

**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"),

Peabody Western Coal Company  
Black Mesa/Kayenta Mine Complex  
1300 South Yale  
Flagstaff, AZ 86001

is authorized to discharge runoff from the retention ponds located throughout the mine lease area, at the outfalls listed in Appendix A hereof

to receiving waters which drain shall meet the State of Arizona's narrative water quality standards, in accordance with effluent limitations, monitoring requirements and in the attached 14 pages of EPA Region 9 "Standard Federal NPDES Permit Conditions," dated May 10, 1990.

This permit shall become effective on \_\_\_\_\_.

This permit and the authorization to discharge shall expire at midnight,  
\_\_\_\_\_.

Signed this \_\_\_\_\_ day of \_\_\_\_\_ 2001.

For the Regional Administrator

Alexis Strauss, Director  
Water Division  
U.S. EPA, Region 9

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

1. During the period beginning from the effective date of this permit, and lasting until its expiration, the permittee shall not discharge to receiving waters except from those discharge points identified in Appendix A and in accordance with both the effluent limits contained in paragraphs A.2, A.3, and A.4, and the narrative water quality standards cited in paragraph A.6.
2. Discharges resulting from lagoon dewatering (or discharge not resulting from precipitation events) shall be monitored and limited to not cause water quality standard violations in the receiving waters or as follows, whatever is more stringent:
  - a. Discharge from active mining areas, reclaimed areas and roads, explosive storage areas, and well rehabilitation activities; Discharge serial numbers 005, 008, 010, 012, 013, 014, 015, 018, 019, 021, 022, 024, 025, 026, 027, 030, 032, 033, 035, 036, 037, 039, 041, 045, 046, 048, 052, 065, 066, 069, 070, 071, 073, 076, 077, 079, 080, 081, 082, 086, 091, 128, 138, 141, 148, 150, 151, 153, 156 and 162:

<b>Effluent Parameter</b>	<b>Units</b>	<b>Monthly Average</b>	<b>Daily Average</b>	<b>Daily Maximum</b>	<b>Monitoring Frequency<sup>(1)</sup></b>
Flow	MGD	(2)	--	(2)	Continuous <sup>(3)</sup>
TSS	mg/l	35.0	--	70.0	1/week
Iron, total	mg/l	3.5	--	7.0	1/week
pH	std. units	between 6.5 to 9.0			1/week

**NOTES:**

- (1) For a discharge lasting less than twenty-four hours and at a frequency of no more than once/month, the monthly average shall not apply. Discharger must certify that these two stipulations are met on Discharge Monitoring Reports.
  - (2) Monitoring only
  - (3) To determine total flow in gallons for each dewatering activity and duration of dewatering activity.
3. Discharge from preparation areas, shops, material storage facilities, and coal transportation facilities. During the period beginning on the effective date of this permit and lasting through date of expiration, the permittee is authorized to; discharge serial number 001, 003, 009, 016, 017, 038, 043, 047, 054, 083, 094, 095, 098, 099, 103, 104, 105, 106, 107, 118, 121, 126, 127, 130, 133, 136, 137, 140, 149 and 152.

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<b>Effluent Parameter</b>	<b>Units</b>	<b>Monthly Average<sup>(1)</sup></b>	<b>Daily Average</b>	<b>Daily Maximum</b>	<b>Monitoring Frequency</b>
Flow	MGD	(2)	--	(2)	Continuous <sup>(3)</sup>
TSS	mg/l	35.0	--	70.0	1/week
Iron, total	mg/l	3.5	--	7.0	1/week
Oil & Grease	mg/l	--	--	15	1/week
pH	std. units	between 6.5 to 9.0			1/week

**NOTES:**

- (1) For a discharge lasting less than twenty-four hours and at a frequency of no more than once/month, the monthly average shall not apply. Discharger must certify that these two stipulations are met on Discharge Monitoring.
- (2) Monitoring only
- (3) To determine total flow in gallons for each dewatering activity and duration of dewatering activity.

