of Section 10: Inspection and Entry of the EPA Region 9 "Standard Federal NPDES Permit Conditions," dated June 3, 2002, as attached.

## **SECTION G. DEFINITIONS**

The following definitions shall apply unless otherwise specified in the permit:

1. "Discrete sample" means any individual sample collected in less than 15 minutes.
2. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharges over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day. "Daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that sampling day.
3. "Daily average" discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
4. "Daily maximum" concentration means the measurement made on any single discrete sample of composite sample.
5. "Daily maximum" mass limit means the highest allowable "daily discharge" by mass during any calendar day.
6. A "composite sample" means, for flow rate measurements, the arithmetic mean of no fewer than 4 individual measurements taken at equal intervals for one hour or for the duration of discharge, whichever is shorter. A composite sample means, for other than flow rate measurements, a combination of 4 individual portions obtained at equal time intervals for 4 hours or for the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling. The sampling period shall coincide with the period of maximum discharge flow.
7. A "monthly or weekly average" concentration limitation means the arithmetic mean of consecutive measurements made during a calendar month or weekly period, respectively.

8. A “monthly or weekly average” mass limitation means the total discharge by mass during a calendar monthly or weekly period, respectively, divided by the number of days in the period that the facility was discharging. Where less than daily sampling is required by this permit, the monthly or weekly average value shall be determined by the summation of all the measured discharges by mass divided by the number of days during the monthly or weekly period when the measurements were made.