**C. Discharge of sanitary wastewaters; Discharge Serial No. 139**

<b>Effluent Parameter</b>	<b>Units</b>	<b>Monthly Average<sup>(1)</sup></b>	<b>Daily Average</b>	<b>Daily Maximum</b>	<b>Monitoring Frequency<sup>(1)</sup></b>
Flow	MGD	(2)	--	(2)	Continuous <sup>(3)</sup>
TSS	mg/l	35.0	--	70.0	1/week
Iron, total	mg/l	3.5	--	7.0	1/week
Oil & Grease	mg/l	--	--	15	1/week
pH	std. units	between 6.5 to 9.0			1/week
BOD	mg/l	--	--	15	1/week
Fecal Coliform	100ml	--	--	1000	1/week

**NOTES:**

- (1) For a discharge lasting less than twenty-four hours and at a frequency of no more than once/month, the monthly average shall not apply. Discharger must certify that these two stipulations are met on Discharge Monitoring.
- (2) Monitoring only
- (3) To determine total flow in gallons for each dewatering activity and duration of dewatering activity.
4. Discharges resulting from a rainfall event less than or equal to a 10-year, 24-hour

precipitation event (1.80 inches within a 24 hour period):

- a. Discharge from active mining areas, reclaimed areas and roads, explosive storage areas, and well rehabilitation activities; Discharge Serial number 005, 008, 010, 012, 013, 014, 015, 018, 019, 021, 022, 024, 025, 026, 030, 031, 032, 033, 035, 036, 037, 039, 041, 045, 046, 048, 052, 065, 066, 069, 070, 071, 073, 076, 077, 079, 080, 081, 082, 086, 091, 128, 138, 141, 148, 150, 151, 153, 156, 162:

<b>Effluent Parameter</b>	<b>Units</b>	<b>Monthly Average</b>	<b>Daily Average</b>	<b>Daily Maximum</b>	<b>Monitoring Frequency</b>
Flow	MGD	(1)	--	(1)	once/day
Settleable Solids (SS)	ml/l <sup>(2)</sup>	(1)	--	0.5	once/day
pH	std. units	between 6.5 to 9.0			once/day

**NOTES:**

- (1) Monitoring only  
 (2) Maximum not to be exceeded at any time.

- c. Discharge from preparation areas, shops, materials storage facilities, and coal transportation facilities; Discharge Serial number. 001, 003, 009, 016, 017, 038, 043, 047, 054, 083, 094, 095, 098, 099, 103, 104, 105, 106, 107, 118, 121, 126, 127, 130, 133, 136, 137, 140, 149, and 152:

<b>Effluent Parameter</b>	<b>Units</b>	<b>Monthly Average</b>	<b>Daily Average</b>	<b>Daily Maximum</b>	<b>Monitoring Frequency<sup>(1)</sup></b>
Flow	MGD	(2)	(2)	(2)	once/day <sup>(3)</sup>
Settleable Solid (SS)	ml/l	--	--	0.5	once/day
Oil & Grease	ml/l <sup>(1)</sup>	--	--	15	once/day
pH	std. units	between 6.5 to 9.0			once/day

**NOTES:**

- (1) Maximum not to be exceeded at any time.  
 (2) Monitoring only

- c. Discharge of sanitary wastewaters; Discharge Serial number 139:

Effluent Parameter	Units	Monthly Average <sup>1</sup>	Daily Average	Daily Maximum	Monitoring Frequency <sup>1</sup>
Flow	MGD	**	--	**	1/day
Settleable Solids	ml/l <sup>1</sup>	--	--	0.5	1/day
Oil & Grease	mg/l	--	--	15	1/day
pH	std. units	between 6.5 to 9.0			1/day
BOD	mg/l	--	--	30	1/day
Fecal Coliform	100ml	--	--	1000	1/day

\*\* Monitoring only

1. Maximum not to be exceeded at any time.

4. Discharge resulting from a rainfall event greater than a 10-year, 24-hour precipitation event (1.80 inches within a 24-hour period):

a. Discharges from active mining areas, reclaimed areas and roads, explosive storage areas, and well rehabilitation activities; Discharge Serial number 005, 008, 010, 012, 013, 014, 015, 018, 019, 021, 022, 024, 025, 026, 027, 030, 031, 032, 033, 035, 036, 037, 039, 041, 045, 046, 048, 052, 065, 066, 069, 070, 071, 073, 076, 077, 079, 080, 081, 082, 086, 091, 128, 138, 141, 148, 150, 151, 153, 156, 162:

Effluent Parameter	Units	Monthly Average	Daily Average	Daily Maximum	Monitoring Frequency
Flow	MGD	**	--	**	1/day
pH	std. units	between 6.5 to 9.0			1/day

\*\* Monitoring only

e. Discharges from preparation areas, shops, material storage facilities, and coal transportation facilities; Discharge Serial number 001, 003, 009, 016, 017, 038, 043, 047, 054, 083, 094, 095, 098, 099, 103, 104, 105, 106, 107, 118, 121, 126, 127, 130, 133, 136, 137, 140, 149 and 152:

Effluent		Monthly	Daily	Daily	Monitoring
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Parameter	Units	Average	Average	Maximum	Frequency
Flow	MGD	**	--	**	1/day
Oil & Grease	mg/l	**	--	15	1/day
pH	std. units	between 6.5 to 9.0			1/day

\*\* Monitoring only

f. Discharge of sanitary wastewaters; Discharge Serial number 139:

Effluent Parameter	Units	Monthly Average <sup>1</sup>	Daily Average	Daily Maximum	Monitoring Frequency <sup>1</sup>
Flow	MGD	**	--	**	1/day
Oil & Grease	mg/l	--	--	15	1/day
pH	std. units	between 6.5 to 9.0			1/day
BOD	mg/l	--	--	30	1/day
Fecal Coliform	100ml	--	--	1000	1/day

\*\* Monitoring only

#### 5. Seepage study

Within 6 months of receipt of the permit Peabody Western Coal Company shall submit a study plan designed to determine the source of, and pollutants in, seepages below impoundments. Such a plan shall include the following elements:

- a. Identification of all seeps located within 100 meters downgradient of sediment impoundments including a record of the location, date, time, flow, proximity to waters of the United States, and accessibility by livestock.
- b. Sampling (or summary of current data if sufficient and valid) of seepages identified in 5.a. for pH, Iron (Total and Dissolved), Dissolved Oxygen, Selenium (Total and Dissolved) and Nitrates. If Peabody submits past data, sampling techniques shall be described in order to determine validity of data. EPA, upon reviewing all data submitted, shall determine whether additional sampling should be performed.
- c. Hydrogeologic modeling or studies in order to determine if the source the seeps are the impoundments and, if so, which impoundments.
- d. Determination of source of Selenium and Nitrates, where data indicates that seepages have a reasonable potential to violate water quality standards.

Unless EPA objects to the study plan, the plan shall be implemented and completed within 12 months of plan submitted and the study results shall be submitted to EPA.

EPA, upon reviewing the results of the study, may reopen the permit for the imposition of numerical limits and/or additional monitoring.

6. All discharges shall meet the State of Arizona's narrative water quality standards:
  - a. Navigable waters shall be free from pollutants in amounts or combinations that:
    - (I) Settle to form bottom deposits that inhibit or prohibit the habitation of aquatic life or that impair recreational uses;
    - (II) Cause objectionable odor in the area in which the navigable water is located;
    - (III) Cause off-taste or odor in drinking water;
    - (IV) Cause off-flavor in aquatic organisms or waterfowl;
    - (V) Are toxic to humans, animals, plants or other organisms;
    - (VI) Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth or propagation of other aquatic life or that impair recreational uses;
    - (VII) Cause or contribute to a violation of an aquifer water quality standard prescribed in A.A.C. R18-11-405 or A.A.C. R18-11-406; or,
    - (VIII) Change the color of the navigable water from natural background levels of color.
  - b. Navigable waters shall be free from oil, grease and other pollutants that float as debris, foam, or scum; or that cause a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank or aquatic vegetation. The discharge of lubricating oil or gasoline associated with the normal operation of a recreational watercraft shall not be considered a violation of this narrative standard.
7. Additional Guidance:
  - a. Samples required in A.2 must be collected from the point of discharge.
  - b. Samples required in A.3 and A.4 may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge.
8. For the purpose of this permit, the gauge stations used to monitor rainfall for specific

discharge points shall be:

<u>Peabody Gauge No.</u>	<u>Discharge Points</u>
1.	046, 048, 049, 050, 051, 052, 069, 070, 071, 073, 076, 077, 097, 088, 089, 090, 091, 038, 147
5.	017, 018, 019, 026, 027, 047, 086, 098, 105, 141, 142, 149
7.	001, 002, 003, 008, 009, 013, 014, 015, 016, 037, 081, 094, 153, 157, 158, 159, 160, 161, 163
8.	024, 025, 030, 031, 032, 033, 035, 038, 039, 041, 043, 103, 104, 128, 130
9.	005, 010, 012, 021, 022, 045, 082, 083, 099, 139, 140, 150, 151
10.	054, 065, 066, 095, 106, 107, 118, 121, 126, 136, 137, 143, 144, 145, 146, 152,
11.	036, 079, 080, 127, 133, 148, 156

9. Best Management Practices:

Within 90 days of permit issuance, Peabody Western Coal Company shall submit to USEPA and the Navajo EPA a description of all Best Management Practices (BMPs) currently required by Office of Surface Mining (OSM) to protect water quality.

10. Reopener:

This permit may be reopened for the imposition of new water quality-based effluent limitations if and when site-specific water quality standards are adopted by the Hopi or Navajo tribe.

This permit may also be reopened for the imposition of Best Management Practices (BMPs) if EPA determines that current BMPs required by the Office of Surface Mining (OSM) are insufficient to protect water quality standards.

The permit may also be reopened for the imposition of selenium and/or nitrate monitoring and limits as specified under Section %

B. Monitoring and Reporting

1. Reporting

Discharge data obtained during the previous month shall be summarized and reported

monthly. If there was no discharge for the month, indicate "Zero Discharge". The report shall include the data required in A.2, A.3, A.4, and A.8. Monthly data should be submitted no later the 15<sup>th</sup> day of the following month. Signed copies of these and all other reports required herein shall be submitted to Regional Administrator, the Navajo nation, and the Hopi Tribe at the following addresses:

Regional Administrator  
U.S. Environmental Protection Agency  
Region 9, Attn: W-5-3  
75 Hawthorne Street  
San Francisco, CA 94105  
Telephone: (415) 744-1905

Navajo Nation Environmental Protection Agency  
Attn: NNPDES Program  
P.O. Box 339  
Window Rock, AZ 86515  
Telephone: (520) 871-7185

Hopi Tribe Department of Natural Resources  
Water Resources Office  
P.O. Box 123  
Kykotsmovi, AZ 86039  
Telephone: (520) 734-2441

2. Intermittent Discharge Monitoring

If the discharge is intermittent, rather than continuous, then on the first day of each such intermittent discharge, the permittee shall monitor and record data for all the characteristics listed in the monitoring requirements, after which the frequencies of analysis listed in the monitoring requirements shall apply for the duration of each such intermittent discharge. In no event shall the permittee be required to monitor and record data more often than twice the frequencies listed on the monitoring requirements.

3. Monitoring Modifications

Monitoring, analytical, and reporting requirements may be modified by the Regional Administrator upon due notice.

4. Inspection and Entry

The permittee shall allow representatives of the Hopi and Navajo Tribes to accompany the Regional Administrator, or an authorized representative, on inspections performed under authority of Section 10 Inspection and Entry of the EPA, Region 9, "Standards Federal NPDES Permit Conditions".

D. Definitions

1. The “monthly or weekly average” concentration, other than for fecal coliform bacteria,, means the arithmetic mean of measurements made during the monthly or weekly period,, respectively. The “monthly or weekly average” concentrations for fecal or total coliform bacteria means the geometric mean of measurements made during a monthly or weekly period, respectively. The geometric mean is nth root of the product of n numbers.
2. A “discrete” or “grab” sample means any individual sample collected in less than 15 minutes.
3. The “daily maximum” discharges means the total discharge by weight during any calendar day. The daily maximum effluent limitations requires that the stated daily maximum discharge any one day cannot be exceeded.
4. The “daily maximum” concentrated means the measurement made on any single sample which shall not be exceeded. The daily maximum concentration effluent limitation requires that the stated daily maximum concentration for any one day cannot be exceeded.